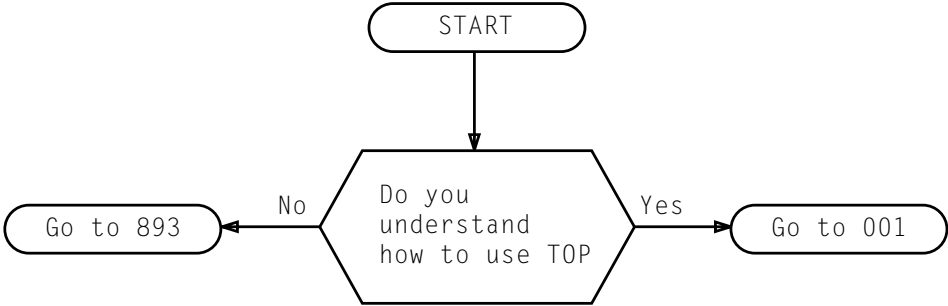




Task Oriented Practice (TOP)

4ESS™ Switch
With 1B Processor
1B Processor Cabinet Clearing Procedures
(CC, PS, PS BUS, CS, CS BUS, IFB, AUI, MUP, SSD, FNS AND XPWR)



TOP Comments Hot Line:
Monday through Friday
8:00 a.m. - 4:00 p.m. (Eastern)
Call: 1-800-645-6759
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No acceptance test procedures are required for the 1B Processor Cabinet. The readiness of this cabinet to become a part of the working system was established by the successful completion of Installation Handbook test procedures.

ACCEPTANCE

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

1	At 1B Processor MTC Terminal, Enter OP:00SUNITS! And Obtain Printout of All Out-of-Service Units	—
2	Using Printout of Out-of-Service Units, Identify Status of Both CC Units And Both SSD Units	—
3	Perform One of The Following Per Status of Both CC Units And Both SSD Units:	—
	A. If Either CC Unit (0 or 1) Or Either SSD Unit (0 or 1) Is Out-of-Service, Perform CC Unit Manual Power Alarm Circuit Test At A Later Time	—
	B. If Both CC Units (0 And 1) And Both SSD Units (0 And 1) Are In-Service, Perform The Following:	—
	1. Test Standby Central Control Unit Manual Power Alarm Circuits	DLP-505
	2. At 1B Processor MTC Terminal, Switch Central Control Units (SW:CC!)	DLP-506
	3. Test Standby Central Control Unit Manual Power Alarm Circuits	DLP-505
4	Record Results for Local Records	—

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

1	Using Trouble Ticket Or Verbal Instructions Received From Technical Support Group, Identify 1B Processor Community Frame, Unit, Circuit Pack Code And Circuit Pack Location Associated With Circuit Pack To Be Replaced	—
2	At 1B Processor MTC Terminal, Remove Unit From Service (RMV:a b!)	DLP-530
	<i>WARNING: A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins.</i>	—
3	Perform One Of The Following To Replace Circuit Pack:	—
	A. If Circuit Pack To Be Replaced Is In 1B Processor Cabinet, Perform The Following:	—
	1. Replace Circuit Pack In 1B Processor Cabinet	DLP-500
	2. Diagnose 1B Processor Unit Containing Circuit Pack Previously Replaced (DGN:a b:TLP!)	DLP-508
	B. If Circuit Pack To Be Replaced Is In 1B Processor Community Frame Other Than 1B Processor Cabinet, Perform The Following:	—
	1. Replace Circuit Pack In 1B Processor Community Frame Other Than 1B Processor Cabinet	DLP-525
	2. Diagnose 1B Processor Unit Containing Circuit Pack Previously Replaced (DGN:a b:TLP!)	DLP-508
4	At 1B Processor MTC Terminal, Restore Unit To Service (RST:a b!)	DLP-526
5	Notify Technical Support Group That Circuit Pack Replacement Is Complete With Acceptable Diagnostic Results	—
6	If Additional Circuit Packs Are To Be Replaced, Repeat From Step 1	—
7	Record Results For Local Records	—

**REPLACE 1B PROCESSOR COMMUNITY CIRCUIT PACK AS DIRECTED
BY TECHNICAL SUPPORT GROUP**

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

1	At 1B Processor MTC Terminal, Obtain Printout of All Out-of-Service Units And Ensure All 1B Processor Units Are In Service (OP:00SUNITS!)	DLP-504
2	Perform Processor Configuration Test (Demand Phase 95) On Standby Central Control Unit	DLP-509
3	At 1B Processor MTC Terminal, Restore Standby Central Control Unit To Service (RST:CC a!)	DLP-526
4	Switch Central Control Units (SW:CC!)	DLP-506
5	Perform Processor Configuration Test (Demand Phase 95) On Standby Central Control Unit	DLP-509
6	At 1B Processor MTC Terminal, Restore Standby Central Control Unit To Service (RST:CC a!)	DLP-526
7	Record Results For Local Records	—

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

1	At 1B Processor MTC Terminal, Enter OP:MUPSTAT! And Identify Status of Both MUPs	—
2	If Either MUP Is Out-of-Service (OOS), Perform The Following:	—
	1. At 1B Processor MTC Terminal, Restore MUP To Service (RST:MUP a!)	DLP-526
	2. If Both MUPs Have Not Been Restored To Service, Repeat From Step 2-1	—
3	Perform Demand Diagnostic Phase 91 On MUP 0 (DGN:MUP 0:PH 91,TLP!)	DLP-519
4	At 1B Processor MTC Terminal, Restore MUP 0 To Service (RST:MUP 0!)	DLP-526
5	At 1B Processor MTC Terminal, Enter OP:MUPSTAT! And Identify Status of Both MUPs	—
6	If Either MUP Is Out-of-Service (OOS), Perform The Following:	—
	1. At 1B Processor MTC Terminal, Restore MUP To Service (RST:MUP a!)	DLP-526
	2. If Both MUPs Have Not Been Restored To Service, Repeat From Step 6-1	—
7	Perform Demand Diagnostic Phase 91 On MUP 1 (DGN:MUP 1:PH 91,TLP!)	DLP-519
8	At 1B Processor MTC Terminal, Restore MUP 1 To Service (RST:MUP 1!)	DLP-526
9	At 1B Processor MTC Terminal, Enter OP:MUPSTAT! And Identify Status of Both MUPs	—
10	If Either MUP Is Out-of-Service (OOS), Perform The Following:	—
	1. At 1B Processor MTC Terminal, Restore MUP To Service (RST:MUP a!)	DLP-526
	2. If Both MUPs Have Not Been Restored To Service, Repeat From Step 10-1	—
11	Record Results For Local Records	—

**PERFORM MCC AND UTILITY PROCESSOR (MUP) DEMAND DIAGNOSTIC
PHASE 91 — ACTIVITY BIT TEST**

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

1	Configure 1B Processor Where MUP 0 Is Active (Not Forced) And MUP 1 Is Standby	DLP-531
2	At 1B Processor MTC Terminal, Enter CLR:IFBECTRS! To Clear MUP Controls	—
3	At 1B Processor MCC Terminal, Enter ESCAPE CONTROL X Sequence (Esc^x) To Force MUP 1 Active	—
4	Verify MUP 1 Is Forced Active	DLP-520
5	At 1B Processor MTC Terminal, Enter CLR:IFBECTRS! To Clear MUP Controls	—
6	At 1B Processor MCC Terminal, Enter ESCAPE CONTROL X Sequence (Esc^x) To Force MUP 0 Active	—
7	Verify MUP 0 Is Forced Active	DLP-520
8	At 1B Processor MTC Terminal, Enter CLR:IFBECTRS! To Clear MUP Controls	—
9	At 1B Processor MCC Terminal, Enter Poke Command 106 To Obtain 106 Page	—
10	On MCC Terminal 106 Page, Enter Poke Command 602 To Release MCC Force	—
11	Record Results For Local Records	—

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

1	At 1B Processor MCC Terminal, Obtain MCC Terminal Setup Page And Set MCC Terminal Parameters	DLP-523
2	Record Results For Local Records	—

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

1	At 1B Processor MTC Terminal, Enter OP:00SUNITS! and Obtain Printout of All Out-of-Service Units	—
2	Using Printout of Out-of-Service Units, Identify Status of CC Units, CS Units, PS Units, CS Buses And PS Buses	—
3	If Any 1B Processor CC Unit, CS Unit, PS Unit, CS Bus or PS Bus Is Identified As Out-of-Service, Perform The Following:	—
	1. At 1B Processor MTC Terminal, Restore Unit To Service (RST:a b!)	DLP-526
	2. If All 1B Processor CC Units, CS Units, PS Units, CS Buses And PS Buses Have Not Been Restored To Service, Repeat From Step 3-1	—
4	Perform Call Store/Program Store Unit Full Memory Fabric Test	DLP-524
5	At 1B Processor MTC Terminal, Restore Unit (CS or PS) To Service (RST:a b!)	DLP-526
6	If Full Memory Fabric Test Has Not Been Run On All Store Units (CSs And PSs), Repeat From Step 1	—
7	Record Results For Local Records	—

1B PROCESSOR CABINET OVERVIEW

The 1B Processor cabinet is one of several cabinets/frames that will make up the 1B Processor community. The 1B Processor cabinet is broken down into several diagnosable units. These units can be viewed as the major functional components of the 1B Processor cabinet and are identified as follows:

- Central Control (CC)
- Program Store (PS)
- Call Store (CS)
- Program Store Bus (PSB)
- Call Store Bus (CSB)
- Interface Bus (IFB)
- Auxiliary Unit Interface (AUI)
- Master Control Complex (MCC) and Utility Processor (MUP)
- Scan and Signal Distributor (SSD)
- Miscellaneous Power (XPWR).

Together these units and the other 1B Processor community cabinets/frames provide the 4ESS™ Switch with enough call capacity and memory to support the full use of all 4ESS Switch terminations. Design requirements specify a 1B Processor equipment downtime of less than 3.4 minutes per year. The 1B Processor will operate at a speed of 6M hertz with an active/standby central control configuration operating in matched mode. There can be up to 7M of program store accessed in double words and up to 20M of call store accessed in single words. In addition to the program store memory and call store memory, the 1B Processor allows additional memory and real time to be provided off the new high speed interface bus (IFB). The IFB will provide the major expansion path for the 1B Processor to access up to a maximum of 24 add-on clients. The 1B Processor will utilize a standard black and white CRT maintenance (MTC) terminal for the craft/machine

interface to receive system status outputs and to input control and monitor messages. A color CRT master control complex (MCC) using page layouts and poke commands will be used for the primary craft/machine system control interface.

1B PROCESSOR CABINET DOCUMENTATION

The maintenance and trouble-clearing procedures contained in this Task Oriented Practice (TOP) are based upon the design of 1B Processor cabinet hardware, diagnostic software and test equipment employed. The procedures are intended to aid personnel in performing routine maintenance and trouble-clearing functions required to keep the 1B Processor cabinet functional and trouble free. The degree to which these procedures accomplish this depends upon input and feedback from the user. Submittal of additions, corrections and improvements to the data are encouraged. Manufacturer, engineering and software documentation such as Input/Output (I/O) manuals, schematic diagrams (SDs) and program listings (PRs) which are available to the customer are referenced where applicable rather than duplicating that information in the TOP. However, some portions of this type documentation may be utilized in procedures as examples for the purpose of explanation. Test equipment (oscilloscopes, voltmeters, etc.) and the parameters involved in circuits being tested, adjusted or checked are usually prescribed. However, the setup and method of operation of such equipment is not described unless it is unusual or unique in some manner.

MAINTENANCE PHILOSOPHY

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1B PROCESSOR CABINET TROUBLE CLEARING DOCUMENTATION STRUCTURE

The 1B Processor cabinet trouble-clearing documentation will be documented using Task Oriented Practices (TOPs). The TOP is structured using different elements to present different types of TOP procedures. These elements include:

- . Task Index List (IXL)
- . Non Trouble Procedures (NTPs)
- . Trouble Analysis Diagrams (TADs)
- . Trouble Analysis Procedures (TAPs)
- . Detail Level Procedures (DLPs).

The task index list (IXL) is structured to provide fast access to the directly accessible procedures contained within this TOP. Procedures not listed on the IXL are designed to support the directly accessible procedures with preconditioning and system restoration steps covered in those level procedures. Therefore, *procedures not designed to be directly accessed are a threat to equipment operation and may compound trouble-clearing problems when accessed using a hunt-and-find method.* The more knowledgeable and experienced personnel may access this TOP at a point in trouble clearing when analysis of a problem is complete (the faulty component and/or condition determined) and only the corrective action is required. This situation requires special attention since most procedures in this TOP are designed to both isolate and clear the problem. If the TOP is entered under these conditions, it is the sole responsibility of the user to verify that the correct entry point on a directly accessible procedure is identified. Otherwise, equipment damage and/or interruption to service is possible.

All procedures directly accessible from the IXL are written for both the experienced and inexperienced maintenance personnel with appropriate bypassing techniques built into the procedures. Therefore, when

using procedures written for personnel with different experience levels, it is the responsibility of the user to make the determination as to what their experience level is and whether it is necessary to access the detail as referenced. However, if it is determined by experienced personnel to bypass the detail provided to complete specific steps, it is assumed that the step is performed correctly.

Non-trouble procedures (NTPs) are used to document routine maintenance and other maintenance procedures that are not directly related to a specific trouble.

Trouble analysis diagrams (TADs) are used to present trouble-clearing aids such as simplified schematics, functional schematics, charts, pictorials, tables and text describing system maintenance philosophy or trouble-clearing strategies for a particular TOP volume. In general, a TAD may be used to present any nonprocedural-type information that will aid the user in understanding or performing procedures in the TOP. TADs can be directly accessed from the IXL or they may only be referenced from the procedure from which they are intended to provide additional support information to aid in clearing a problem.

Trouble analysis procedures (TAPs) are used to document trouble-clearing procedures which attempt to isolate and clear specific problems. TAPs can be directly accessible from the IXL or accessed only after a directly accessible TAP has been exhausted and additional analysis and trouble-clearing effort is required to clear a trouble.

Detail level procedures (DLPs) are used to document step-by-step detailed procedures which attempt to perform a single specific function. DLPs can be directly accessible from the IXL or accessed from NTPs, TAPs or other DLPs in an attempt to provide additional detailed data to support a specific step. DLPs written to be accessed from NTPs, TAPs, and other DLPs are written to provide additional detail and are targeted to the inexperienced audience. However, in cases where DLPs are written to be directly accessed from the IXL, the procedures are targeted to both the experienced and inexperienced audience.

1B PROCESSOR CABINET DOCUMENTATION/TRAINING TRADE-OFFS

As a team, documentation and training share a single goal to provide the recipient of training and user of TOPs with a comprehensive documentation and training package to support the 1B Processor cabinet equipment as designed by the development community. This package will allow the maintenance personnel to attain an entry level knowledge of the 1B Processor cabinet equipment to be maintained and a package of detailed procedures that will aid in performing routine preventive maintenance and trouble analysis when problems arise. Documentation/training trade-offs have been identified and agreements reached as to the skills and knowledge to be possessed by the target audience, subjects to be covered by the training packages and procedures to be documented in the TOP.

1B PROCESSOR CABINET TROUBLE-CLEARING APPROACH

When documenting a procedural approach to trouble clearing, certain assumptions are made. It is assumed that only one fault is being cleared at a time. When directing maintenance personnel to perform an action, it is assumed that the action is performed correctly. Similarly, when directed to make replacements, the replacement part is always assumed to be good. Equipment used for testing,

both built-in (hardware and software) and commercial, is assumed to be good. Input messages entered at the maintenance terminal will be used to ensure the removal and restoral of units while performing trouble-clearing procedures. In addition, any time hardware is replaced, diagnostics must be run with an All-Tests-Pass (ATP) result expected. These assumptions and the fact that trouble-clearing procedures are designed for faults with consistent fault signatures provide procedures with a clean straightforward approach to trouble clearing. It is possible that some faults will not present a consistent fault signature or a Trouble Locating Procedure (TLP) pack list. If this occurs, the diagnostic should be repeated a number of times and the most consistent fault and TLP list used following the same general approach provided in the procedures. This repetitive diagnostic method should be used each time an attempt is made to correct the problem so that it can be determined if there is any change in the fault signature due to the corrective action that has been taken. If the action performed resulted in clearing the problem, an All-Tests-Pass (ATP) diagnostic result should be expected.

Trouble-clearing procedures provided to clear diagnostic failures are provided on two levels for the 1B Processor cabinet. The first level addresses what to do with a software generated Trouble Locating Procedure (TLP) SUSPECTED FAULTY EQUIPMENT list and provides a step-by-step procedure for replacing suspect circuit packs one at a time, running diagnostics and analyzing the results. This first level approach to clearing diagnostic failures is straightforward and requires some familiarity with the equipment, maintenance terminal techniques and diagnostic printouts. Access to this procedure is made directly from the IXL.

The second level approach to clearing diagnostic failures is accessed from the first level when attempts have failed to clear the problem or accessed directly from the IXL. This level is known as raw data analysis and describes what to do with the summary and supplemental data printed either with or instead of the SUSPECTED FAULTY EQUIPMENT list. It is expected that this analysis will lead to the identification of faulty circuits and possibly additional suspect hardware not previously identified. This second level approach to clearing diagnostic failures is more complex and requires an increase in the capabilities cited in the first level with additional knowledge of the equipment, maintenance terminal techniques, diagnostic printouts, schematic diagrams (SDs), program listings (PRs), etc.

Recommended routine maintenance procedures include:

FREQUENCY	PROCEDURE TITLE	PROCEDURE NUMBER
3M	Test Power Switch LEDs – 1B Processor cabinet	DLP-507
6M	Perform Manual Power Alarm Circuit Test - Central Control Unit	NTP-003

1B PROCESSOR CABINET TEST EQUIPMENT AND TOOL LIST

The 1B Processor cabinet test equipment and tool list identifies the recommended test equipment and tools required to perform routine maintenance and trouble clearing on the 1B Processor cabinet.

1B PROCESSOR CABINET ROUTINE MAINTENANCE TEST LIST

The routine maintenance test list provides a list of procedures that are recommended for routine preventive maintenance. Information identifying these procedures is arranged in the following order from left to right – Frequency, Procedure Title and Procedure Number.

GENERAL INFORMATION

The cautions and warnings provided in this element are specific to performing trouble-clearing and routine maintenance on the 1B Processor cabinet (SD-4A145). The most important goals while performing any job are to complete the job safely while minimizing service interruptions and avoiding equipment damage. Thus, cautions and warnings have been defined to protect against these possible hazards:

- CAUTION - Identifies the possibility of service interruption
- WARNING - Identifies the possibility of equipment damage.

This element will group the different admonishment types into two separate categories depending upon their importance. Cautions will appear first and warnings will appear second. When a condition exists that will cause more than one of the identified admonishments, the highest priority will be used.

At the beginning of each category (CAUTIONS and WARNINGS), an index will appear to identify each specific admonishment for easy access. This element is not intended to replace or supersede the step-by-step instructions provided in the Non Trouble Procedures (NTPs), Trouble Analysis Procedures (TAPs) and Detail Level Procedures (DLPs) where applicable cautions and warnings will be identified at the specific step that they need to be observed.

SPECIFIC CAUTIONS AND WARNINGS — 1B PROCESSOR CABINET

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CAUTIONS

The following is an index of the CAUTIONS that reside in this element:

1. Adjacent Pins In Complementary Service Groups On CC/IFB Unit Backplane (ED-4A325/SD-4A147)
2. System Recovery Actions Initiated When Powering Down An Out-of-Service Unit
3. System Recovery Actions Initiated When Powering Up Any Unit

CAUTION 1 - ADJACENT PINS IN COMPLEMENTARY SERVICE GROUPS ON CC/IFB UNIT BACKPLANE (ED-4A325/SD-4A147)

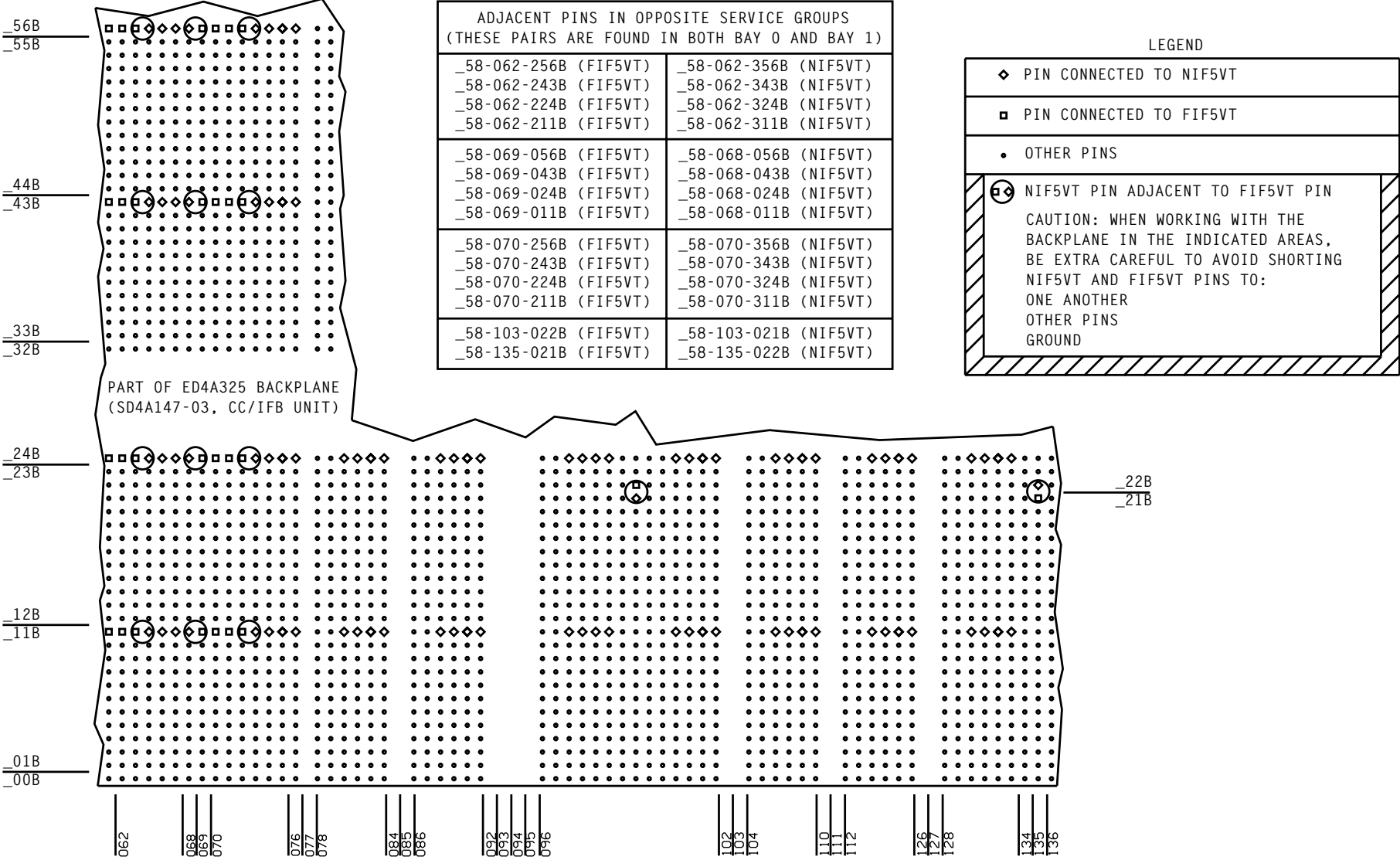


FIG. 1 - Front View (Circuit Pack Side) of CC/IFB Unit Backplane (Partial)

CAUTION 2 - SYSTEM RECOVERY ACTIONS INITIATED WHEN POWERING DOWN AN OUT-OF-SERVICE UNIT

Powering down an out-of-service unit should not cause system recovery actions (interrupts, phases, etc.) to be initiated. If system recovery actions are initiated when powering down an OOS unit, another unit may be at fault. Immediately confirm that the switch is processing calls. If there are indications of a continuing outage, power up the unit previously powered down. If there are no indications of a continuing outage, determine the unit that caused the system recovery actions to be initiated and correct the fault in that unit before continuing to work on the OOS unit originally powered down.

CAUTION 3 - SYSTEM RECOVERY ACTIONS INITIATED WHEN POWERING UP ANY UNIT

If system recovery actions (interrupts, phases, etc.) are initiated when powering up any unit (CC, CS, etc.), the suspected cause should be the unit just powered up. Therefore, the first action to take in this situation should be to power down the unit just powered up in an attempt to clear the reason that system recovery actions were initiated.

WARNINGS

The following is an index of the WARNINGS that reside in this element:

1. Shorted -48V, -48V Return or Ground Nets, Affected Units, Related Circuitry and Observable Symptoms
2. Static Discharge
3. Excessive Force When Replacing Circuit Packs
4. Push/Pull Fuses Straight To Avoid Breakage

WARNING 1 - SHORTED -48V, -48V RETURN OR GROUND NETS, AFFECTED UNITS, RELATED CIRCUITRY AND OBSERVABLE SYMPTOMS

Specific 1B Processor cabinet backplane pins (NETS) have been identified that may create potential trouble-clearing difficulties when shorted with other backplane pins (NETS). These specific NETS, affected units, related circuitry and observable symptoms are identified in TABLE A.

TABLE A SHORTED -48V, -48V RETURN OR GROUND NETS, AFFECTED UNITS, RELATED CIRCUITRY AND OBSERVABLE SYMPTOMS							
OBSERVABLE SYMPTOMS	AFFECTED UNIT	RELATED CIRCUITRY		SHORTED NETS			
		NAME	EQUIPMENT LOCATION*	NET NAME	NET EQUIPMENT LOCATION*	NET NAME	NET EQUIPMENT LOCATION*
Both circuit packs identified as related circuitry will be out-of-service simultaneously and 48V can be measured at identified circuit pack NETS. <i>WARNING: Identified circuit packs are permanently damaged when these symptoms are observed.</i>	CC/PS	KLW2 KLW15	X41-144-541T X58-168-232B	POS3	X41-134-055T	48VB01	X41-128-555T
	CS/PS	KLW2 KLW15	X41-144-551T X58-168-532B	PSCANB3	X41-134-053T	48RB01	X41-128-553T
	CS	KLW27 KLW15	024-096-542T 058-168-304T	CSACK22	X24-174-055T	48VB04	X24-168-555T
	CS	KLW27 KLW15	024-096-051T 058-168-302T	CSCNA22	X24-174-053T	48RB04	X24-168-553T
	CS/IFB	KLW15 KLW15	058-168-542T 158-168-323T	MSD4B231	X58-174-055T	48VB168	X58-168-555T
	CS/IFB	KLW1 KLW15	024-062-551T 058-168-053T	MS11B230	X58-174-053T	48RB168	X58-168-553T
* X Is Equivalent To 0 Or 1 For 1B Processor Cabinet 0 Or 1							

TABLE A (Contd)
SHORTED -48V, -48V RETURN OR GROUND NETS, AFFECTED UNITS, RELATED CIRCUITRY AND OBSERVABLE SYMPTOMS

OBSERVABLE SYMPTOMS	AFFECTED UNIT	RELATED CIRCUITRY		SHORTED NETS			
		NAME	EQUIPMENT LOCATION	NET NAME	NET EQUIPMENT LOCATION	NET NAME	NET EQUIPMENT LOCATION
Fuse identified as related circuitry is blown and replacement fuses blow. Fuse continues to blow after associated loads are removed.	CC/IFB	FUSE IFB2A	081-051E	48VA086	058-086-055T	GND	024-085-055T
		FUSE IFB3A	181-051E	48VA086	158-086-055T	GND	124-085-055T
		FUSE IFB2B	081-071E	48VB086	058-086-555T	GND	024-092-055T
		FUSE IFB3B	181-071E	48VB086	158-086-555T	GND	124-092-055T
		FUSE IFB4A	081-056A	48VA096	058-096-055T	GND	024-095-055T
		FUSE IFB5A	181-056A	48VA096	158-096-055T	GND	124-095-055T
		FUSE IFB4B	081-076A	48VB096	058-096-555T	GND	058-102-055T
		FUSE IFB5B	181-076A	48VB096	158-096-555T	GND	158-102-055T
		FUSE IFB6A	081-056B	48VA104	058-104-055T	GND	058-103-055T
		FUSE IFB7A	181-056B	48VA104	158-104-055T	GND	158-103-055T
		FUSE IFB12A	081-056E	48VA128	058-128-055T	GND	058-127-055T
		FUSE IFB13A	181-056E	48VA128	158-128-055T	GND	158-127-055T
		FUSE IFB12B	081-076E	48VB128	058-128-555T	GND	058-134-055T
		FUSE IFB13B	181-076E	48VB128	158-128-555T	GND	158-134-055T
		FUSE IFB14A	081-061A	48VA136	058-136-055T	GND	058-135-055T
		FUSE IFB15A	181-061A	48VA136	158-136-055T	GND	158-135-055T
		FUSE IFB14B	081-081A	48VB136	058-136-555T	GND	058-142-055T
		FUSE IFB15B	181-081A	48VB136	158-136-555T	GND	158-142-055T
		FUSE IFB16A	081-061B	48VA144	058-144-055T	GND	058-143-055T
		FUSE IFB17A	181-061B	48VA144	158-144-055T	GND	158-143-055T
		FUSE IFB16B	081-081B	48VB144	058-144-555T	GND	058-150-055T
		FUSE IFB17B	181-081B	48VB144	158-144-555T	GND	158-150-055T

TABLE A (Contd)											
SHORTED -48V, -48V RETURN OR GROUND NETS, AFFECTED UNITS, RELATED CIRCUITRY AND OBSERVABLE SYMPTOMS											
OBSERVABLE SYMPTOMS	AFFECTED UNIT	RELATED CIRCUITRY		SHORTED NETS							
		NAME	EQUIPMENT LOCATION	NET NAME	NET EQUIPMENT LOCATION*	NET NAME	NET EQUIPMENT LOCATION*				
Fuse identified as related circuitry is blown and replacement fuses blow. Fuse continues to blow after associated loads are removed.	CC/IFB (Contd)	FUSE IFB18A	081-061C	48VA152	058-152-055T	GND	058-151-055T				
		FUSE IFB19A	181-061C	48VA152	158-152-055T	GND	158-151-055T				
		FUSE IFB18B	081-081C	48VB152	058-152-555T	GND	058-158-055T				
		FUSE IFB19B	181-081C	48VB152	158-152-555T	GND	158-158-055T				
		FUSE IFB20A	081-061D	48VA160	058-160-055T	GND	058-159-055T				
		FUSE IFB21A	181-061D	48VA160	158-160-055T	GND	158-159-055T				
Excessive signal noise	—	48V Ground Current		48RA086	X58-086-053T	GND	X24-085-053T				
				48RB086	X58-086-553T	GND	X24-092-053T				
				48RA096	X58-096-053T	GND	X24-095-053T				
				48RB096	X58-096-553T	GND	X58-102-053T				
				48RA104	X58-104-053T	GND	X58-103-053T				
				48RA128	X58-128-053T	GND	X58-127-053T				
				48RB128	X58-128-553T	GND	X58-134-053T				
				48RA136	X58-136-053T	GND	X58-135-053T				
				48RB136	X58-136-553T	GND	X58-142-053T				
				48RA144	X58-144-053T	GND	X58-143-053T				
				48RB144	X58-144-553T	GND	X58-150-053T				
				48RA152	X58-152-053T	GND	X58-151-053T				
				48RB152	X58-152-553T	GND	X58-158-053T				
				48RA160	X58-160-053T	GND	X58-159-053T				
				* X Is Equivalent To 0 Or 1 For 1B Processor Cabinet 0 Or 1							

WARNING 2 - STATIC DISCHARGE

A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins.

WARNING 3 - EXCESSIVE FORCE WHEN REPLACING CIRCUIT PACKS

Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding.

WARNING 4 - PUSH/PULL FUSE STRAIGHT TO AVOID BREAKAGE

When inserting and removing fuses, care must be taken to ensure fuses are pushed in and pulled out straight. Failure to push/pull fuses straight can exert excessive pressure on fuse assembly causing fuse assembly to crack or completely break off and lodge in fuse circuit card.

● ON	GREEN PUSHBUTTON
● OFF	RED PUSHBUTTON
○ OFF	RED LED
○ PA	RED LED
○ OS	YELLOW LED
○ ACK	GREEN LED
○ -48FA	RED LED
● LTEST	BLACK PUSHBUTTON
● ROS ► ◄ NORM	YELLOW TOGGLE SWITCH
● MOR	BLACK PUSHBUTTON

LEGEND:

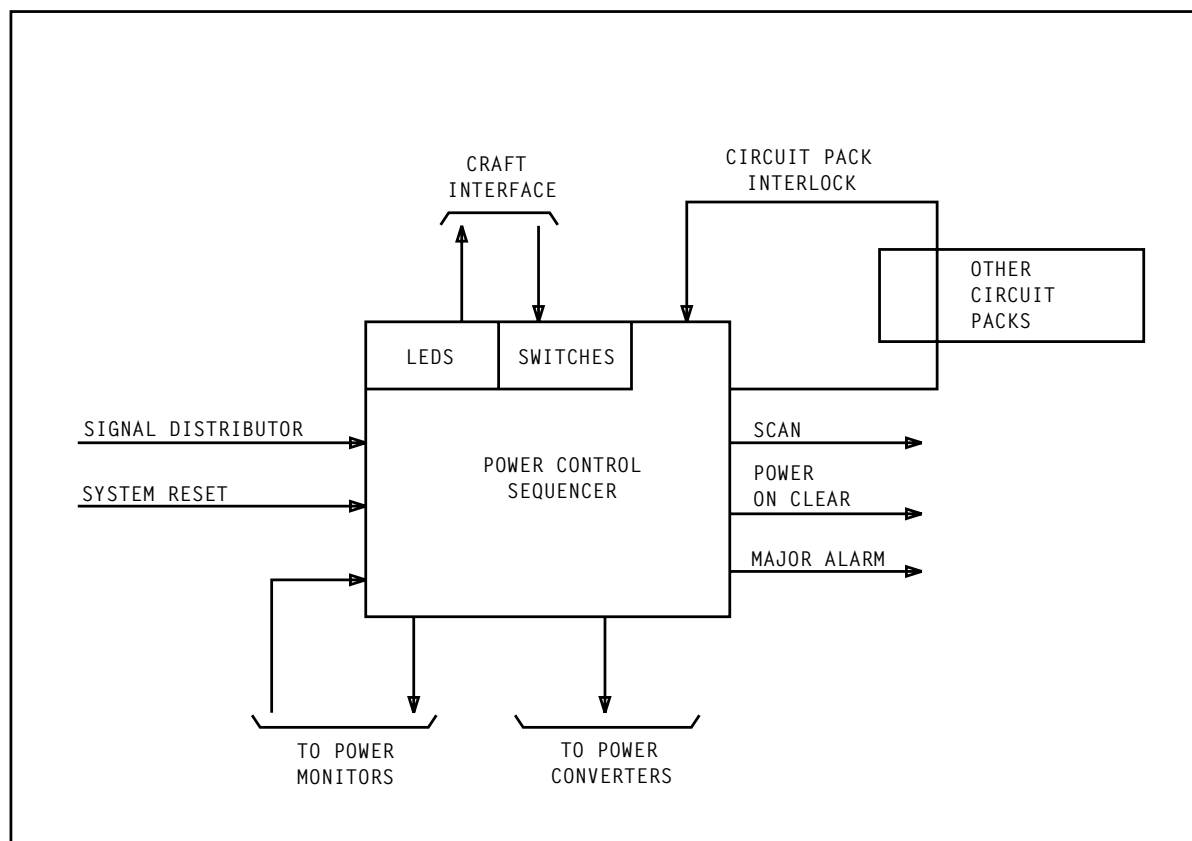
● - PUSHBUTTON/SWITCH

○ - LED

**POWER SWITCH
FACEPLATE LAYOUT**

TABLE A POWER SWITCH LED INDICATORS			
IDENTIFIER	NAME	COLOR	FUNCTION (WHEN LIGHTED)
OFF	Power Off	Red	Power off
PA	Power Alarm	Red	Fault in power system
OS	Out-of-Service	Yellow	Unit out-of-service
ACK	Acknowledge	Green	Acknowledges operator request
FA	Fuse Alarm	Red	Incoming -48V power lost due to blown fuse

TABLE B POWER SWITCH FUNCTIONS			
IDENTIFIER	NAME	SWITCH TYPE	FUNCTION
ON	Power On	Pushbutton	Powers up unit from power off state. No software intervention required.
OFF	Power Off	Pushbutton	Powers down out-of-service unit. When operated simultaneously with MOR pushbutton, powers down in-service unit. Clears any alarm state. No software intervention required.
ROS	Request Out-of-Service	Two Position Toggle	Request to remove unit from service. ACK LED will flash and OS LED will light. Software intervention required.
NORM	Request In-Service		Request to restore unit to service. ACK LED will flash and OS LED will go off. Software intervention required.
LTEST	Lamp Test	Pushbutton	Tests power switch LED indicators (Does not test power monitor LEDs on circuit packs).
MOR	Manual Override	Pushbutton	When operated simultaneously with OFF pushbutton, powers down in-service unit. No software intervention required.



POWER SWITCH FUNCTIONAL BLOCK DIAGRAM

39AA				39AC				39AD				39AD					
A	CC1 041-014 KLW11 5A	CC6 041-014 KLW11 5A	CC11 058-014 KLW12 5A	XP1A 058-030 KLW23 5A	F1A 011-031F FAN 1 3A	F4A 011-155R FAN 4 3A	F1B 011-031F FAN 1 3A	F4B 011-155R FAN 4 3A	PS0A 041-128 KLW2 2A	PS10A 041-168 KLW2 2A	IFB4A 058-096 2A	IFB14A 058-136 2A	PS0B 041-128 KLW2 2A	PS10B 041-168 KLW2 2A	IFB4B 058-096 2A	IFB14B 058-136 2A	CS0A 024-006 KLW1 2A
B	CC2 041-014 KLW11 5A	CC7 058-014 KLW12 5A	CC12 058-014 KLW12 5A	XP2A 058-030 KLW23 5A	F2A 011-093F FAN 2 3A	F5A 011-093R FAN 5 3A	F2B 011-093F FAN 2 3A	F5B 011-093R FAN 5 3A	PS2A 041-136 KLW2 2A	PS12A 041-176 KLW2 2A	IFB6A 058-104 2A	IFB16A 058-144 2A	PS2B 041-136 KLW2 2A	PS12B 041-176 KLW2 2A	IFB6B 058-104 2A	IFB16B 058-144 2A	CS4A 024-014 KLW1 2A
C	CC3 041-014 KLW11 5A	CC8 058-014 KLW12 5A	CC13 041-104 KLW3 2A	XP3A 058-030 KLW23 5A	F3A 011-155F FAN 3 3A	F6A 011-031R FAN 6 3A	F3B 011-155F FAN 3 3A	F6B 011-031R FAN 6 3A	PS4A 041-144 KLW2 2A		IFB8A 058-112 2A	IFB18A 058-152 2A	PS4B 041-144 KLW2 2A		IFB8B 058-112 2A	IFB18B 058-152 2A	CS8A 024-022 KLW1 2A
D	CC4 041-014 KLW11 5A	CC9 058-014 KLW12 5A	CC14 041-112 KLW4 2A		FCA 077-046 FC 1.33A		FCB 077-134 FC 1.33A		PS6A 041-152 KLW2 2A	IFB0A 058-078 KLW16/ KLW116 2A	IFB10A 058-120 KLW18 2A	IFB20A 058-160 2A	PS6B 041-152 KLW2 2A	IFB0A 058-078 KLW16/ KLW116 2A	IFB10B 058-120 KLW18 2A	IFB20B 058-160 2A	CS12A 024-030 KLW1 2A
E	CC5 041-014 KLW11 5A	CC10 058-014 KLW12 5A	CC15 041-120 KLW22/ KLW122 3A						PS8A 041-160 KLW2 2A	IFB2A 058-086 KLW25 3A	IFB12A 058-128 2A	IFB22A 058-168 KLW15 2A	PS8B 041-160 KLW2 2A	IFB2B 058-086 KLW25 3A	IFB12B 058-128 2A	IFB22B 058-168 KLW15 2A	CS16A 024-038 KLW1 2A
	006	011	016	021	026	031	036	041	046	051	056	061	066	071	076	081	086

39AD					39AD					39AG	39AG	39AE	39AJ	39AH
CS0A 024-006 KLW1 2A	CS20A 024-046 KLW1 2A	B00A 024-086 KLW26 0.5A	CS26A 024-128 KLW1 2A	CS6A 024-168 KLW1 2A	CS0B 024-006 KLW1 2A	CS20B 024-046 KLW1 2A	B00B 024-086 KLW26 0.5A	CS26B 024-128 KLW1 2A	CS6B 024-168 KLW1 2A	SSDA 058-168 KLW15 1.33A	SSDB 058-168 KLW15 1.33A	FUSE ALARM CIRC CARD	TP1 + - CR1	TEL
CS4A 024-014 KLW1 2A	CS24A 024-054 KLW1 2A	B10A 024-096 KLW27 0.5A	CS22A 024-136 KLW1 2A	CS2A 024-176 KLW1 2A	CS4B 024-014 KLW1 2A	CS24B 024-054 KLW1 2A	B10B 024-096 KLW27 0.5A	CS22B 024-136 KLW1 2A	CS2B 024-176 KLW1 2A	AUA 070-() UN338 1.33A	AUB 070-() UN338 1.33A		TP2 + - CR2	
CS8A 024-022 KLW1 2A	CS28A 024-062 KLW1 2A	CS38A 024-104 KLW1 2A	CS18A 024-144 KLW1 2A	48FAPA 081-146 0.5A	CS8B 024-022 KLW1 2A	CS28B 024-062 KLW1 2A	CS38B 024-104 KLW1 2A	CS18B 024-144 KLW1 2A	48FAPB 081-146 0.5A	PUBA 070-() UN339 1.33A	PUBB 070-() UN339 1.33A		TP3 + - CR3	TTYA
CS12A 024-030 KLW1 2A	CS32A 024-070 KLW1 2A	CS34A 024-112 KLW1 2A	CS14A 024-152 KLW1 2A		CS12B 024-030 KLW1 2A	CS32B 024-070 KLW1 2A	CS34B 024-112 KLW1 2A	CS14B 024-152 KLW1 2A		GCPA 070-() UN340 1.33A	GCPB 070-() UN340 1.33A		TP4 + - CR4	
CS16A 024-038 KLW1 2A	CS36A 024-078 KLW1 2A	CS30A 024-120 KLW1 2A	CS10A 024-160 KLW1 2A		CS16B 024-038 KLW1 2A	CS36B 024-078 KLW1 2A	CS30B 024-120 KLW1 2A	CS10B 024-160 KLW1 2A		24FAA 081-146 39AE 0.5A	24FAB 081-146 39AE 0.5A		TP5 + - CR5	
086	091	096	101	106	111	116	121	126	131	136	141	146	151	176

FUSE LAYOUT CHART - CABINET 0

1B PROCESSOR CABINET FUSE LAYOUT CHART

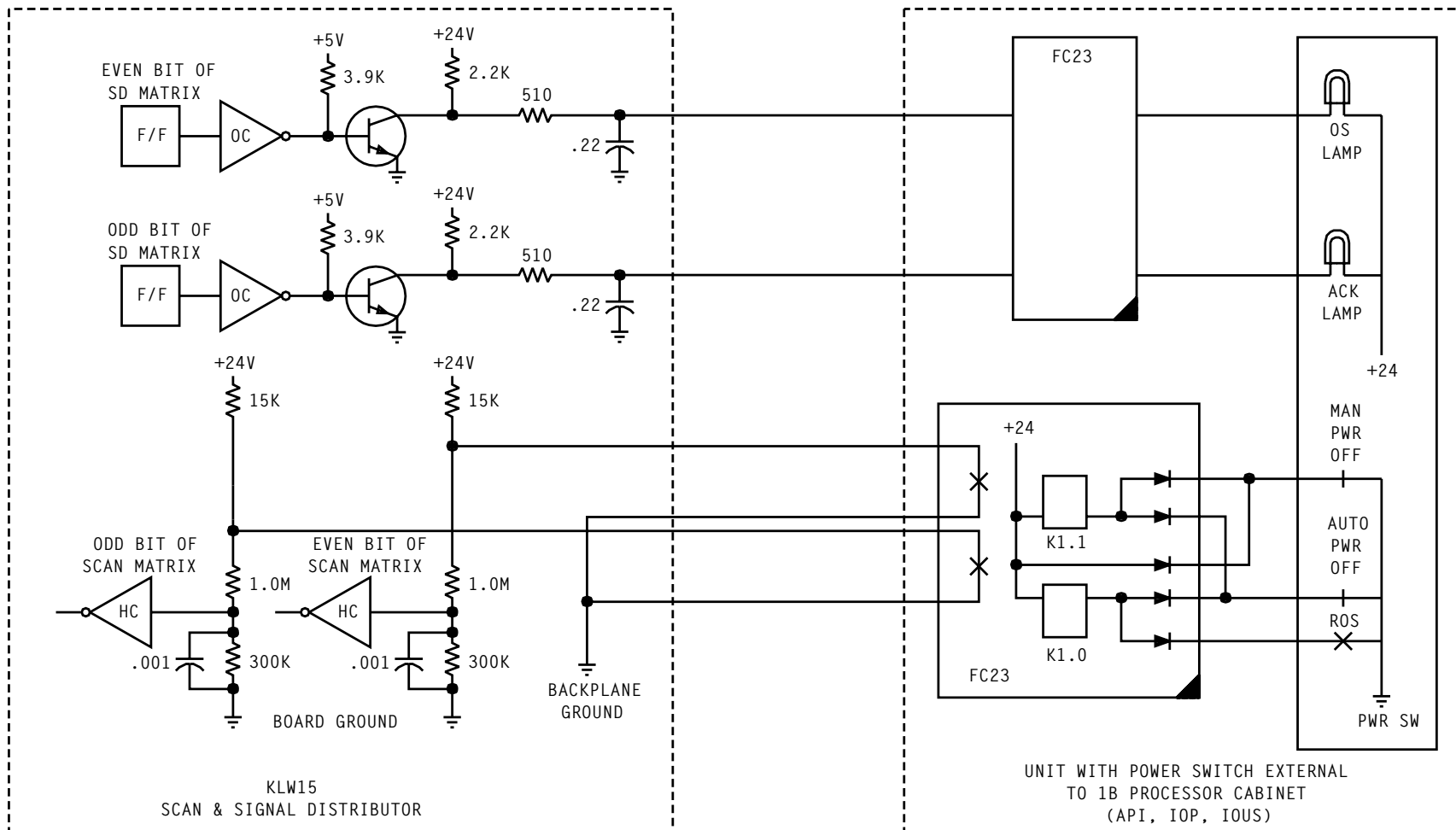
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39AA				39AC				39AD				39AD					
A	CC1 141-014 KLW11 5A	CC6 141-014 KLW11 5A	CC11 158-014 KLW12 5A	XP1B 158-030 KLW23 5A	F1A 111-031F FAN 1 3A	F4A 111-155R FAN 4 3A	F1B 111-031F FAN 1 3A	F4B 111-155R FAN 4 3A	PS1A 141-128 KLW2 2A	PS11A 141-168 KLW2 2A	IFB5A 158-096 2A	IFB15A 158-136 2A	PS1B 141-128 KLW2 2A	PS11B 141-168 KLW2 2A	IFB5B 158-096 2A	IFB15B 158-136 2A	CS1A 124-006 KLW1 2A
	CC2 141-014 KLW11 5A	CC7 158-014 KLW12 5A	CC12 158-014 KLW12 5A	XP2B 158-030 KLW23 5A	F2A 111-093F FAN 2 3A	F5A 111-093R FAN 5 3A	F2B 111-093F FAN 2 3A	F5B 111-093R FAN 5 3A	PS3A 141-136 KLW2 2A	PS13A 141-176 KLW2 2A	IFB7A 158-104 2A	IFB17A 158-144 2A	PS3B 141-136 KLW2 2A	PS13B 141-176 KLW2 2A	IFB7B 158-104 2A	IFB17B 158-144 2A	CS5A 124-014 KLW1 2A
B	CC3 141-014 KLW11 5A	CC8 158-014 KLW12 5A	CC13 141-104 KLW3 2A	XP3B 158-030 KLW23 5A	F3A 111-155F FAN 3 3A	F6A 111-031R FAN 6 3A	F3B 111-155F FAN 3 3A	F6B 111-031R FAN 6 3A	PS5A 141-144 KLW2 2A		IFB9A 158-112 2A	IFB19A 158-152 2A	PS5B 141-144 KLW2 2A		IFB9B 158-112 2A	IFB19B 158-152 2A	CS9A 124-022 KLW1 2A
	CC4 141-014 KLW11 5A	CC9 158-014 KLW12 5A	CC14 141-112 KLW4 2A		FCB 177-046 FC 1.33A		FCB 177-134 FC 1.33A		PS7A 141-152 KLW2 2A	IFB1A 158-078 KLW16/ KLW116 2A	IFB11A 158-120 KLW18 2A	IFB21A 158-160 2A	PS7B 141-152 KLW2 2A	IFB1A 158-078 KLW16/ KLW116 2A	IFB11B 158-120 KLW18 2A	IFB21B 158-160 2A	CS13A 124-030 KLW1 2A
C	CC5 141-014 KLW11 5A	CC10 158-014 KLW12 5A	CC15 141-120 KLW22/ KLW122 3A						PS9A 141-160 KLW2 2A	IFB3A 158-086 KLW25 3A	IFB13A 158-128 2A	IFB23A 158-168 KLW15 2A	PS9B 141-160 KLW2 2A	IFB3B 158-086 KLW25 3A	IFB13B 158-128 2A	IFB23B 158-168 KLW15 2A	CS17A 124-038 KLW1 2A
	006	011	016	021	026	031	036	041	046	051	056	061	066	071	076	081	086

39AD					39AD					39AG	39AG	39AE	39AJ	39AH
CS1A 124-006 KLW1 2A	CS21A 124-046 KLW1 2A	B01A 124-086 KLW26 0.5A	CS27A 124-128 KLW1 2A	CS7A 124-168 KLW1 2A	CS1B 124-006 KLW1 2A	CS21B 124-046 KLW1 2A	B01B 124-086 KLW26 0.5A	CS27B 124-128 KLW1 2A	CS7B 124-168 KLW1 2A	SSDA 158-168 KLW15 1.33A	SSDB 158-168 KLW15 1.33A	FUSE ALARM CIRCUIT CARD	TP1 + - CR1	TEL
CS5A 124-014 KLW1 2A	CS25A 124-054 KLW1 2A	B11A 124-096 KLW27 0.5A	CS23A 124-136 KLW1 2A	CS3A 124-176 KLW1 2A	CS5B 124-014 KLW1 2A	CS25B 124-054 KLW1 2A	B11B 124-096 KLW27 0.5A	CS23B 124-136 KLW1 2A	CS3B 124-176 KLW1 2A	AUA 170-() UN338 1.33A	AUB 170-() UN338 1.33A		TP2 + - CR2	
CS9A 124-022 KLW1 2A	CS29A 124-062 KLW1 2A	CS39A 124-104 KLW1 2A	CS19A 124-144 KLW1 2A	48FAPA 181-146 0.5A	CS9B 124-022 KLW1 2A	CS29B 124-062 KLW1 2A	CS39B 124-104 KLW1 2A	CS19B 124-144 KLW1 2A	48FAPB 181-146 0.5A	PUBA 170-() UN339 1.33A	PUBB 170-() UN339 1.33A		TP3 + - CR3	
CS13A 124-030 KLW1 2A	CS33A 124-070 KLW1 2A	CS35A 124-112 KLW1 2A	CS15A 124-152 KLW1 2A		CS13B 124-030 KLW1 2A	CS33B 124-070 KLW1 2A	CS35B 124-112 KLW1 2A	CS15B 124-152 KLW1 2A		GCPA 170-() UN340 1.33A	GCPB 170-() UN340 1.33A		TP4 + - CR4	
CS17A 124-038 KLW1 2A	CS37A 124-078 KLW1 2A	CS31A 124-120 KLW1 2A	CS11A 124-160 KLW1 2A		CS17B 124-038 KLW1 2A	CS37B 124-078 KLW1 2A	CS31B 124-120 KLW1 2A	CS11B 124-160 KLW1 2A		24FAA 181-146 39AE 0.5A	24FAB 181-146 39AE 0.5A		TP5 + - CR5	
086	091	096	101	106	111	116	121	126	131	136	141	146	151	176

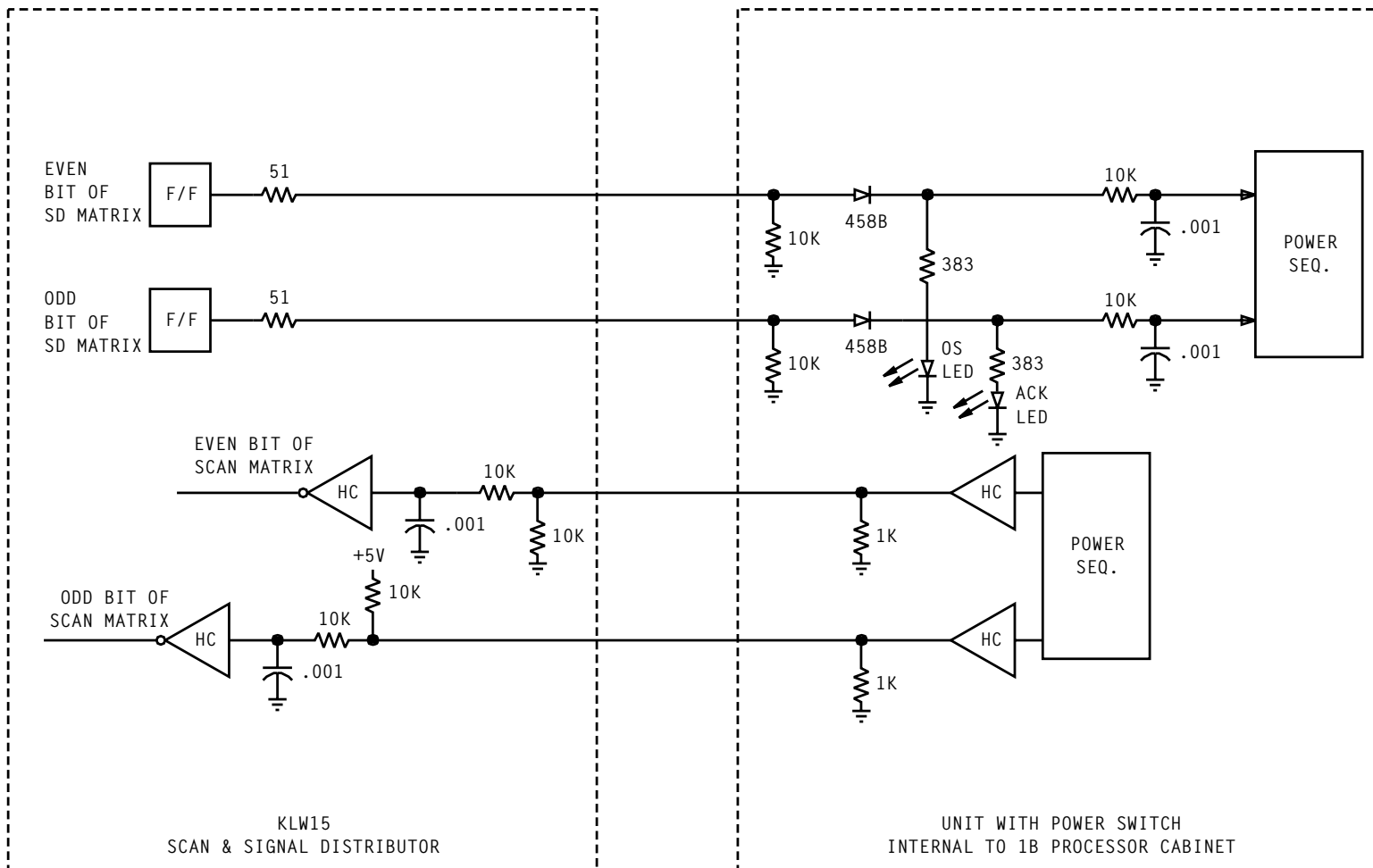
FUSE LAYOUT CHART – CABINET 1

1B PROCESSOR CABINET FUSE LAYOUT CHART



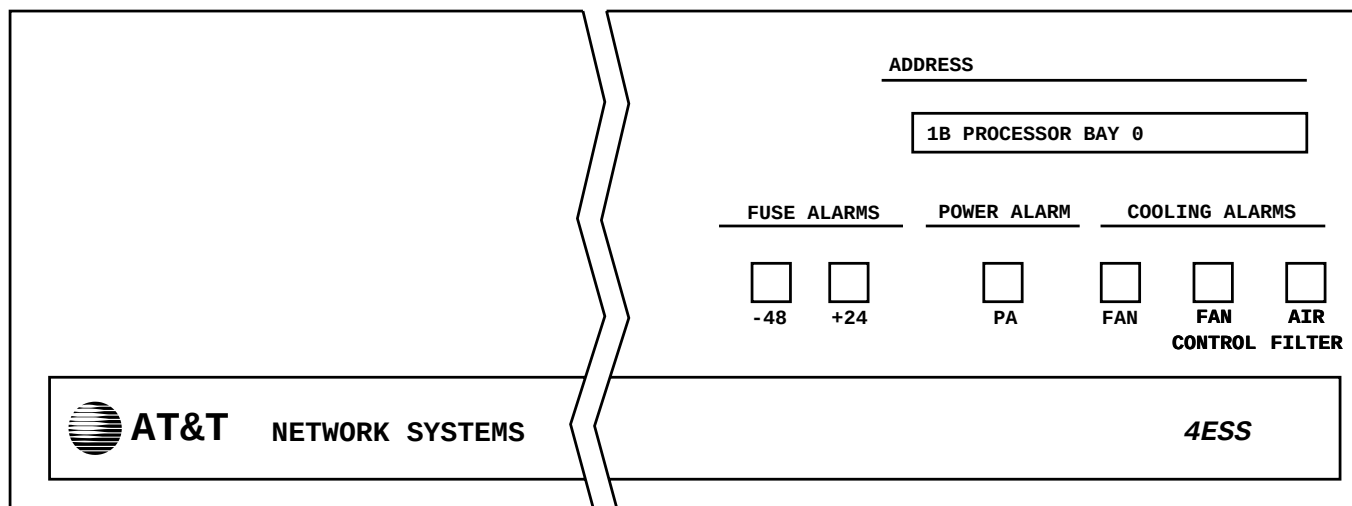
SCAN AND SIGNAL DISTRIBUTOR (SSD) FLOW – UNIT EXTERNAL TO 1B PROCESSOR CABINET

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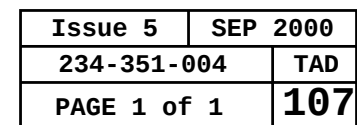


SCAN AND SIGNAL DISTRIBUTOR (SSD) FLOW – UNIT INTERNAL TO 1B PROCESSOR CABINET

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Layout Of Alarm LEDs On 1B Processor Cabinet Fuse Unit Cover (Bezel)



1B

PROC

CIRCUIT PACK RETURN TAG

OFFICE NAME:

DATE:

GENERIC:

CIRCUIT PACK CODE & SERIES:

SERIAL NUMBER:

CIRCUIT PACK LOCATION (EQL):
(IE 176-024)

FAULT TYPE:

DGN
INTERRUPT
UPDATE

FAILURE MODE:

PRE-SERVICE
IN-SERVICE

MAJOR OUTAGE:

(>2000 BLOCKED CALLS
>10 MINUTES DOWNTIME)

YES
NO

FAULT DURING FIRST 24 HRS:

YES
NO

WERE OTHER CPs RETURNED FOR
THE SAME FAULT:

YES
NO

(DETAIL FAULT TYPE ON BACKSIDE)

(FRONT VIEW)

FAULT

TYPE

DGN FAULT

PHASE	TEST	MM

INTERRUPT DATA

TYPE	UNIT
LEVEL A B C D E F	
INTERJECT	
BLM	

COMMENTS

NAME:

PLEASE STAPLE FAILURE
PRINTOUTS TO THIS TICKET.
FOR ADDITIONAL TICKETS
CALL 614-860-2347

(REAR VIEW)

Example of 1B Processor Circuit Pack Return Tag

1B PROCESSOR CIRCUIT PACK RETURN TAG DATA IDENTIFICATION

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GENERAL

The information entered onto the 1B Processor Circuit Pack Return Tag will provide manufacturing personnel with data necessary to ensure the highest quality equipment repair service. The data can be used to focus additional testing in the problem area that occurred in the field. This focus will allow all defects to be identified and corrected prior to returning equipment to the field and/or prevent equipment that has caused major service affecting incidents from being returned to the field when a "No Trouble Found" test result occurs during the repair process. Thus, the correct and detailed data provided on the 1B Processor Circuit Pack Return Tag will improve the quality of customer service. Refer to Table A for the 1B Processor Circuit Pack Return Tag data fields and associated data to be entered.

TABLE A 1B PROCESSOR CIRCUIT PACK RETURN TAG DATA	
DATA FIELD	DESCRIPTION OF DATA TO BE ENTERED
OFFICE DATA	Office 11-digit CLLI code (OKBKIL0A52T)
DATE	Date of failure (02/20/94)
GENERIC	Office operating generic at time of failure (4E19.4)
CIRCUIT PACK CODE & SERIES	Circuit pack code and series identifiers (KLW21, Series 5)
SERIAL NUMBER	Serial number from scanner identification (93CB04013895)
CIRCUIT PACK LOCATION (EQL)	Circuit pack equipment location including bay (176-024)
FAULT TYPE	Circle appropriate reason for removal (DGN, Interrupt or Update)
FAILURE MODE	Circle whether failure occurred IN-SERVICE or PRE-SERVICE
MAJOR OUTAGE	Circle YES if fault caused major outage (Major outage is defined as "Greater Than 2000 Blocked Calls Or More Than 10 Minutes Downtime")
FAULT DURING FIRST 24 HOURS	Circle Yes if fault occurred during first 24 hours of service
WERE OTHER CIRCUIT PACKS RETURNED FOR THE SAME REASON	Circle YES if multiple circuit packs were returned for the same failure. Circle NO if this is only circuit pack returned for identified failure
DGN FAULT	Data relative to diagnostic failure (Phase, Test and MM)
INTERRUPT DATA	If applicable, data relative to interrupt
COMMENTS	Provide any additional useful comments about failure
NAME	Provide name of person having most knowledge about failure
NOTE	Attach any additional failure printouts to Return Tag that may aid in resolving failure

1B PROCESSOR CIRCUIT PACK RETURN TAG DATA IDENTIFICATION

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1B PROCESSOR CABINET 1002C NULLPACK EXTENDER TEST TOOL

The 1002C nullpack extender is a cable fault analysis test tool designed to minimize backplane cable probing in the 1B Processor cabinet backplane. The tool extends the rear backplane pins of a K LW unit to the front of the cabinet allowing pin access for cable testing. The 1002C nullpack extender is extremely useful in detecting cable open connections while troubleshooting. When used as designed, the 1002C nullpack extender can safely be used in the 1B Processor cabinet without causing a duplex failure.

Connectivity to pins 524B and 555B is not represented on the 1002C nullpack extender due to electrical problems in some 1B Processor K LW circuit pack slots. Therefore, testing these pins must be performed at the rear of the 1B Processor cabinet on the backplane. Extreme care should be exercised while in the backplane area of the 1B Processor cabinet to ensure minimal movement of backplane cabling, avoid shorting/bending pins, etc.

The 1002C nullpack extender is not designed or intended to serve as a K LW circuit pack extender board and should not be modified in an attempt to create a pack extender. In addition, any modifications to the 1002C nullpack extender will destroy the design intent of the test tool. One common use of the 1002C nullpack extender is to verify opens within cables. Cable opens are verified by removing the K LW circuit packs located at each end of the cable, inserting a 1002C nullpack extender into both K LW circuit pack slots and using an ohmmeter to verify cable conductivity.

WARNING: To avoid a possible duplex failure when testing cross-connect cables, only one K LW circuit pack should be removed and replaced with a 1002C nullpack extender while a voltmeter or oscilloscope is used to verify cable conductivity.

Figures 1 and 2 identify the front and left side view of the 1002C nullpack extender test tool.

1B PROCESSOR CABINET 1002C NULLPACK EXTENDER

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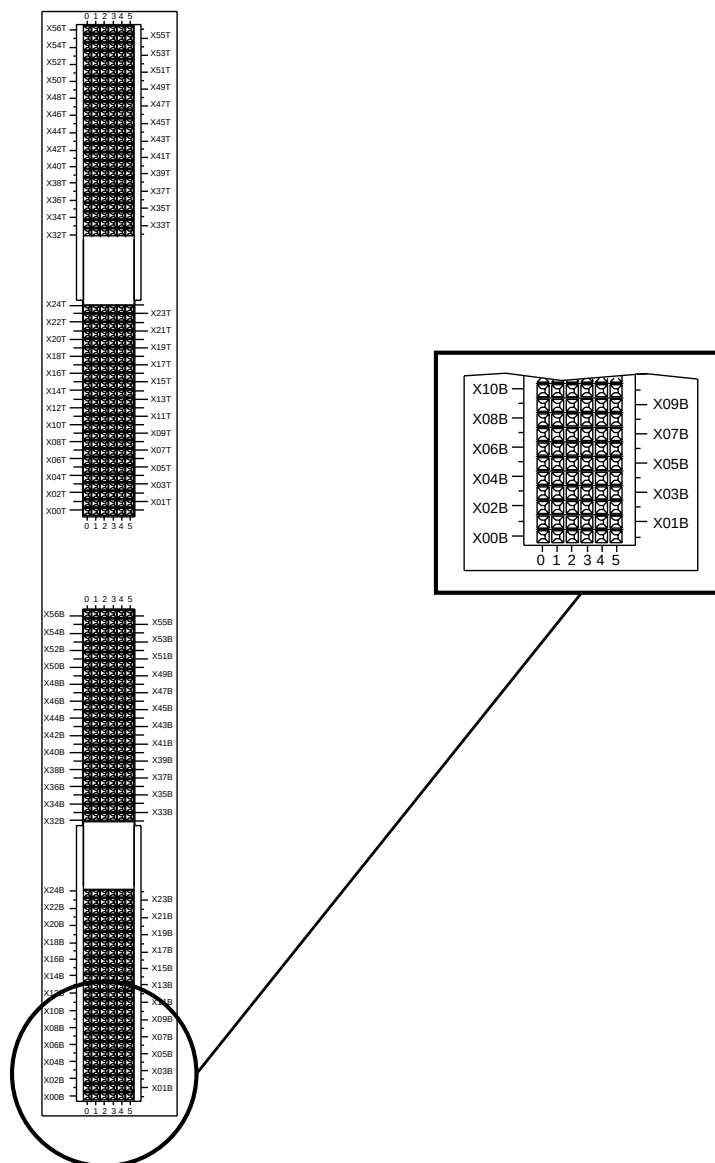


FIG. 1 – 1002C NULLPACK EXTENDER (Front View)



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TABLE A**1B PROCESSOR RECOMMENDED TOOLS**

TOOL NAME	COMCODE	ED	ITE	SUPPLIER	DEPLOYMENT
Frame Dollies	050035146	NA	NA	AT&T	One per installation site
Scope Adapter Unit	106825870	NA	6818	AT&T Installation	One per installation site
Heat Gun	NA	NA	NA	Newark Electronics, ALPHA Wire Corp.	One per installation site
Oscilloscope, Remotable	NA	NA	NA	Tektronix, Inc.	One per office, NESAC, PEDD & TCC
Logic Analyzer, Remotable	NA	NA	NA	Hewlett Packard	One per Geographical Area, NESAC, PECC & TCC
Amp Meter/Current Gun	NA	NA	NA	Golbeck Milota Assoc.	One per office
Digital Volt Meter	NA	NA	NA	Hewlett Packard	One per office
KLW1002B Nullpack Extender Board	—	—	—	FASTEK	Two per Geographic Area
UN918H Nullpack Extender Board	—	—	—	FASTEK	One per Geographic Area
RS-232 Mini-Tester	NA	NA	NA	Black Box	One per office
High Intensity Lamp	NA	NA	NA	Roxter Corp	One per office
Magnifier Light	NA	NA	NA	Grainger Equipment	One per office
Wrist Straps	901003562	NA	NA	Semtronics	Two per office
Fuse/Fuse Card Extractor Tool	846983641	NA	NA	NA	Part of Produce
Backplane Pin Repair Kit (KS-22876,L5)	Kit-406902817 Extension-406902833 Instructions-406902825	NA	NA	AT&T	One per office
Backplane Pin-Field Clean and Lube Tool Kit	UN Kit-103661542 KLW Kit-106967722 Pads-843940206 Cleaner-106967722	NA	NA	AT&T-Kansas City Works	One per office
KLW/UN Circuit Pack Key Block Repair Tool	NA	NA	NA	AT&T-OK City	One per TCC, NESAC & PECC
Orange Stick (KS6329,L1/L2)	Wood-996780946 Plastic-401921341	NA	NA	AT&T	Two per office

1B PROCESSOR RECOMMENDED TOOLS

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TABLE A (Contd)**1B PROCESSOR RECOMMENDED TOOLS**

TOOL NAME	COMCODE	ED	ITE	SUPPLIER	DEPLOYMENT
Cutters	NA	NA	NA	Newark Electronics	One per office
Cable Ties	401682273	NA	NA	Panduit, Thomas & Betts	One per office
Lacing	900308990	NA	NA	Indian Head Yarn & Thread	One per office
127C Cable Retainer Insertion Tool	403384209	NA	NA	AT&T	One per office
127C Cable Retainer Extraction Tool	403559917	NA	NA	AT&T	One per office
12A Cable Retainer Insertion Extraction Tool	106189517	NA	NA	AT&T	One per office
12B Cable Retainer Insertion Extraction Tool	106189525	NA	NA	AT&T	One per office
12C Cable Retainer Insertion Extraction Tool	106189533	NA	NA	AT&T	One per office
12D Cable Retainer Insertion Extraction Tool	106189541	NA	NA	AT&T	One per office
12E Cable Retainer Insertion Extraction Tool	106189558	NA	NA	AT&T	One per office
12F Cable Retainer Insertion Extraction Tool	106189566	NA	NA	AT&T	One per office
963T Connector Repair Tool	106077654	NA	NA	AT&T-Micro Electronics	One per Geographic Area

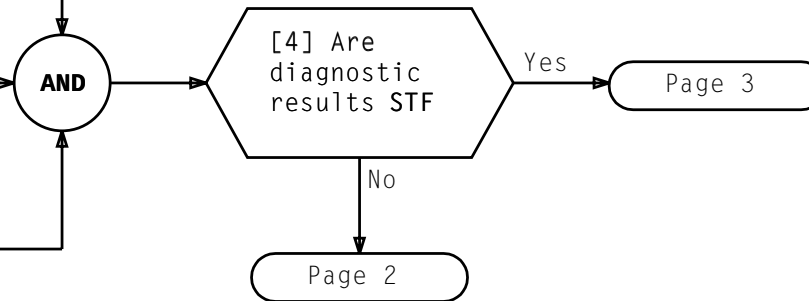
1B PROCESSOR RECOMMENDED TOOLS

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[1] Identify 1B Processor
cabinet unit failing
diagnostics

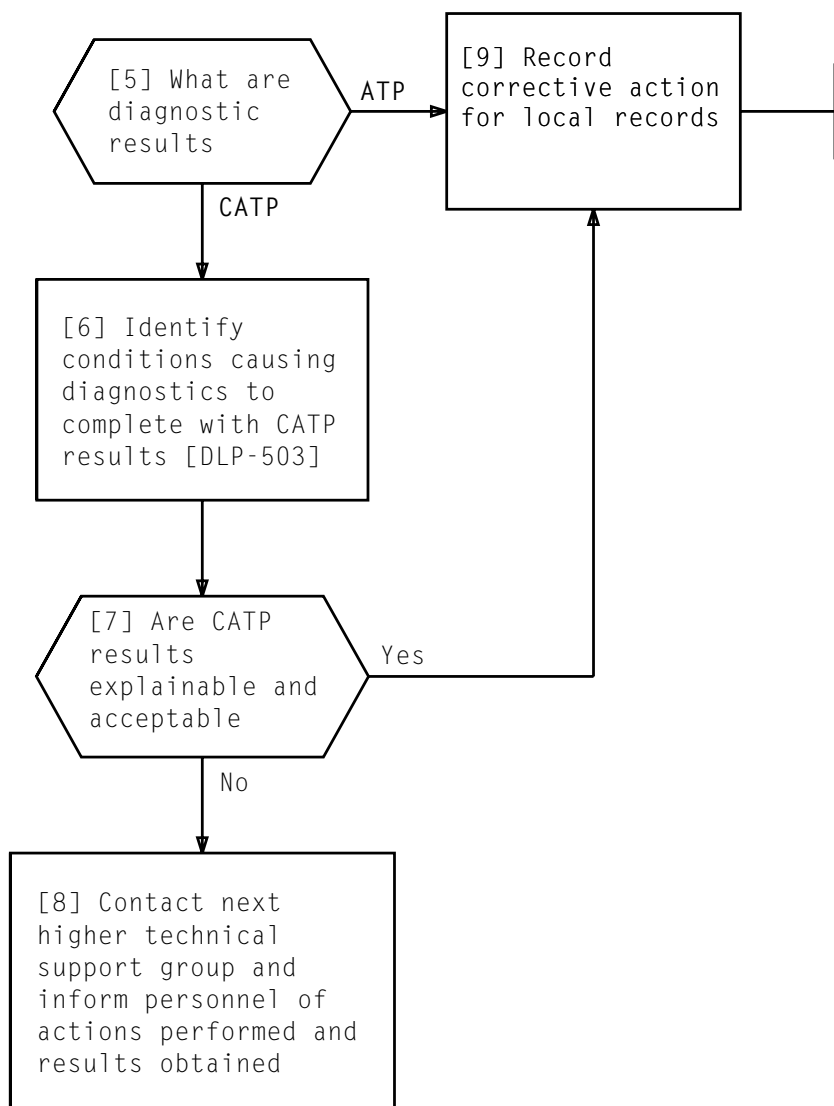
[2] At 1B Processor MTC
terminal, enter
DGN:a b:TLP!
a = Unit type
b = Unit member number

[3] Allow ample time
for diagnostics to
complete



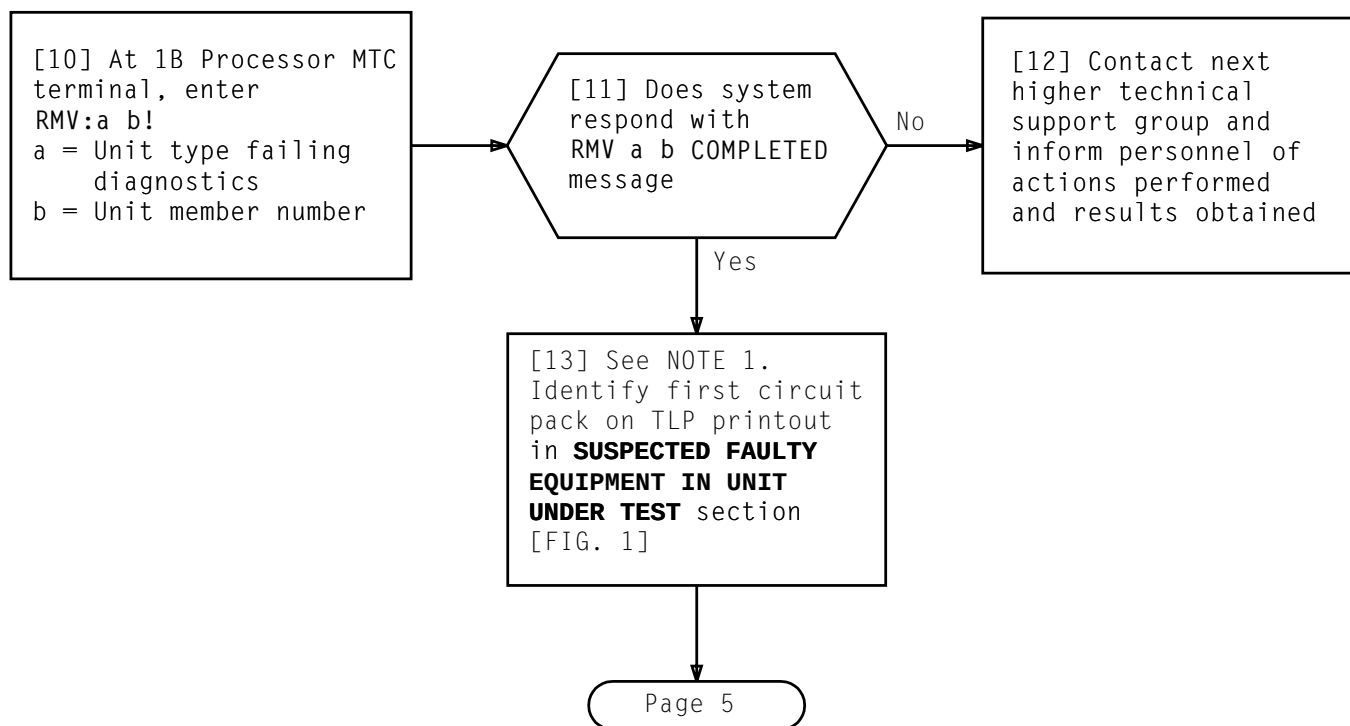
**CLEAR DIAGNOSTIC FAILURE BY REPLACING CIRCUIT PACKS ON TLP
SUSPECTED FAULTY EQUIPMENT LIST**

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CLEAR DIAGNOSTIC FAILURE BY REPLACING CIRCUIT PACKS ON TLP SUSPECTED FAULTY EQUIPMENT LIST

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**CLEAR DIAGNOSTIC FAILURE BY REPLACING CIRCUIT PACKS ON TLP
SUSPECTED FAULTY EQUIPMENT LIST**

NOTE 1		
Suspect circuit packs are printed on TLP printout in the order that they are to be replaced		
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UNIT FAILING
DIAGNOSTICS
CONTAINING
SUSPECTED FAULTY
EQUIPMENT

SUSPECTED
FAULTY
EQUIPMENT CODE
AND FUNCTION

SUSPECTED
FAULTY
EQUIPMENT
LOCATION

STF SCRAMBLED
NUMBER

M 28 DGN: CC 0 TERMINATED AT PH 56 ADR 4666 AFTER TEST 343 MSG STARTED
#896

M 28 DGN: CC 0 PH 56 STF (9,00000000 00000000) MSG IP
TEST MISMATCH SUPPLEMENTARY DATA
19 00400000
26 00400000
#897

M 28 ANALY:TLPFILE :CC 0 SUMMARY DATA MSG STARTED
KEY: V1 V2 V3 V4 V5 V6
TD : 03020014 00000000 00000523 00700000 00000000 00000000
ED : 01060020 00000000 00132014 00000000 00132123 00000000
ED : 00050001 00000000 00024016 00000000 00000000 00000000
MFNUM : 00000523
#898

M 28 ANALY:TLPFILE: CC 0 SUSPECTED FAULTY EQUIPMENT MSG IP
IN UNIT UNDER TEST

MFNUM : 00000523
FLN 00015.640
EQPT LOC CODE (FN) NOTE WT FS SYM SD HELPER ID

1B PROC-041-062	KLW24 (CKUT)	1	10	7	1	4A148
1B PROC-041-046	KLW8 (CB1)	2	9	1	4A148	

#899

M 28 ANALY:TLPFILE: CC 0 SUSPECTED FAULTY EQUIPMENT MSG IP
NOT IN UNIT UNDER TEST

MFNUM : 00000523
EQPT LOC CODE (FN) NOTE WT FS SYM SD HELPER ID

1B PROC-141-062	KLW24 (CKUT)	1	1	7	1	4A148 :CC 1

NEQLS 00000006
#900

M28 ANALY:TLPFILE: CC 0 SUSPECTED FAULTY EQUIPMENT MSG COMPL
NOTES

MFNUM : 00000523

NOTES:

1 (COM01)----SPECIAL PROCEDURES ARE REQUIRED FOR CIRCUIT PACK
REPLACEMENT. REFER TO THE ASSOCIATED TOP.

#901

M 28 DGN: CC 0 STOPPED STF (1.9,15364222) MSG COMPL
05/20/92 00:28:38
#902

LOCATION OF
SUSPECTED FAULTY
EQUIPMENT NOT IN
UNIT FAILING
DIAGNOSTICS

EQUIPMENT CODE
AND FUNCTION OF
SUSPECTED FAULTY
EQUIPMENT NOT IN
UNIT FAILING
DIAGNOSTICS

UNIT CONTAINING
SUSPECTED FAULTY
EQUIPMENT NOT IN
UNIT FAILING
DIAGNOSTICS

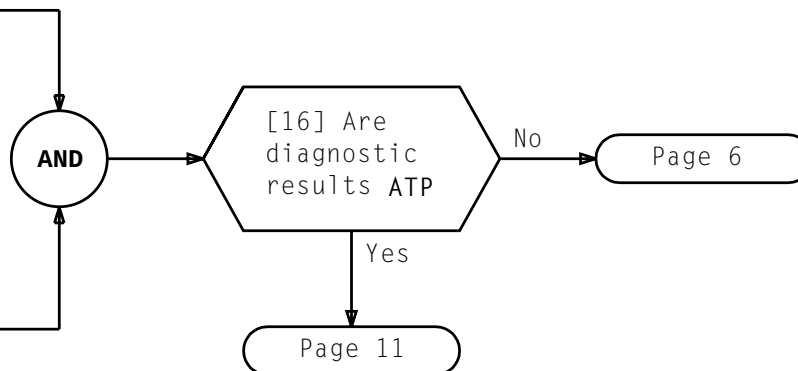
FIG. 1 - Sample Printout of TLP Suspected Faulty Equipment

**CLEAR DIAGNOSTIC FAILURE BY REPLACING CIRCUIT PACKS ON TLP
SUSPECTED FAULTY EQUIPMENT LIST**

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[14] See WARNING 1 and
NOTE 2. Replace
circuit pack [DLP-500]

[15] After moving applicable
ROS/NORM switch left to
NORM position, allow ample
time for diagnostics
to complete



NOTE 2

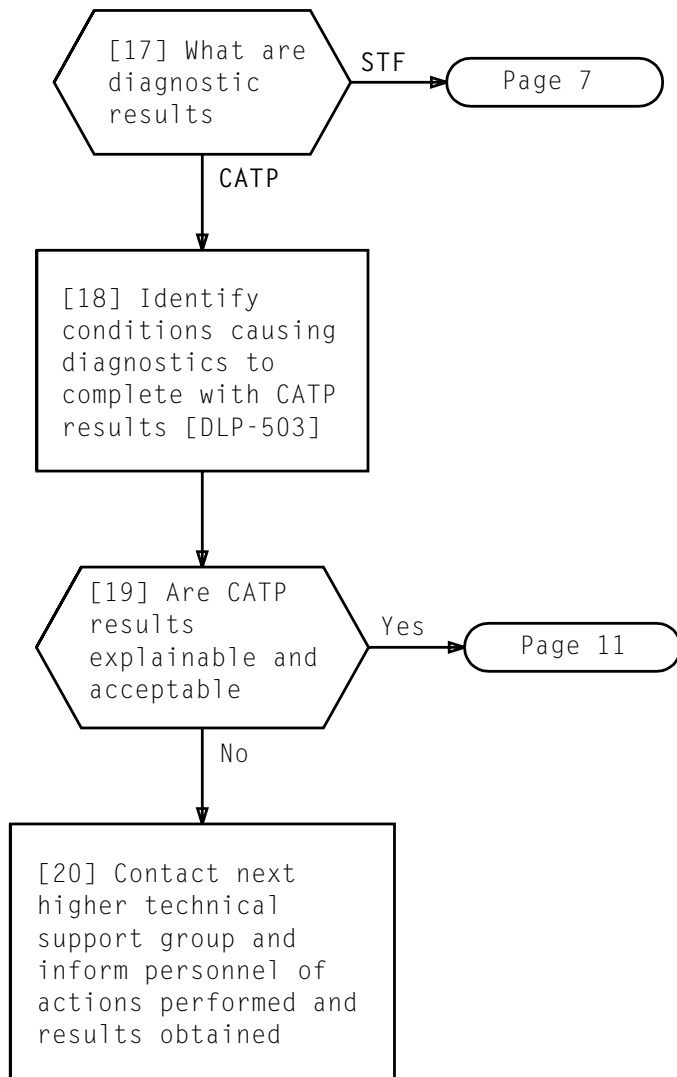
Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 1

A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

**CLEAR DIAGNOSTIC FAILURE BY REPLACING CIRCUIT PACKS ON TLP
SUSPECTED FAULTY EQUIPMENT LIST**

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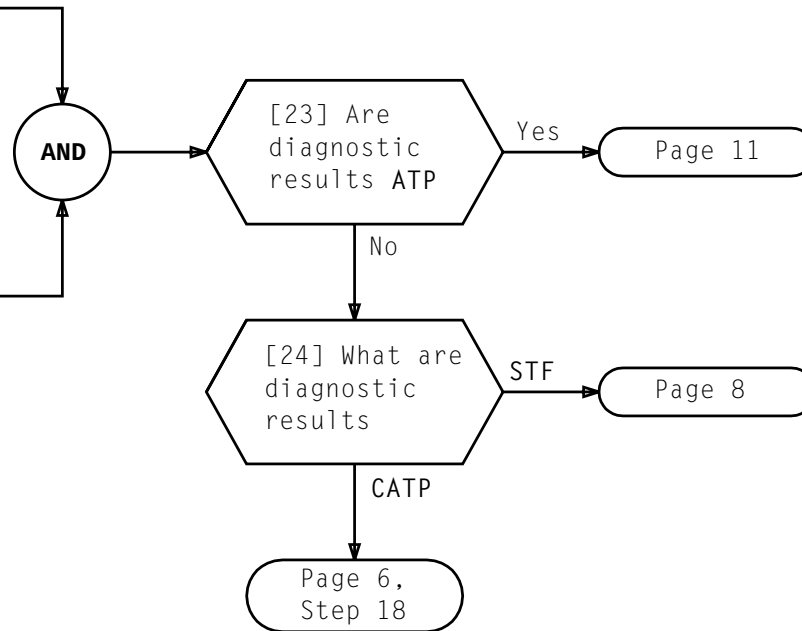


**CLEAR DIAGNOSTIC FAILURE BY REPLACING CIRCUIT PACKS ON TLP
SUSPECTED FAULTY EQUIPMENT LIST**

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[21] See WARNING 2 and NOTE 3.
Replace original circuit
pack previously replaced
[DLP-500]

[22] After moving applicable
ROS/NORM switch left to
NORM position, allow ample
time for diagnostics
to complete



NOTE 3

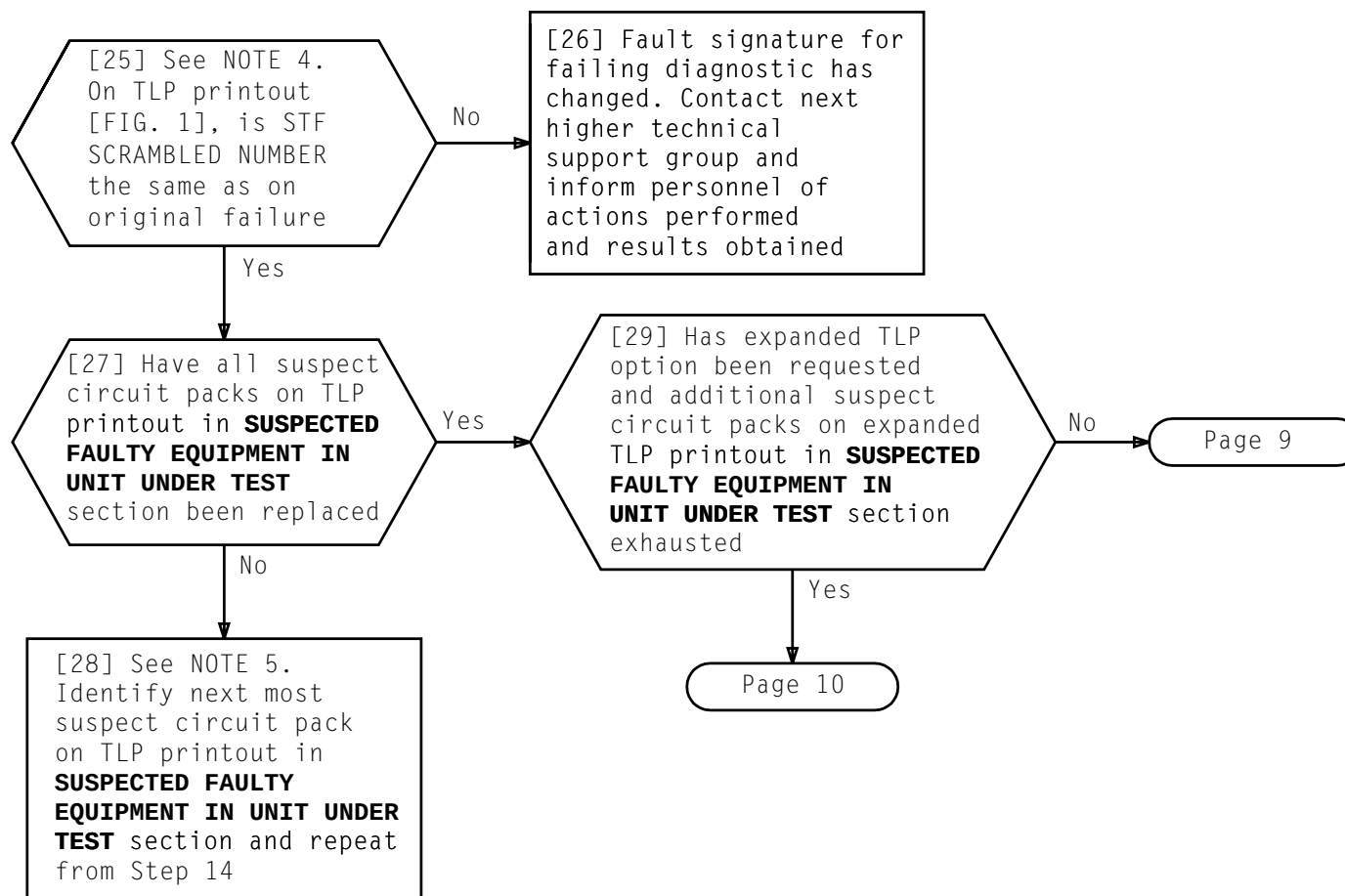
Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 2

A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

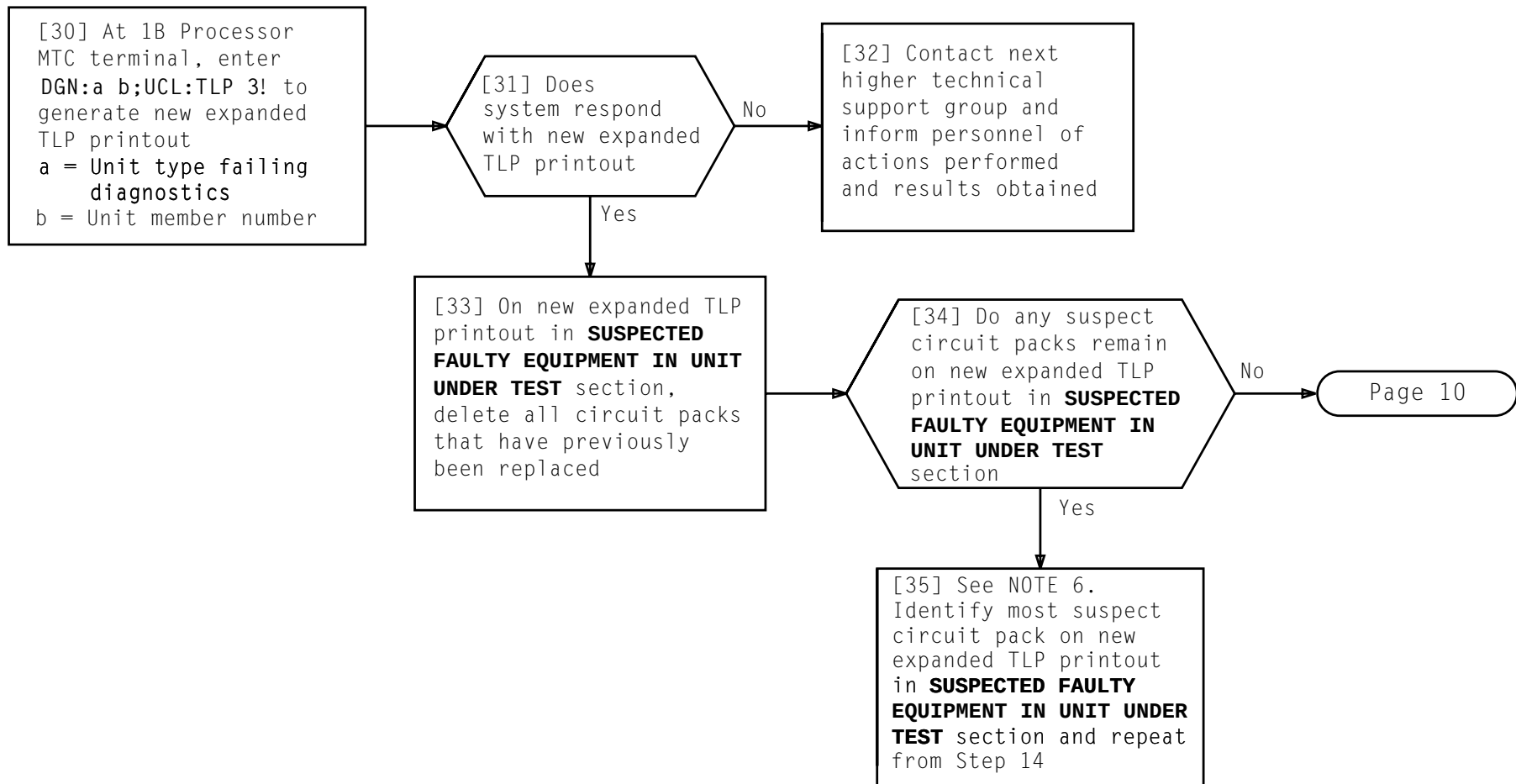
**CLEAR DIAGNOSTIC FAILURE BY REPLACING CIRCUIT PACKS ON TLP
SUSPECTED FAULTY EQUIPMENT LIST**

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NOTES			
4. The STF SCRAMBLED NUMBER indicates if all the diagnostic raw data (test and mismatch) is identical or different for two diagnostic runs. If STF SCRAMBLED NUMBER value is same, diagnostic raw data is identical. Otherwise, diagnostic raw data has changed in some manner			
5. Suspect circuit packs are printed on TLP printout in the order that they are to be replaced			
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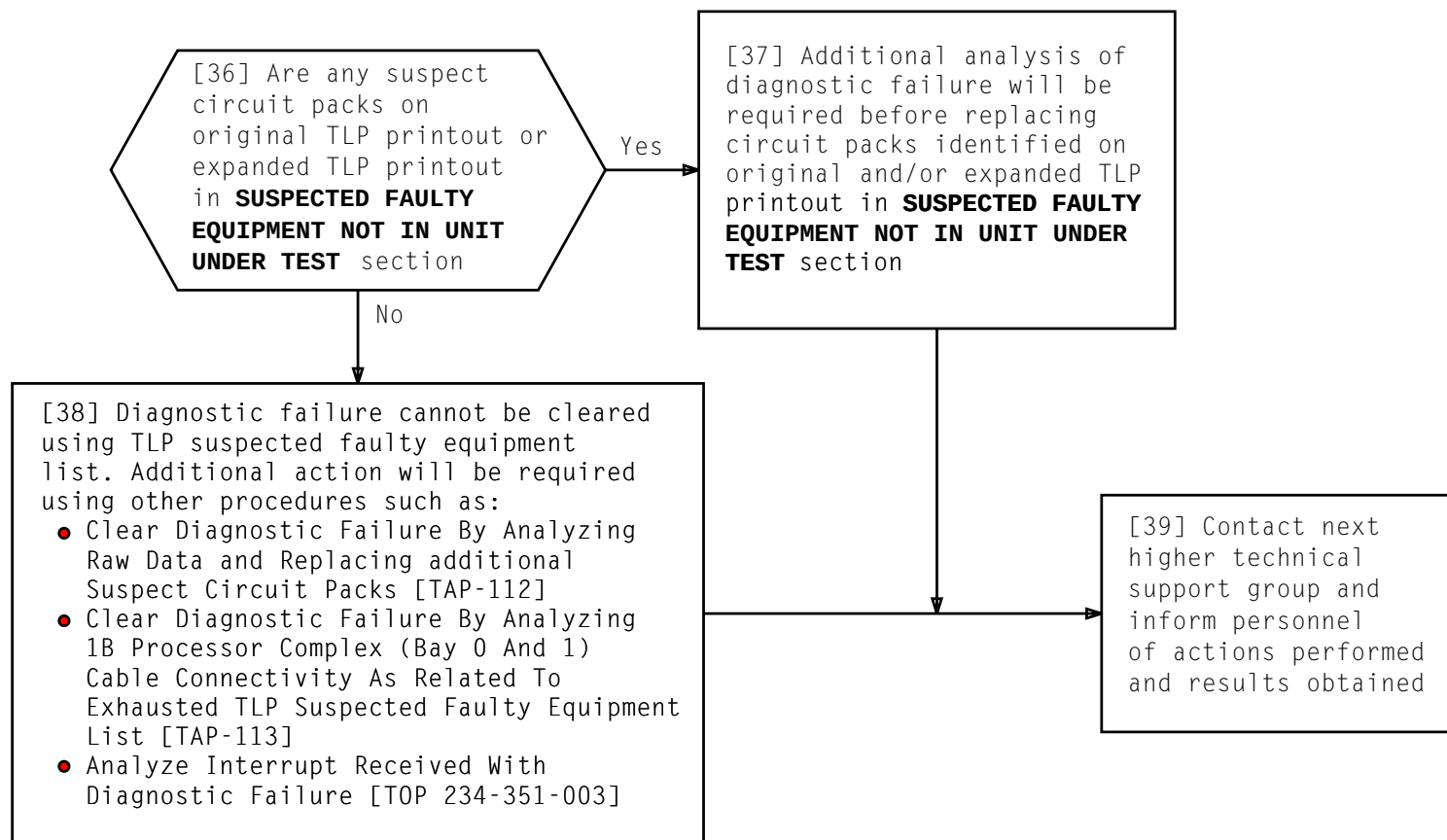


NOTE 6

Suspect circuit packs are printed on TLP printout in the order that they are to be replaced

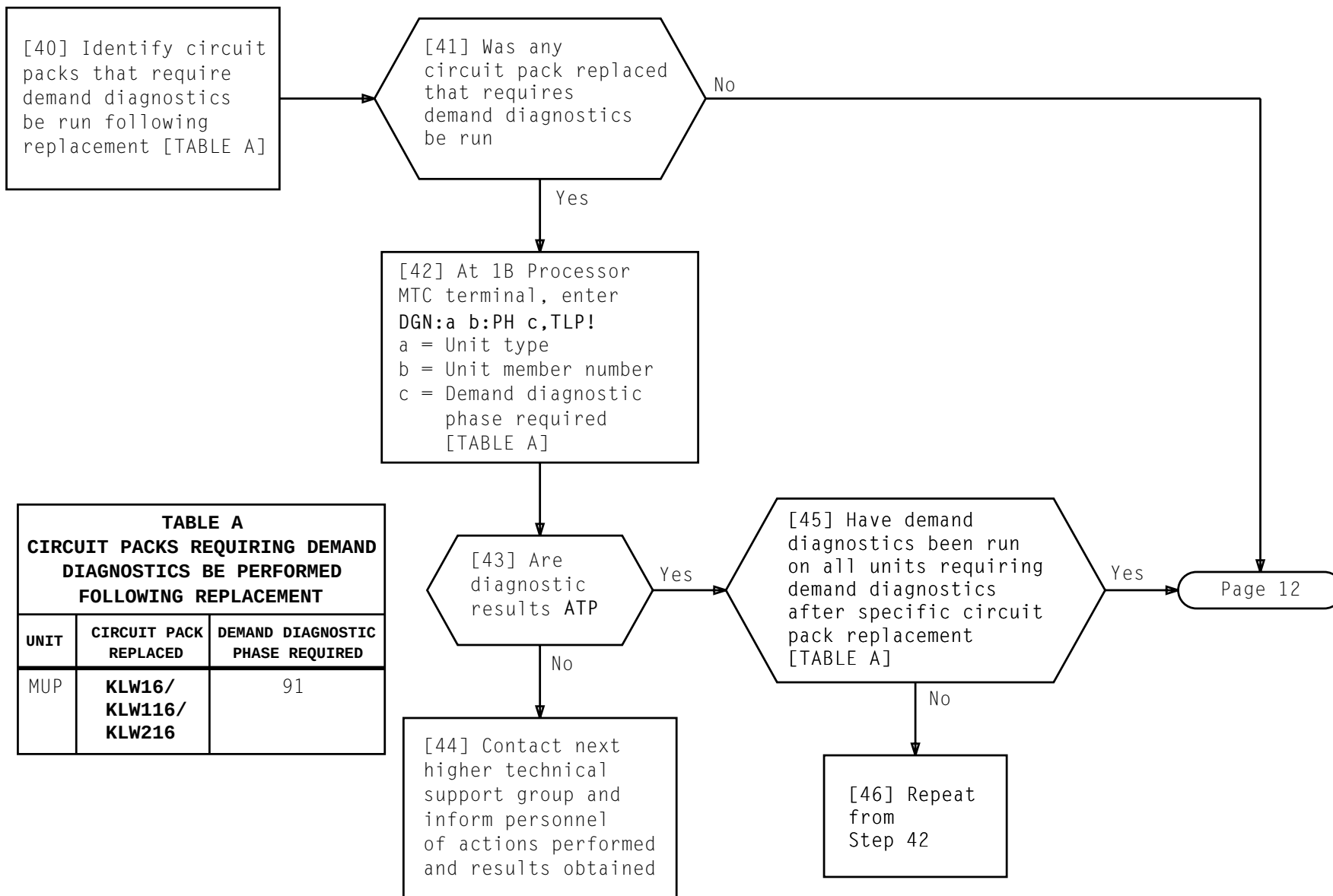
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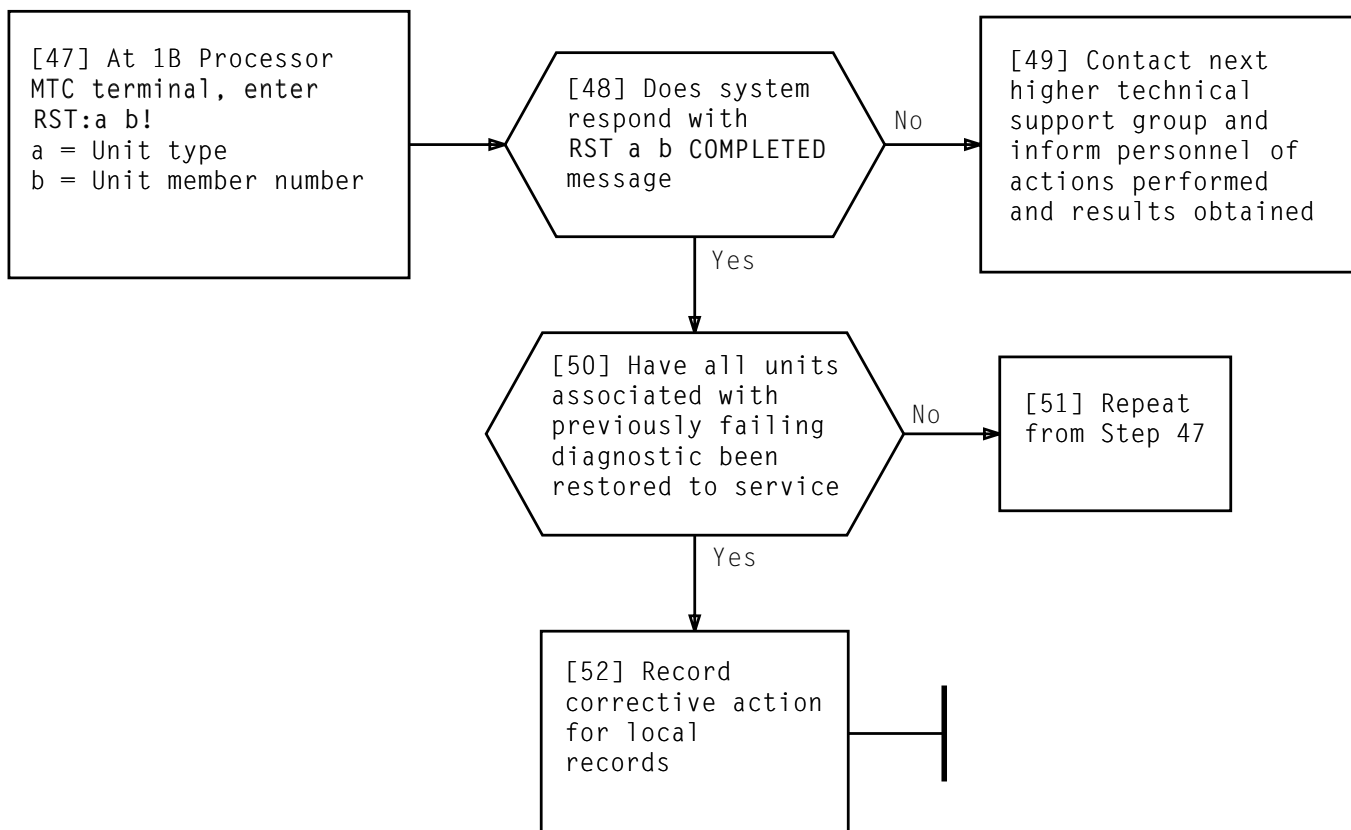


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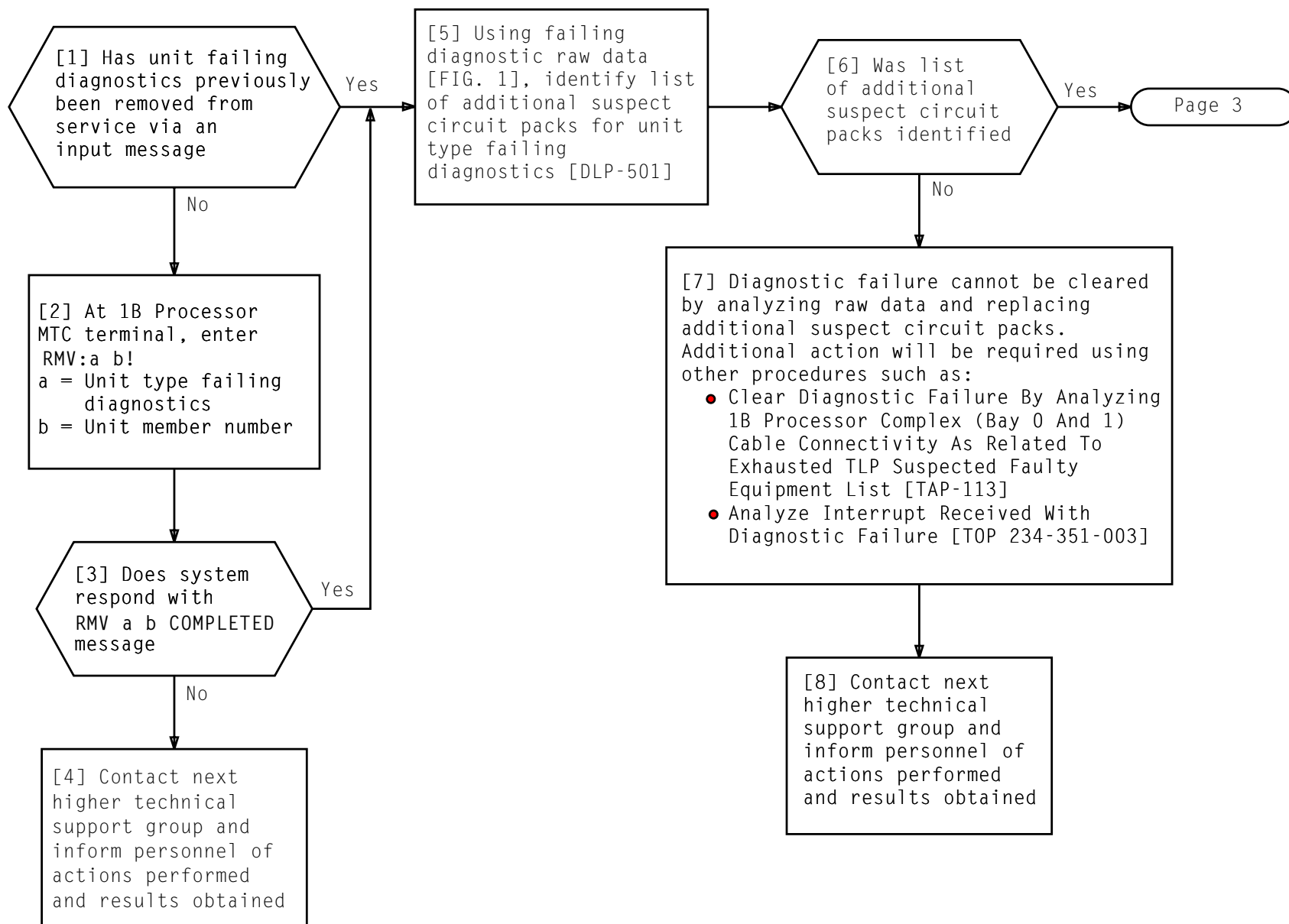


CLEAR DIAGNOSTIC FAILURE BY REPLACING CIRCUIT PACKS ON TLP SUSPECTED FAULTY EQUIPMENT LIST



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CLEAR DIAGNOSTIC FAILURE BY ANALYZING RAW DATA AND REPLACING ADDITIONAL SUSPECT CIRCUIT PACKS

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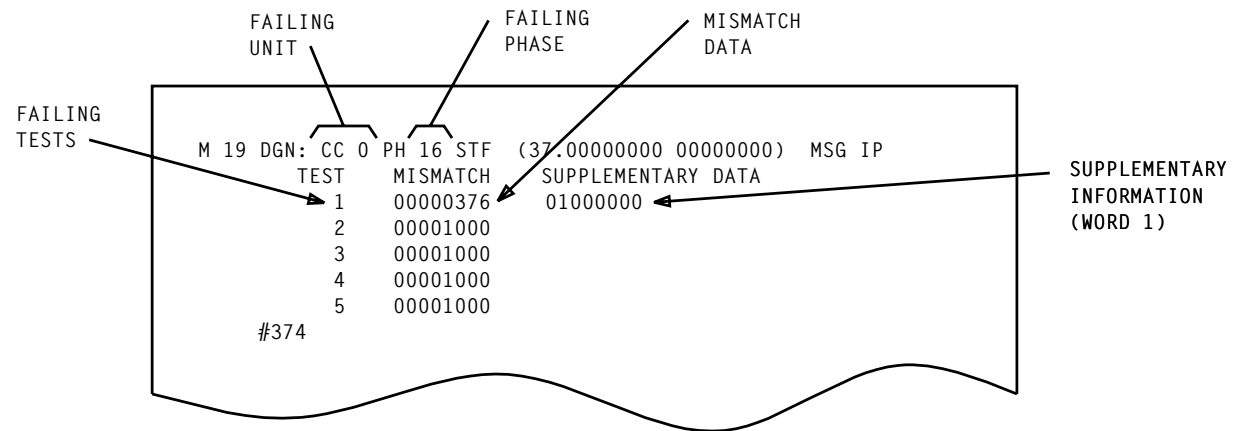
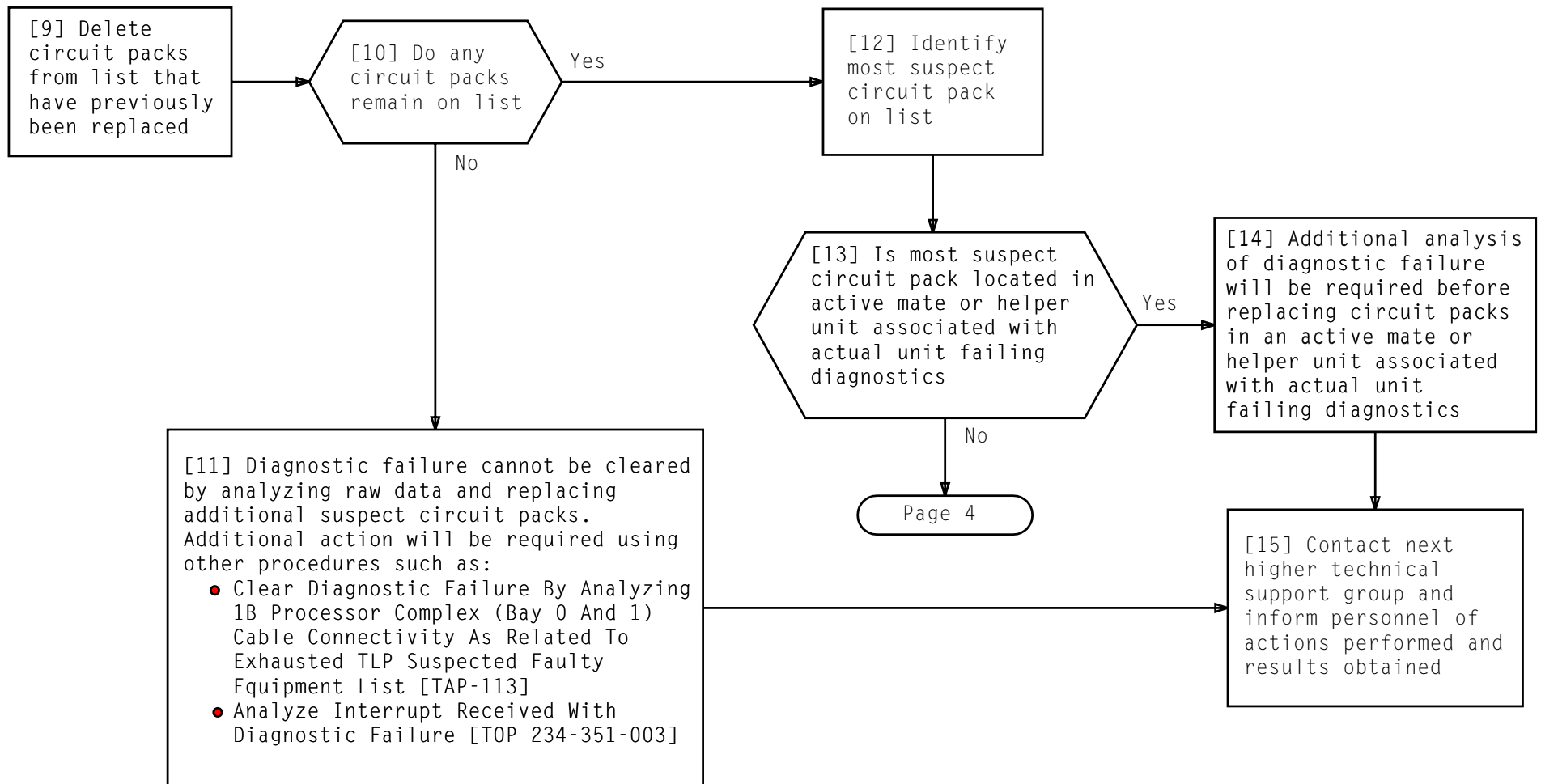


Fig. 1 - Sample Printout of Failing Diagnostic Raw Data

**CLEAR DIAGNOSTIC FAILURE BY ANALYZING RAW DATA AND REPLACING
ADDITIONAL SUSPECT CIRCUIT PACKS**

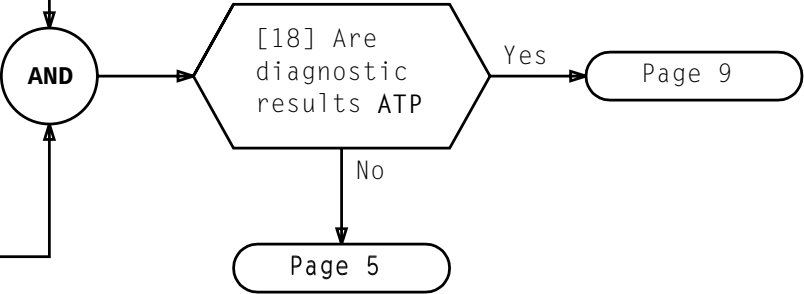


CLEAR DIAGNOSTIC FAILURE BY ANALYZING RAW DATA AND REPLACING ADDITIONAL SUSPECT CIRCUIT PACKS

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[16] See WARNING 1 and NOTE 1.
Replace circuit
pack [DLP-500]

[17] After moving applicable
ROS/NORM switch left to
NORM position, allow ample
time for diagnostics to
complete



NOTE 1

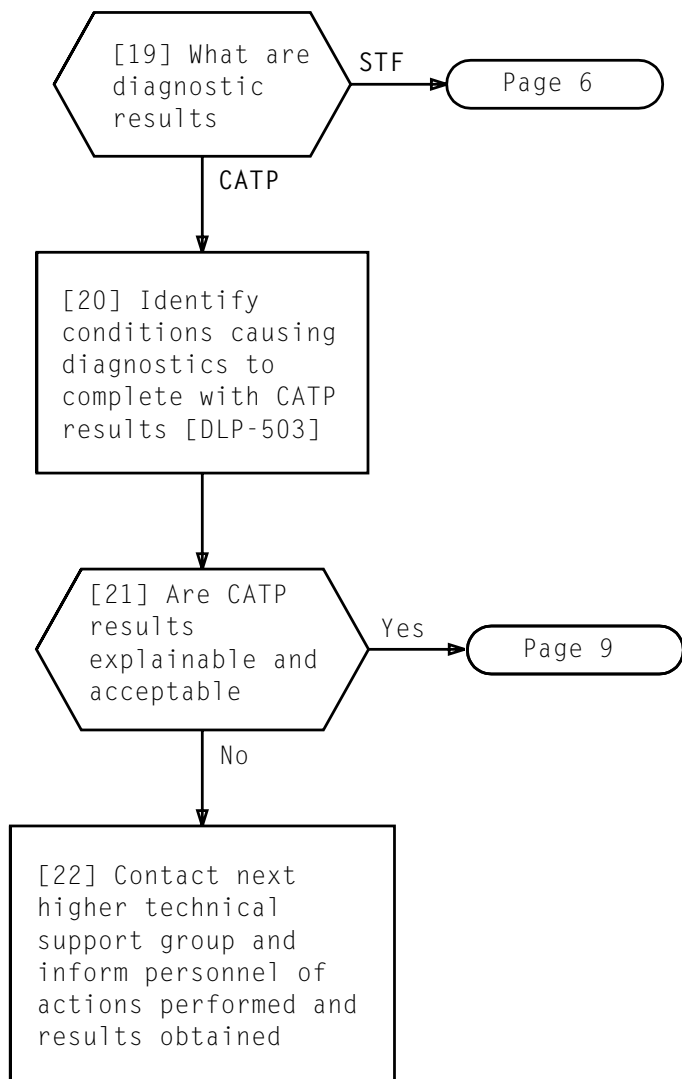
Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 1

A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

**CLEAR DIAGNOSTIC FAILURE BY ANALYZING RAW DATA AND REPLACING
ADDITIONAL SUSPECT CIRCUIT PACKS**

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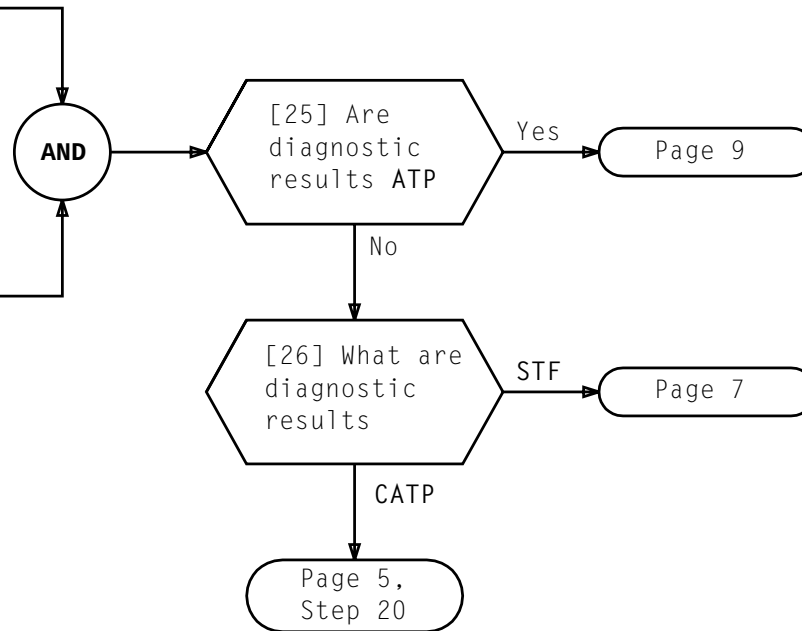


**CLEAR DIAGNOSTIC FAILURE BY ANALYZING RAW DATA AND REPLACING
ADDITIONAL SUSPECT CIRCUIT PACKS**

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[23] See WARNING 2 and NOTE 2.
Replace original circuit
pack previously replaced
[DLP-500]

[24] After moving applicable
ROS/NORM switch
left to **NORM** position,
allow ample time
for diagnostics
to complete



NOTE 2

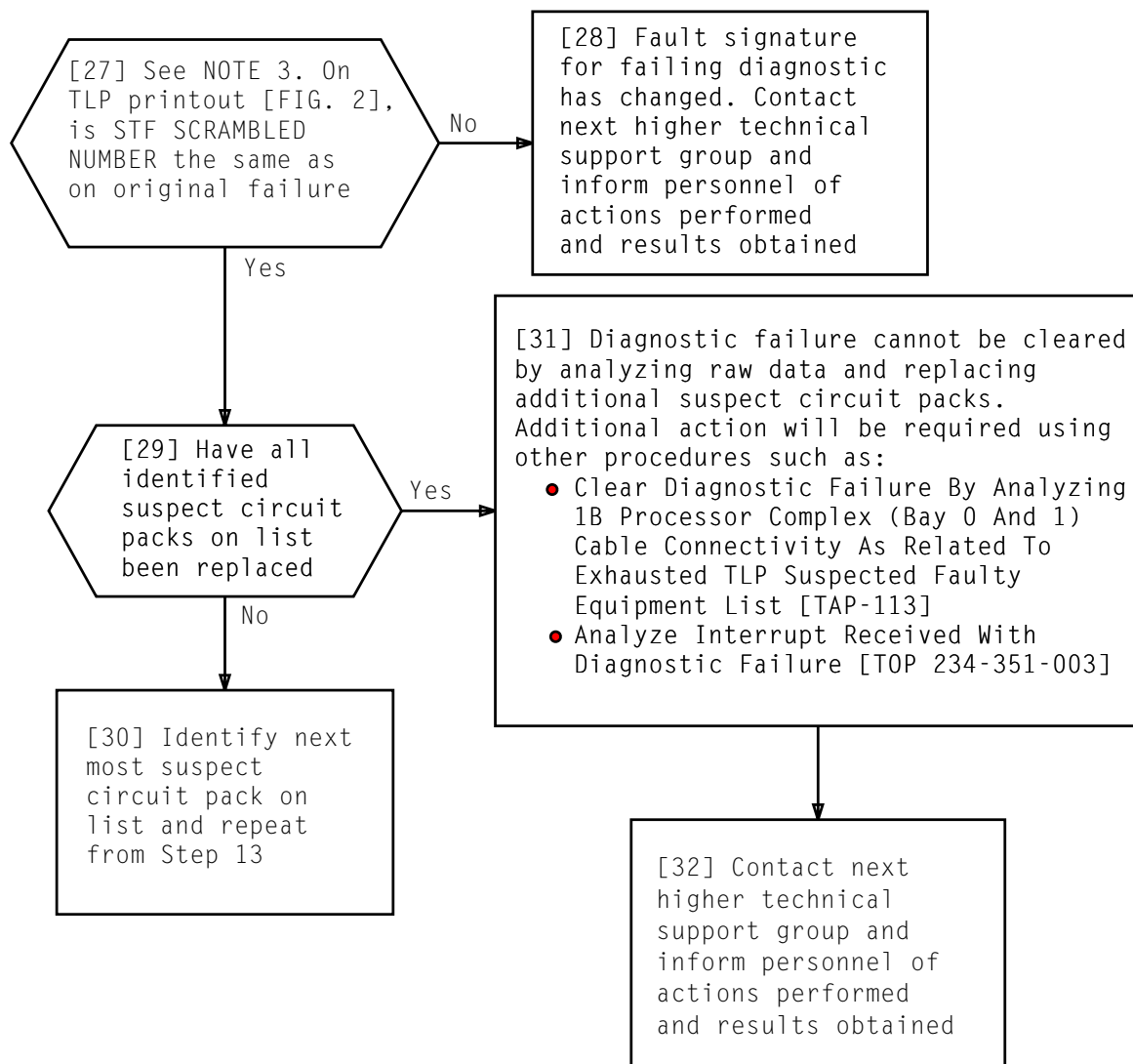
Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 2

A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

**CLEAR DIAGNOSTIC FAILURE BY ANALYZING RAW DATA AND REPLACING
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NOTE 3	
The STF SCRAMBLED NUMBER indicates if all the diagnostic raw data (test and mismatch) is identical or different for two diagnostic runs. If SCRAMBLED NUMBER value is same, diagnostic raw data is identical. Otherwise, diagnostic raw data has changed in some manner.	
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CLEAR DIAGNOSTIC FAILURE BY ANALYZING RAW DATA AND REPLACING ADDITIONAL SUSPECT CIRCUIT PACKS

UNIT FAILING
DIAGNOSTICS
CONTAINING
SUSPECTED FAULTY
EQUIPMENT

SUSPECTED
FAULTY
EQUIPMENT CODE
AND FUNCTION

SUSPECTED
FAULTY
EQUIPMENT
LOCATION

STF
SCRAMBLED
NUMBER

M 28 DGN: CC 0 TERMINATED AT PH 56 ADR 4666 AFTER TEST 343 MSG STARTED
#896

M 28 DGN: CC 0 PH 56 STF (9,00000000 00000000) MSG IP
TEST MISMATCH SUPPLEMENTARY DATA
19 00400000
26 00400000
#897

M 28 ANALY:TLPFILE :CC 0 SUMMARY DATA MSG STARTED
KEY: V1 V2 V3 V4 V5 V6
TD : 03020014 00000000 00000523 00700000 00000000 00000000
ED : 01060020 00000000 00132014 00000000 00132123 00000000
ED : 00050001 00000000 00024016 00000000 00000000 00000000
MFNUM : 00000523
#898

M 28 ANALY:TLPFILE: CC 0 SUSPECTED FAULTY EQUIPMENT MSG IP
IN UNIT UNDER TEST

MFNUM : 00000523
FLN 00015.640
EQPT LOC CODE (FN) NOTE WT FS SYM SD HELPER ID

1B PROC-041-062	KLW24 (CKUT)	1	10	7	1	4A148
1B PROC-041-046	KLW8 (CB1)	2	9	1	4A148	

#899

M 28 ANALY:TLPFILE: CC 0 SUSPECTED FAULTY EQUIPMENT MSG IP
NOT IN UNIT UNDER TEST

MFNUM : 00000523
EQPT LOC CODE (FN) NOTE WT FS SYM SD HELPER ID

1B PROC-141-062	KLW24 (CKUT)	1	1	7	1	4A148 :CC 1

NEQLS 00000006

#900

M28 ANALY:TLPFILE: CC 0 SUSPECTED FAULTY EQUIPMENT MSG COMPL
NOTES

MFNUM : 00000523

NOTES:

1 (COM01)----SPECIAL PROCEDURES ARE REQUIRED FOR CIRCUIT PACK
REPLACEMENT. REFER TO THE ASSOCIATED TOP.

#901

M 28 DGN: CC 0 STOPPED STF (1.9,15364222) MSG COMPL
05/20/92 00:28:38
#902

LOCATION OF
SUSPECTED FAULTY
EQUIPMENT NOT IN
UNIT FAILING
DIAGNOSTICS

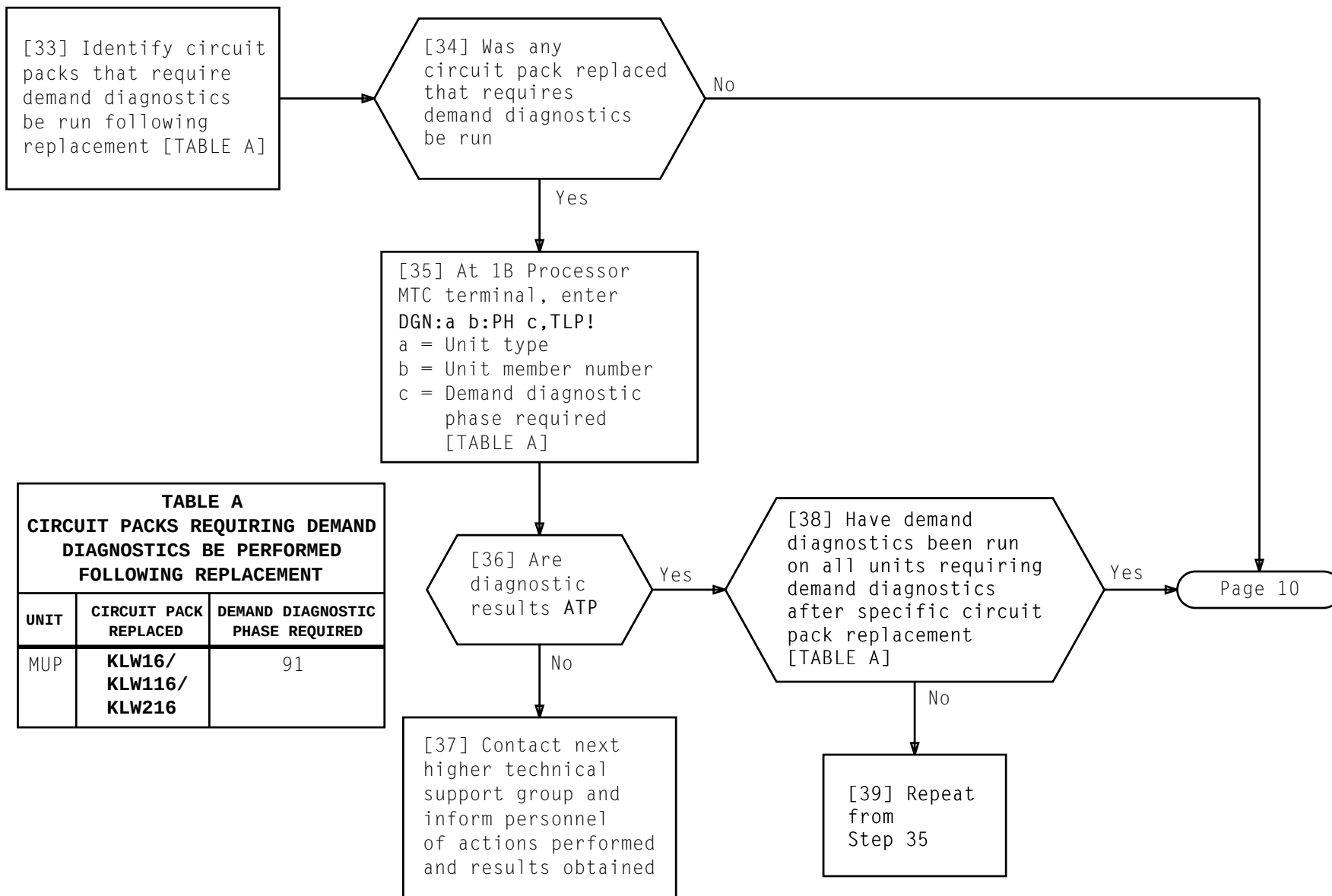
EQUIPMENT CODE
AND FUNCTION OF
SUSPECTED FAULTY
EQUIPMENT NOT IN
UNIT FAILING
DIAGNOSTICS

UNIT CONTAINING
SUSPECTED FAULTY
EQUIPMENT NOT IN
UNIT FAILING
DIAGNOSTICS

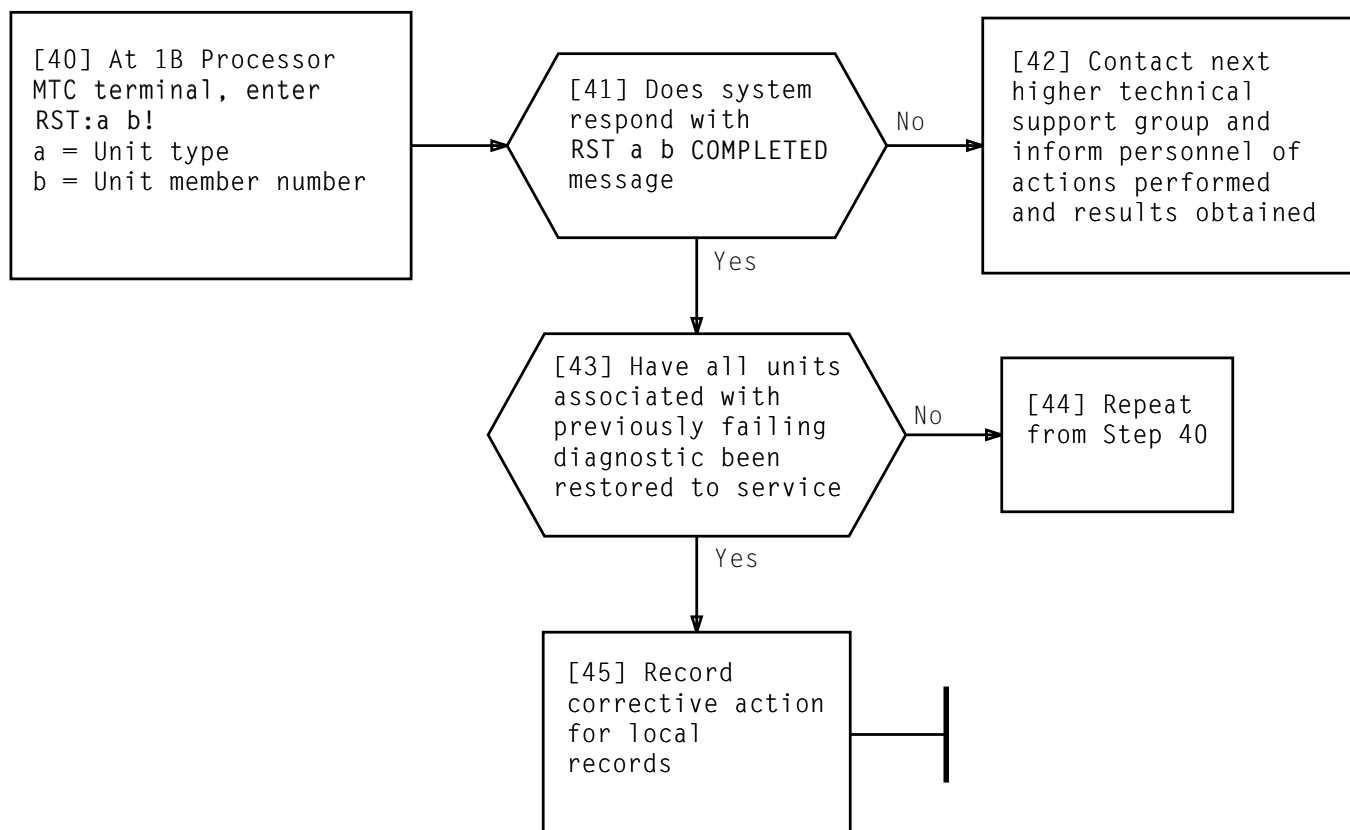
FIG. 2 - Sample Printout of TLP Suspected Faulty Equipment

**CLEAR DIAGNOSTIC FAILURE BY ANALYZING RAW DATA AND REPLACING
ADDITIONAL SUSPECT CIRCUIT PACKS**

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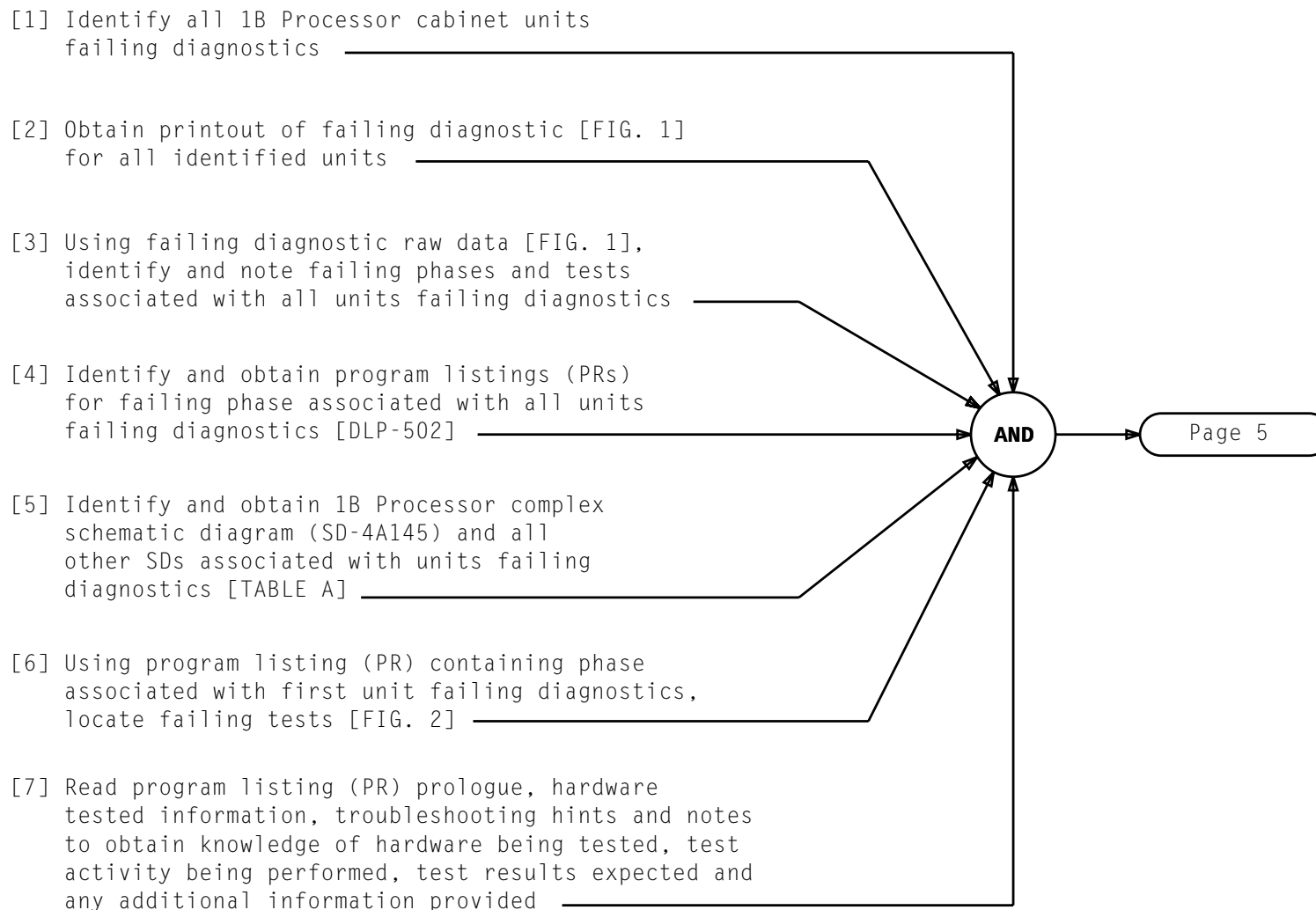


CLEAR DIAGNOSTIC FAILURE BY ANALYZING RAW DATA AND REPLACING ADDITIONAL SUSPECT CIRCUIT PACKS



**CLEAR DIAGNOSTIC FAILURE BY ANALYZING RAW DATA AND REPLACING
ADDITIONAL SUSPECT CIRCUIT PACKS**

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**CLEAR DIAGNOSTIC FAILURE BY ANALYZING 1B PROCESSOR COMPLEX
(BAY 0 AND 1) CABLE CONNECTIVITY AS RELATED TO EXHAUSTED TLP
SUSPECTED FAULTY EQUIPMENT LIST**

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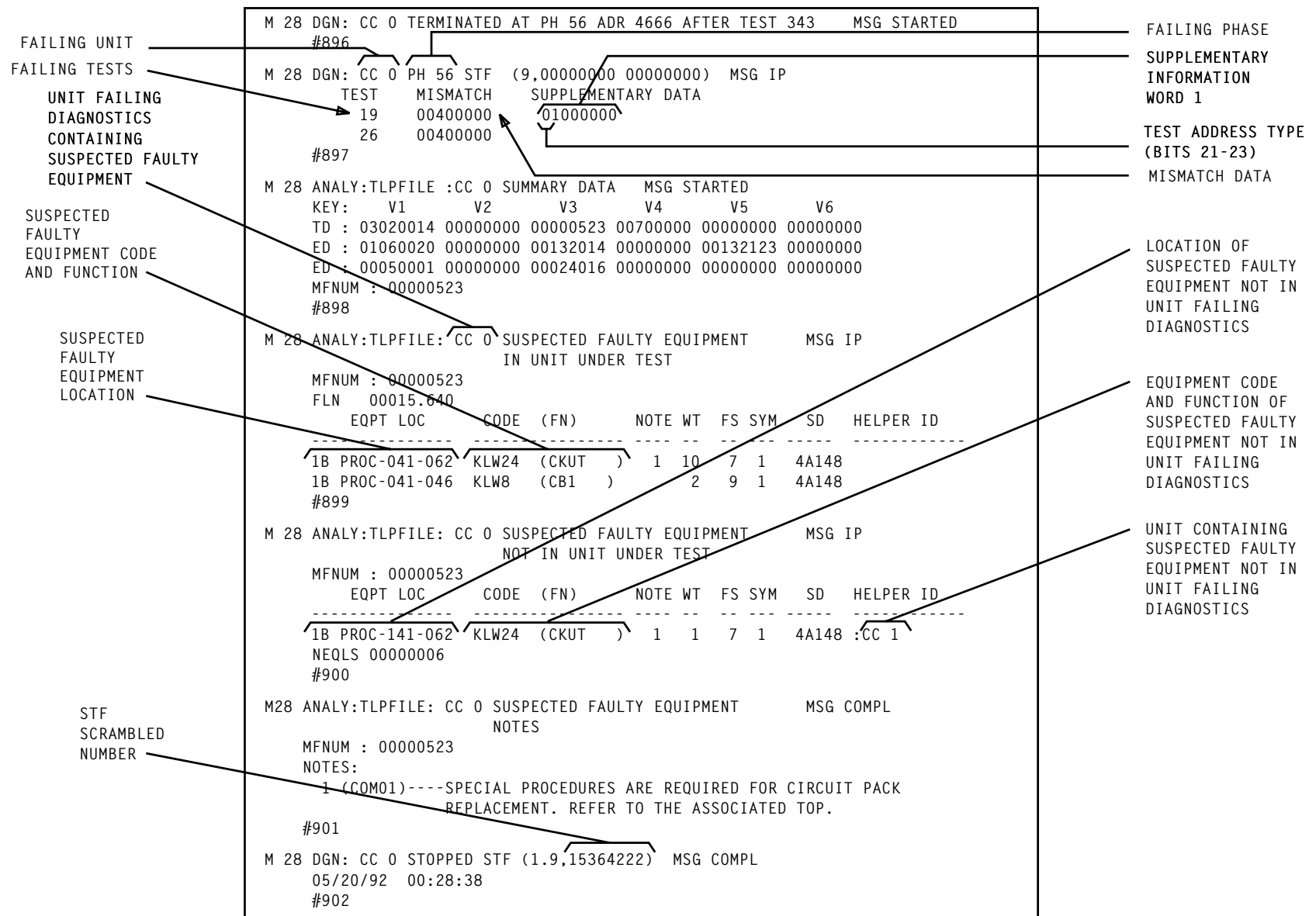


FIG. 1 - Sample Printout of Failing Diagnostic For 1B Processor Cabinet Unit

**CLEAR DIAGNOSTIC FAILURE BY ANALYZING 1B PROCESSOR COMPLEX
(BAY 0 AND 1) CABLE CONNECTIVITY AS RELATED TO EXHAUSTED TLP
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TABLE A 1B PROCESSOR CABINET UNITS AND ASSOCIATED SCHEMATIC DIAGRAMS (SDs)	
1B PROCESSOR CABINET UNIT	ASSOCIATED SCHEMATIC DIAGRAM (SD)
1B Processor Complex	SD-4A145
Bus Driver/Receiver Unit	SD-4A146
Interface Bus Unit	SD-4A147
Central Control And Program Store Unit	SD-4A148
Call Store Unit	SD-4A149
Fuse Unit	SD-4A150
Filter Unit	SD-4A180

**CLEAR DIAGNOSTIC FAILURE BY ANALYZING 1B PROCESSOR COMPLEX
(BAY 0 AND 1) CABLE CONNECTIVITY AS RELATED TO EXHAUSTED TLP
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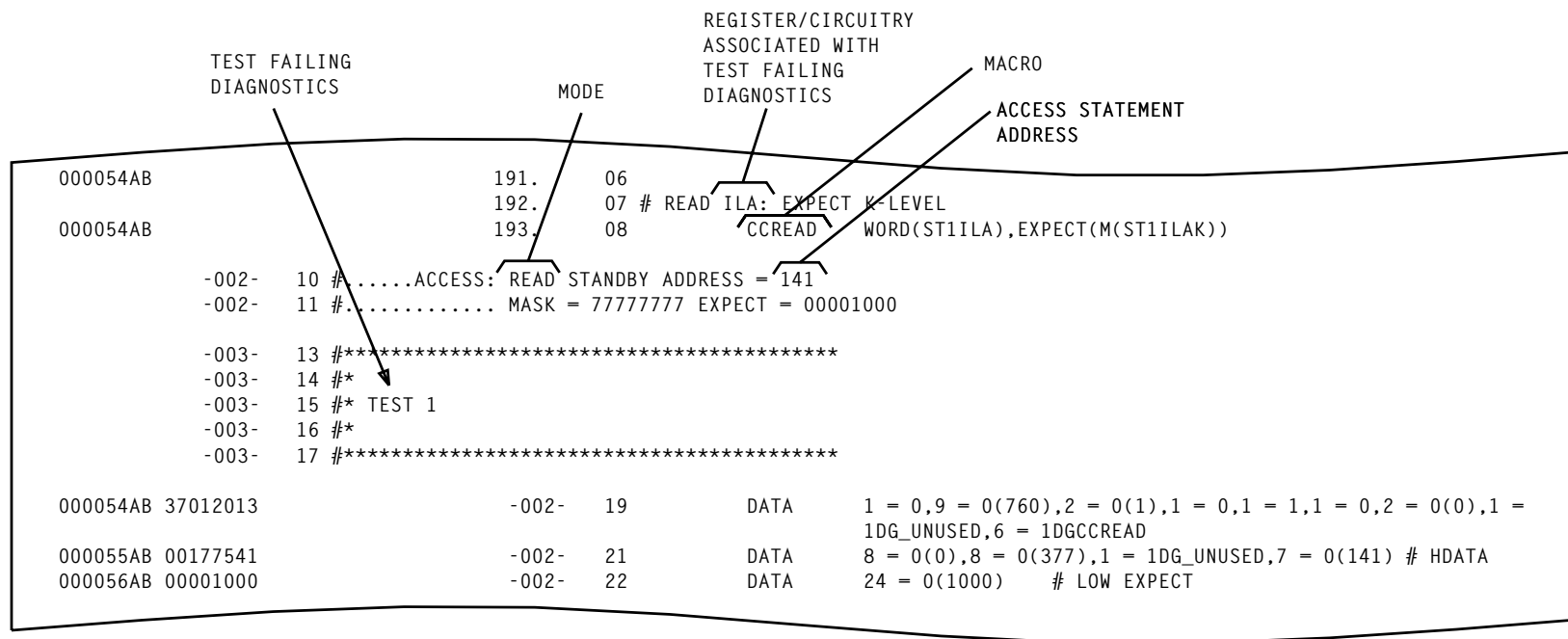
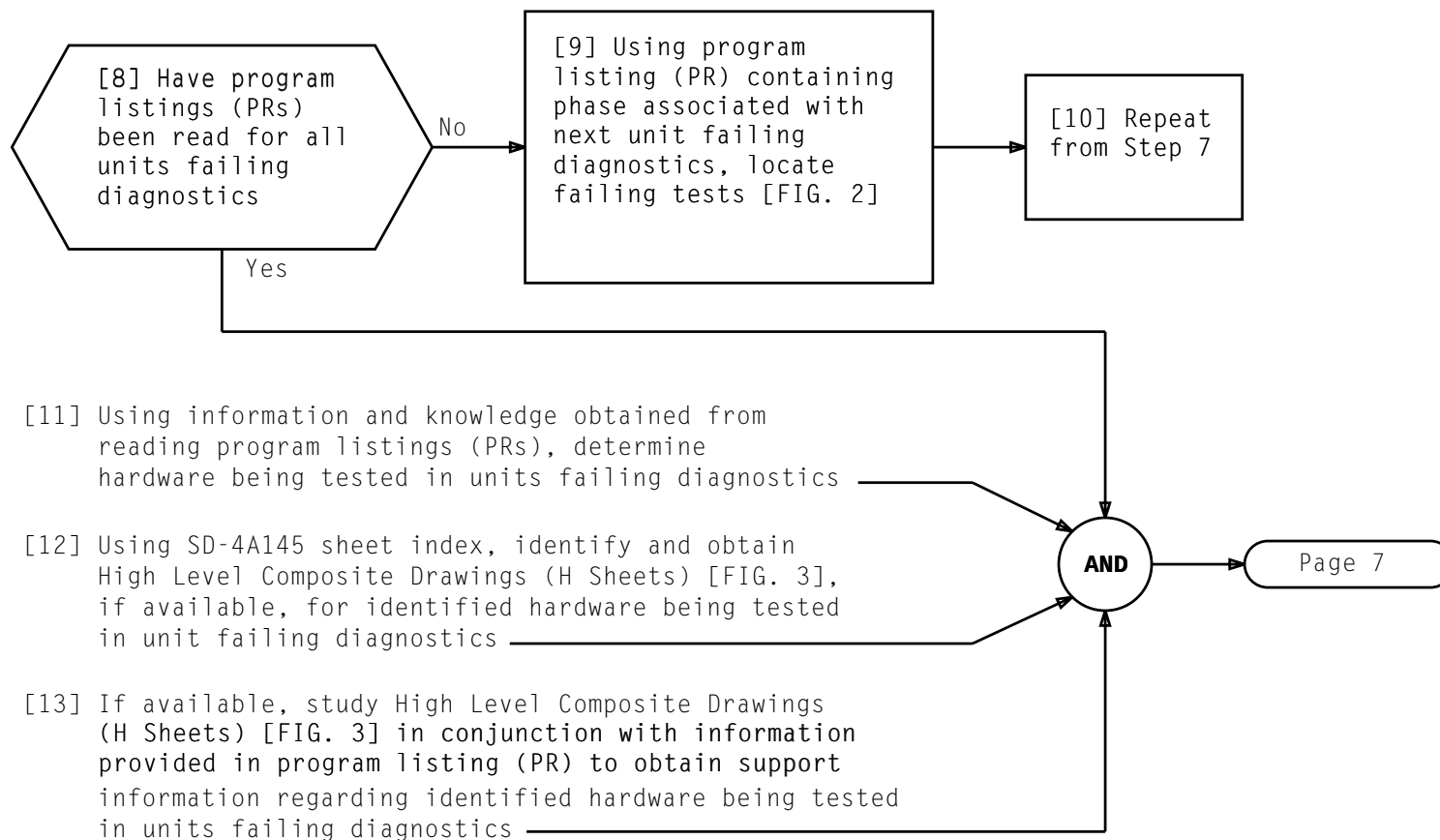


FIG. 2 – Example of Program Listing (PR)

**CLEAR DIAGNOSTIC FAILURE BY ANALYZING 1B PROCESSOR COMPLEX
(BAY 0 AND 1) CABLE CONNECTIVITY AS RELATED TO EXHAUSTED TLP
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**CLEAR DIAGNOSTIC FAILURE BY ANALYZING 1B PROCESSOR COMPLEX
(BAY 0 AND 1) CABLE CONNECTIVITY AS RELATED TO EXHAUSTED TLP
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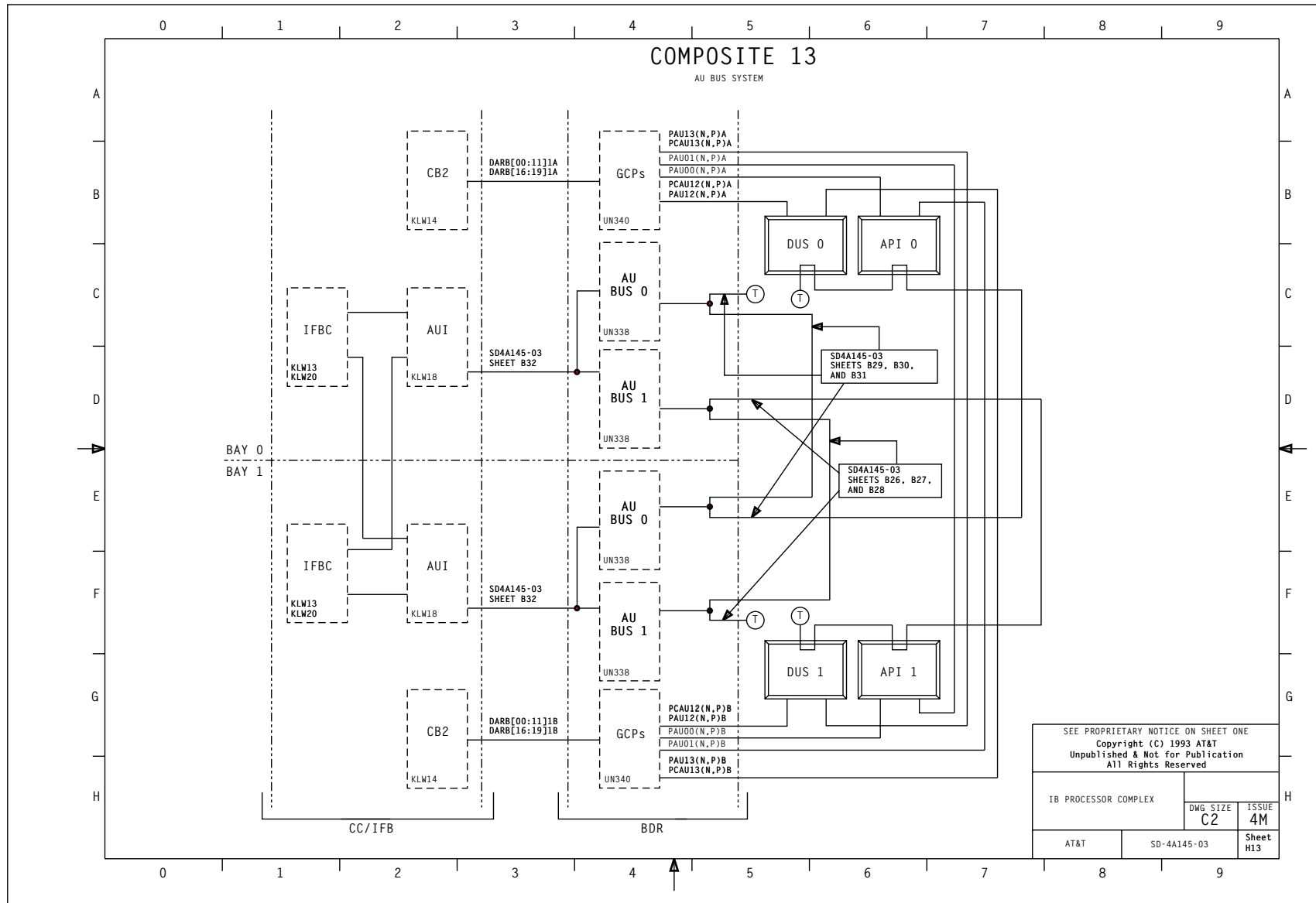
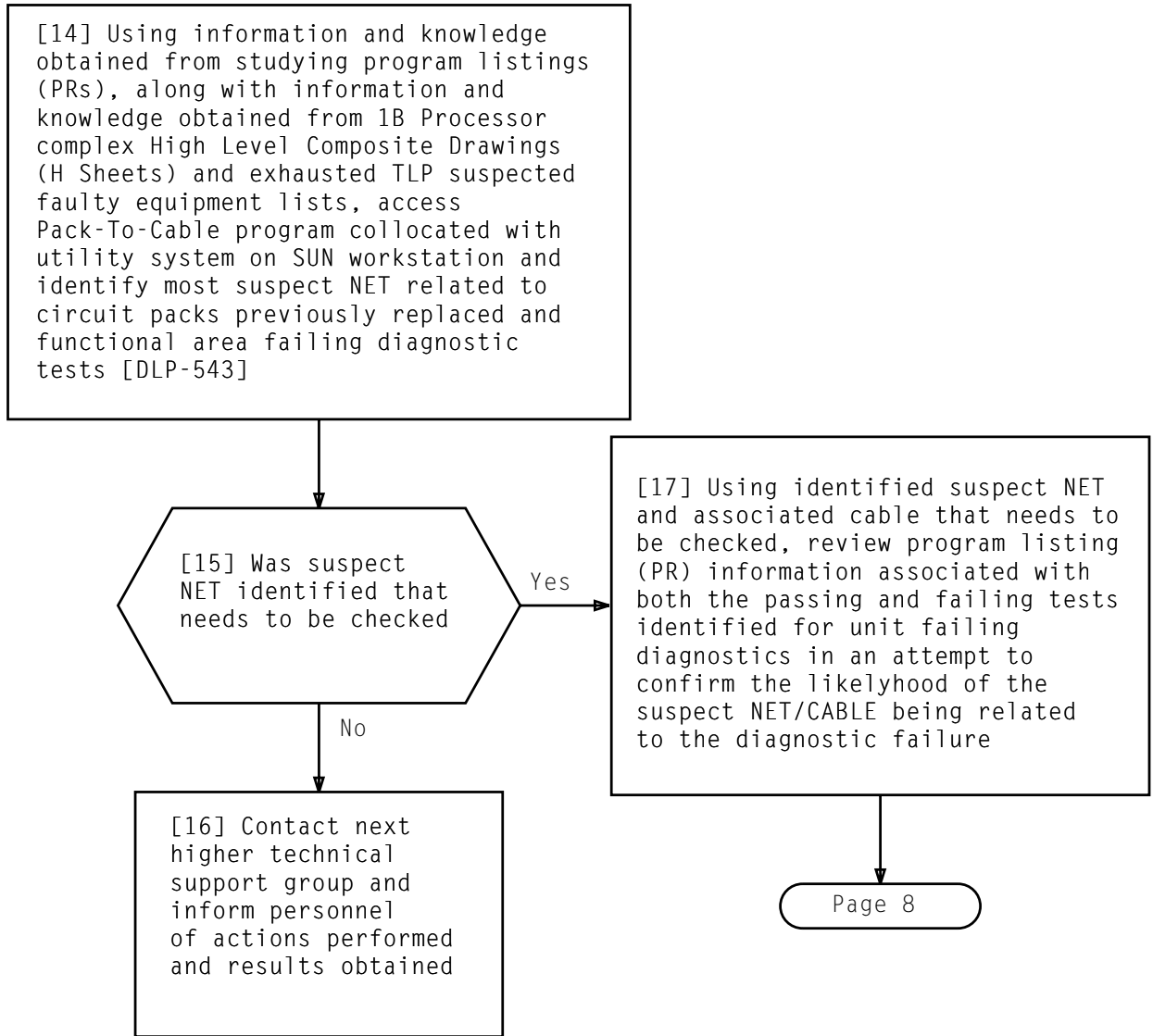


FIG. 3 – Example of 1B Processor Complex SD-4A145 High Level Composite Drawing (H-Sheet)

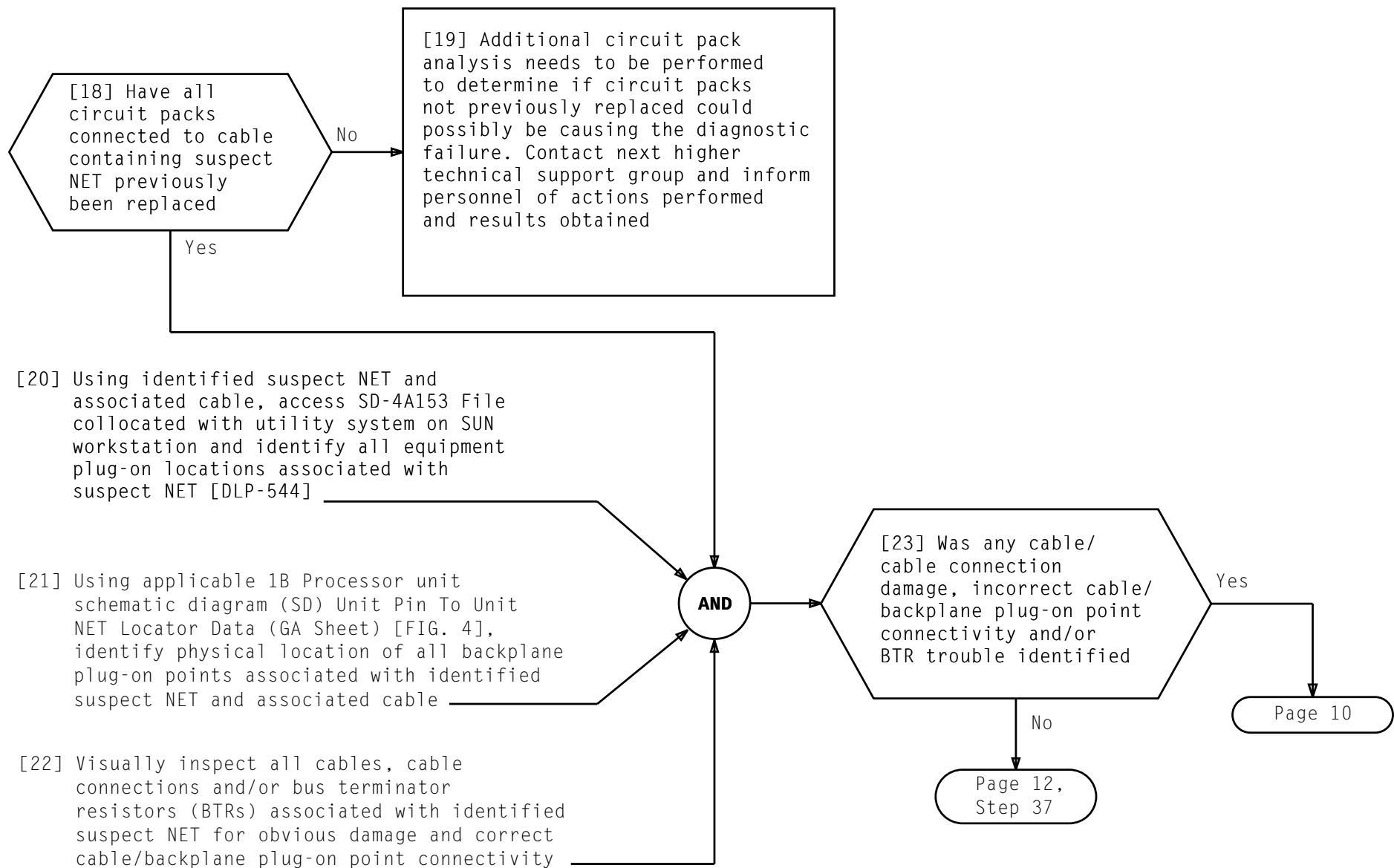
**CLEAR DIAGNOSTIC FAILURE BY ANALYZING 1B PROCESSOR COMPLEX
(BAY 0 AND 1) CABLE CONNECTIVITY AS RELATED TO EXHAUSTED TLP
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CLEAR DIAGNOSTIC FAILURE BY ANALYZING 1B PROCESSOR COMPLEX (BAY 0 AND 1) CABLE CONNECTIVITY AS RELATED TO EXHAUSTED TLP SUSPECTED FAULTY EQUIPMENT LIST

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CLEAR DIAGNOSTIC FAILURE BY ANALYZING 1B PROCESSOR COMPLEX (BAY 0 AND 1) CABLE CONNECTIVITY AS RELATED TO EXHAUSTED TLP SUSPECTED FAULTY EQUIPMENT LIST

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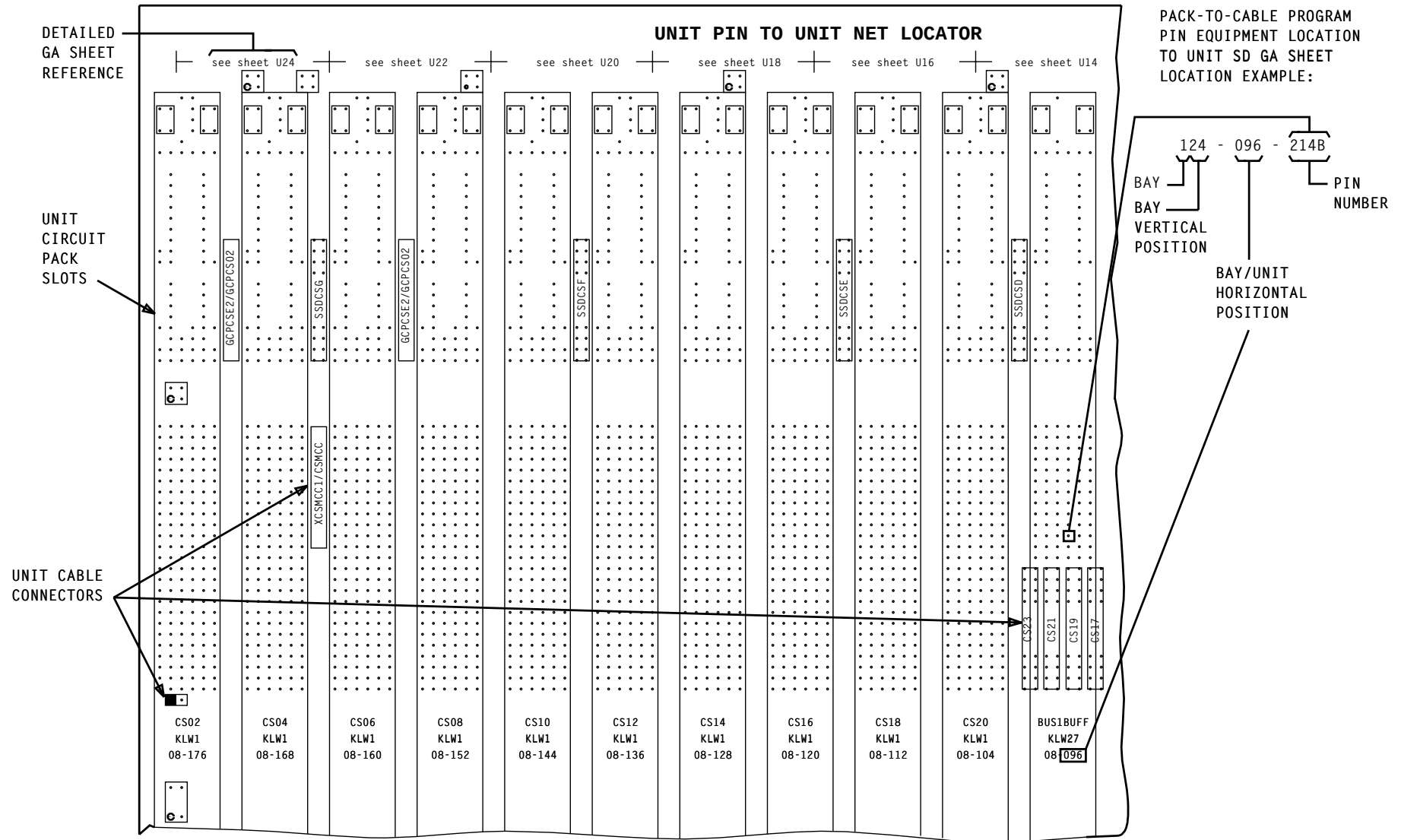
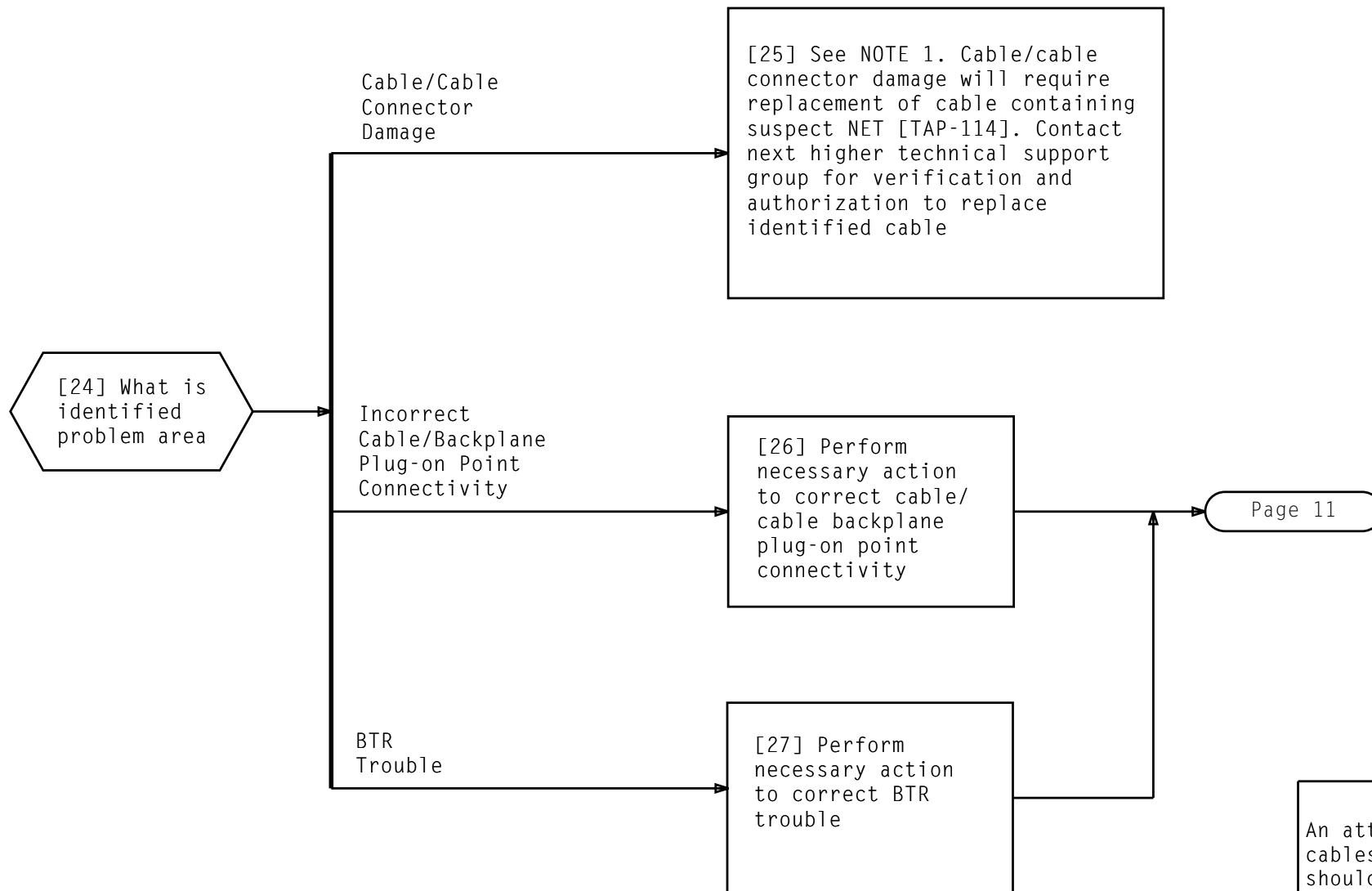


FIG. 4 – Sample of 1B Processor Unit Schematic Diagram (SD) Unit Pin To Unit Net Locator Data (GA Sheet)

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(BAY 0 AND 1) CABLE CONNECTIVITY AS RELATED TO EXHAUSTED TLP
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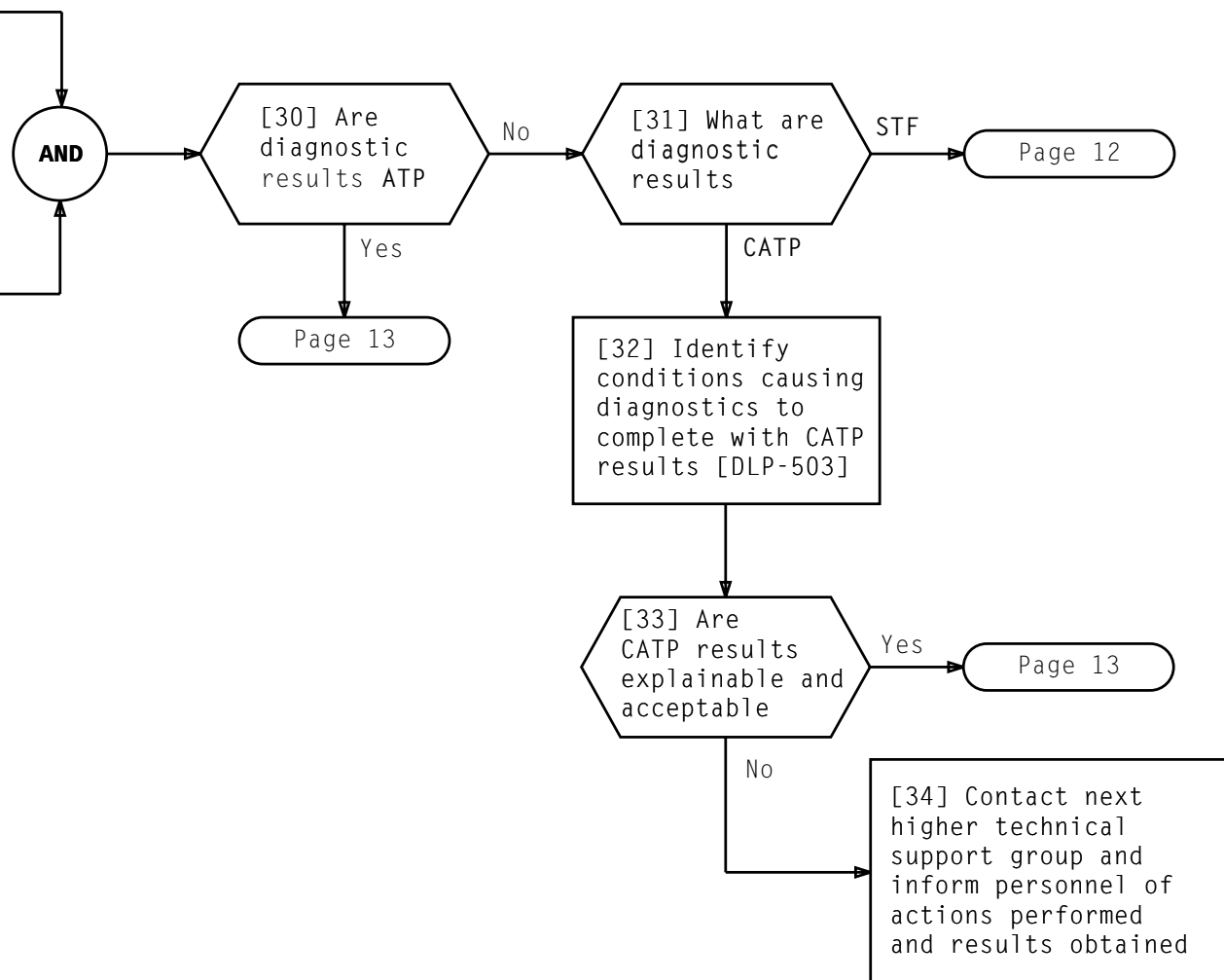


NOTE 1 An attempt to repair cables in the field should not be made. Proper replacement cables can be ordered using the assigned ED and GROUP number		
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CLEAR DIAGNOSTIC FAILURE BY ANALYZING 1B PROCESSOR COMPLEX (BAY 0 AND 1) CABLE CONNECTIVITY AS RELATED TO EXHAUSTED TLP SUSPECTED FAULTY EQUIPMENT LIST

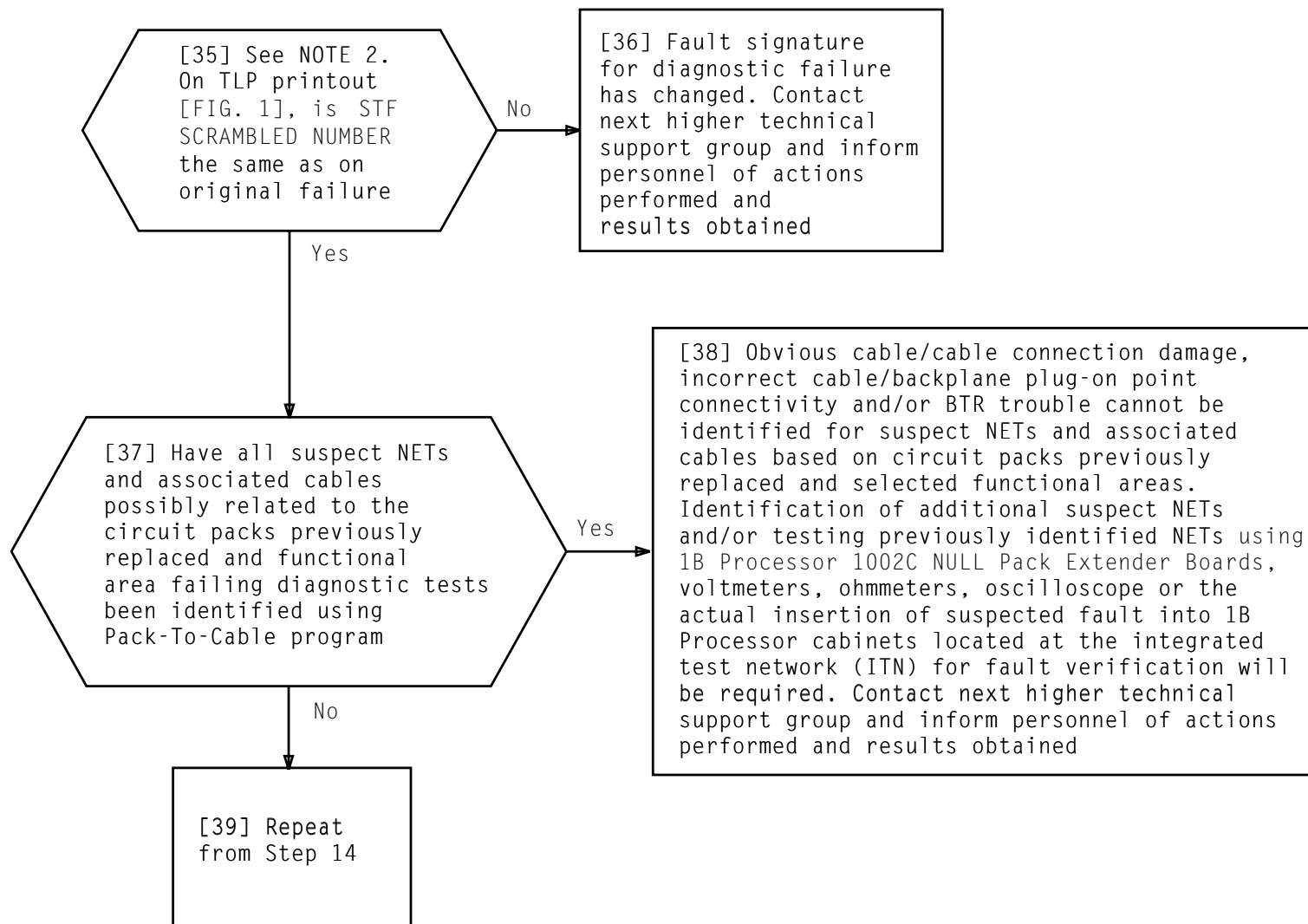
[28] At 1B Processor MTC
terminal, enter
DGN:a b:TLP!
a = Unit type
b = Unit member
number

[29] Allow ample time
for diagnostics
to complete



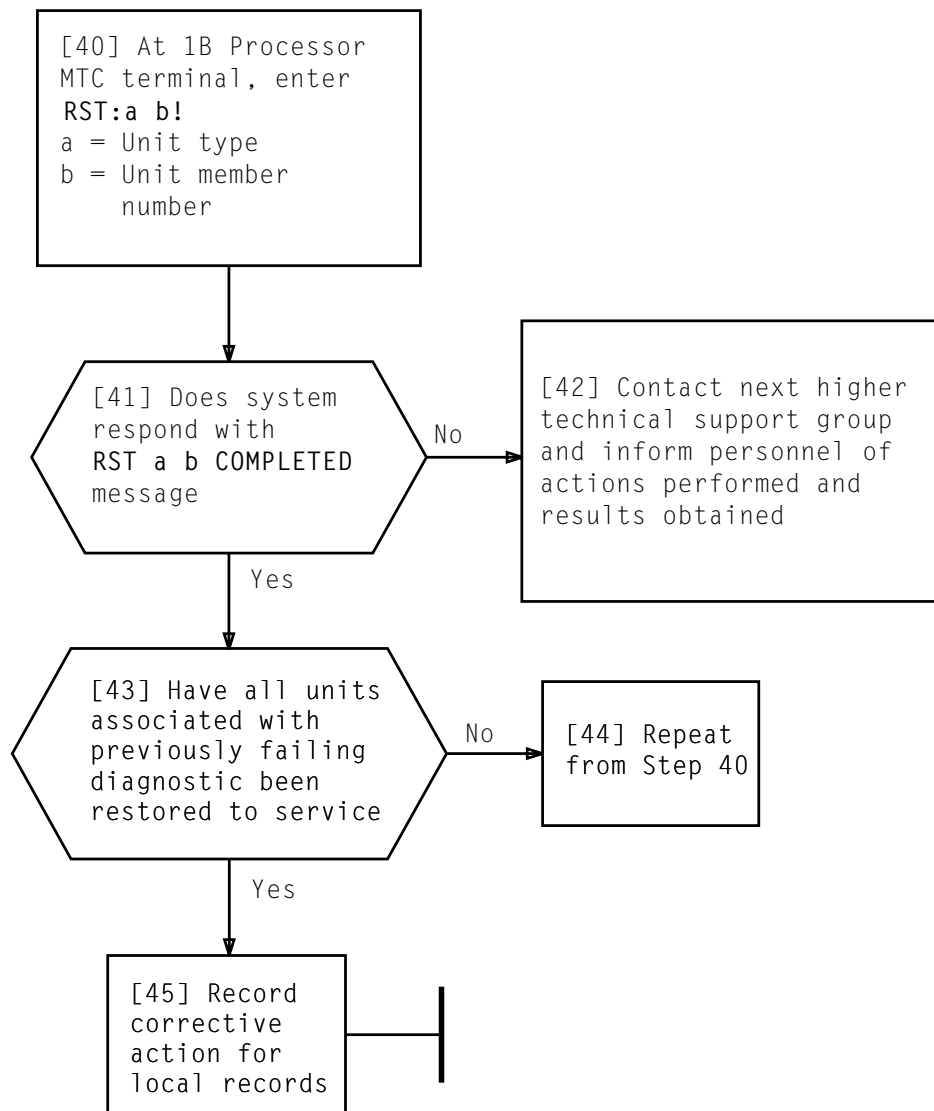
**CLEAR DIAGNOSTIC FAILURE BY ANALYZING 1B PROCESSOR COMPLEX
(BAY 0 AND 1) CABLE CONNECTIVITY AS RELATED TO EXHAUSTED TLP
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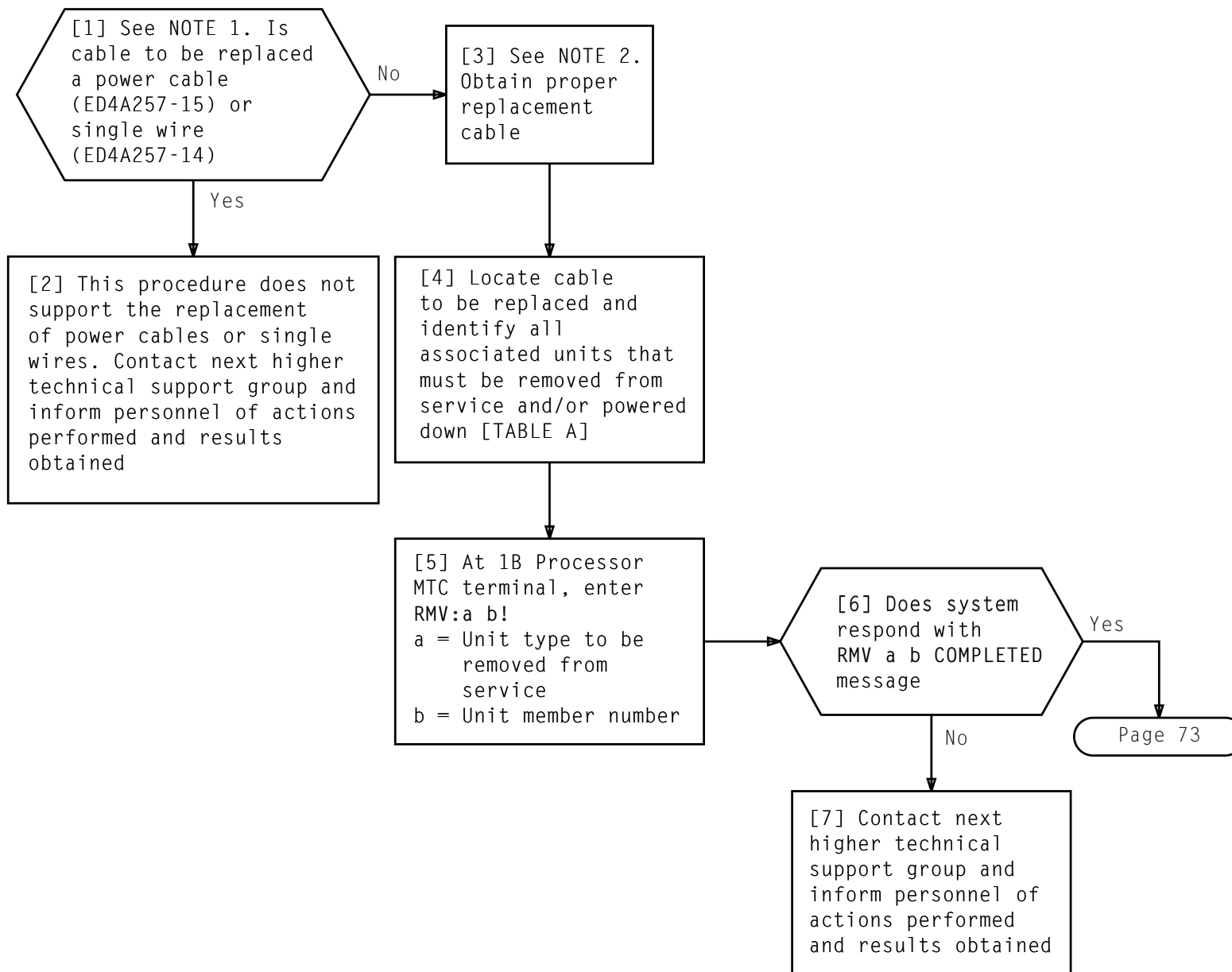
NOTE 2		
The STF SCRAMBLED NUMBER indicates if all the diagnostic raw data (test and mismatch) is identical or different for two diagnostic runs. If STF SCRAMBLED NUMBER value is same, diagnostic raw data is identical. Otherwise, diagnostic raw data has changed in some manner		
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**CLEAR DIAGNOSTIC FAILURE BY ANALYZING 1B PROCESSOR COMPLEX
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**CLEAR DIAGNOSTIC FAILURE BY ANALYZING 1B PROCESSOR COMPLEX
(BAY 0 AND 1) CABLE CONNECTIVITY AS RELATED TO EXHAUSTED TLP
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NOTES			
1. This procedure only supports the replacement of clock cables (ED4A257-16), switchboard cables (ED4A257-20), flat ribbon cables (ED4A257-25), peripheral retrofit cables (ED4A257-28) and bus terminator resistors (BTRs)			
2. An attempt to repair cables in the field should not be made. Proper replacement cables can be ordered using the assigned ED and GROUP number.			
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TABLE A REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
16G1	00C0	1	HSN1606(B,N)	041-068	002T	CC0	N/A
16G1	00C0	2	HSN1606(B,N)	041-068	052B	CC0	N/A
16G2	00C1	1	HSN1606(B,N)	041-068	003T	CC0	N/A
16G2	00C1	2	HSN1606(B,N)	041-068	051B	CC0	N/A
16G3	00C2	1	HSN1606(B,N)	041-068	004T	CC0	N/A
16G3	00C2	2	HSN1606(B,N)	041-068	050B	CC0	N/A
16G4	00C3	1	HSN1606(B,N)	041-068	005T	CC0	N/A
16G4	00C3	2	HSN1606(B,N)	041-068	049B	CC0	N/A
16G5	01C0	1	HSN1606(B,N)	041-068	006T	CC0	N/A
16G5	01C0	2	HSN1606(B,N)	141-068	048B	CC0	N/A
16G6	01C1	1	HSN1606(B,N)	041-068	007T	CC0	N/A
16G6	01C1	2	HSN1606(B,N)	141-068	047B	CC0	N/A
16G7	01C2	1	HSN1606(B,N)	041-068	008T	CC0	N/A
16G7	01C2	2	HSN1606(B,N)	141-068	046B	CC0	N/A
16G8	01C3	1	HSN1606(B,N)	041-068	009T	CC0	N/A
16G8	01C3	2	HSN1606(B,N)	141-068	045B	CC0	N/A
16G9	00I0	1	HSN1606(B,N)	041-068	034T	CC0	N/A
16G9	00I0	2	HSN1606(B,N)	058-062	233T	CC0	N/A
16G10	00I2	1	HSN1606(B,N)	041-068	035T	CC0	N/A
16G10	00I2	2	HSN1606(B,N)	058-070	238T	CC0	N/A
16G11	01I0	1	HSN1606(B,N)	041-068	036T	CC0	N/A
16G11	01I0	2	HSN1606(B,N)	158-062	232T	CC0	N/A

REPLACE CABLE — 1B PROCESSOR CABINET

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TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
16G12	01I2	1	HSN1606(B,N)	041-068	037T	CC0	N/A
16G12	01I2	2	HSN1606(B,N)	158-070	237T	CC1	N/A
16G13	10C0	1	HSN1606(B,N)	041-068	048B	CC1	N/A
16G13	10C0	2	HSN1606(B,N)	141-068	006T	CC1	N/A
16G14	10C1	1	HSN1606(B,N)	041-068	047B	CC1	N/A
16G14	10C1	2	HSN1606(B,N)	141-068	007T	CC1	N/A
16G15	10C2	1	HSN1606(B,N)	041-068	046B	CC1	N/A
16G15	10C2	2	HSN1606(B,N)	141-068	008T	CC1	N/A
16G16	10C3	1	HSN1606(B,N)	041-068	045B	CC1	N/A
16G16	10C3	2	HSN1606(B,N)	141-068	009T	CC1	N/A
16G17	10I0	1	HSN1606(B,N)	058-062	232T	CC1	N/A
16G17	10I0	2	HSN1606(B,N)	141-068	036T	CC1	N/A
16G18	10I2	1	HSN1606(B,N)	058-070	237T	CC1	N/A
16G18	10I2	2	HSN1606(B,N)	141-068	037T	CC1	N/A
16G19	0TFI0	1	HSN1606(B,N)	058-078	218B	CC1	N/A
16G19	0TFI0	2	HSN1606(B,N)	158-068	032T	CC1	N/A
16G20	0TFI1	1	HSN1606(B,N)	058-086	218B	CC1	N/A
16G20	0TFI1	2	HSN1606(B,N)	158-068	033T	CC1	N/A
16G21	0TIF2	1	HSN1606(B,N)	058-096	218B	CC1	N/A
16G21	0TIF2	2	HSN1606(B,N)	158-068	034T	CC1	N/A
16G22	0TIF3	1	HSN1606(B,N)	058-104	218B	CC1	N/A
16G22	0TIF3	2	HSN1606(B,N)	158-068	035T	CC1	N/A

TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
16G23	0TIF4	1	HSN1606(B,N)	058-112	218B	CC1	N/A
16G23	0TIF4	2	HSN1606(B,N)	158-068	036T	CC1	N/A
16G24	0TIF5	1	HSN1606(B,N)	058-120	218B	CC1	N/A
16G24	0TIF5	2	HSN1606(B,N)	158-068	037T	CC1	N/A
16G25	0TIF6	1	HSN1606(B,N)	058-128	218B	CC1	N/A
16G25	0TIF6	2	HSN1606(B,N)	158-068	038T	CC1	N/A
16G26	0TIF7	1	HSN1606(B,N)	058-136	218B	CC1	N/A
16G26	0TIF7	2	HSN1606(B,N)	158-068	039T	CC1	N/A
16G27	0TIF8	1	HSN1606(B,N)	058-144	218B	CC1	N/A
16G27	0TIF8	2	HSN1606(B,N)	158-068	040T	CC1	N/A
16G28	0TIF9	1	HSN1606(B,N)	058-152	218B	CC1	N/A
16G28	0TIF9	2	HSN1606(B,N)	158-068	041T	CC1	N/A
16G29	0TIFA	1	HSN1606(B,N)	058-160	218B	CC1	N/A
16G29	0TIFA	2	HSN1606(B,N)	158-068	042T	CC1	N/A
16G30	0TIFB	1	HSN1606(B,N)	058-168	218B	CC1	N/A
16G30	0TIFB	2	HSN1606(B,N)	158-068	043T	CC1	N/A
16G31	1TIF0	1	HSN1606(B,N)	058-068	032T	CC0	N/A
16G31	1TIF0	2	HSN1606(B,N)	158-078	218B	CC0	N/A
16G32	1TIF1	1	HSN1606(B,N)	058-068	033T	CC0	N/A
16G32	1TIF1	2	HSN1606(B,N)	158-086	218B	CC0	N/A
16G33	1TIF2	1	HSN1606(B,N)	058-068	034T	CC0	N/A
16G33	1TIF2	2	HSN1606(B,N)	158-096	218B	CC0	N/A

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TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
16G34	1TIF3	1	HSN1606(B,N)	058-068	035T	CC0	N/A
16G34	1TIF3	2	HSN1606(B,N)	158-104	218B	CC0	N/A
16G35	1TIF4	1	HSN1606(B,N)	058-068	036T	CC0	N/A
16G35	1TIF4	2	HSN1606(B,N)	158-112	218B	CC0	N/A
16G36	1TIF5	1	HSN1606(B,N)	058-068	037T	CC0	N/A
16G36	1TIF5	2	HSN1606(B,N)	158-120	218B	CC0	N/A
16G37	1TIF6	1	HSN1606(B,N)	058-068	038T	CC0	N/A
16G37	1TIF6	2	HSN1606(B,N)	158-128	218B	CC0	N/A
16G38	1TIF7	1	HSN1606(B,N)	058-068	039T	CC0	N/A
16G38	1TIF7	2	HSN1606(B,N)	158-136	218B	CC0	N/A
16G39	1TIF8	1	HSN1606(B,N)	058-068	040T	CC0	N/A
16G39	1TIF8	2	HSN1606(B,N)	158-144	218B	CC0	N/A
16G40	1TIF9	1	HSN1606(B,N)	058-068	041T	CC0	N/A
16G40	1TIF9	2	HSN1606(B,N)	158-152	218B	CC0	N/A
16G41	1TIFA	1	HSN1606(B,N)	058-068	042T	CC0	N/A
16G41	1TIFA	2	HSN1606(B,N)	158-160	218B	CC0	N/A
16G42	1TIFB	1	HSN1606(B,N)	058-068	043T	CC0	N/A
16G42	1TIFB	2	HSN1606(B,N)	158-168	218B	CC0	N/A
16G43	11C0	1	HSN1606(B,N)	141-068	002T	CC1	N/A
16G43	11C0	2	HSN1606(B,N)	141-068	052B	CC1	N/A
16G44	11C1	1	HSN1606(B,N)	141-068	003T	CC1	N/A
16G44	11C1	2	HSN1606(B,N)	141-068	051B	CC1	N/A

REPLACE CABLE — 1B PROCESSOR CABINET

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TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
16G45	11C2	1	HSN1606(B,N)	141-068	004T	CC1	N/A
16G45	11C2	2	HSN1606(B,N)	141-068	050B	CC1	N/A
16G46	11C3	1	HSN1606(B,N)	141-068	005T	CC1	N/A
16G46	11C3	2	HSN1606(B,N)	141-068	049B	CC1	N/A
16G47	11I0	1	HSN1606(B,N)	141-068	034T	CC1	N/A
16G47	11I0	2	HSN1606(B,N)	158-062	233T	CC1	N/A
16G48	11I2	1	HSN1606(B,N)	141-068	035T	CC1	N/A
16G48	11I2	2	HSN1606(B,N)	158-070	238T	CC1	N/A
20G3	UTMD	1	963T-24(N,N)	058-046	000B	CC0	N/A
20G3	UTMD	2	963T-24(N,N)	041-022	232T	CC0	N/A
20G4	UTMA	1	963T-24(N,N)	058-046	013B	CC0	N/A
20G4	UTMA	2	963T-24(N,N)	041-022	245T	CC0	N/A
20G6	IBUTM	1	963T-24(N,N)	058-054	000T	CC0	N/A
20G6	IBUTM	2	963T-24(N,N)	041-022	100T	CC0	N/A
20G7	CNTRL1	1	963T-24(N,N)	058-046	032B	CC0	N/A
20G7	CNTRL1	2	963T-24(N,N)	041-046	032T	CC0	N/A
20G8	CNTRL5	1	963T-24(N,N)	058-046	213B	CC0	N/A
20G8	CNTRL5	2	963T-24(N,N)	041-046	213T	CC0	N/A
20G9	GCP1	1	963T-24(N,N)	058-038	400B	CC0	N/A
20G9	GCP1	2	963T-24(N,N)xf	041-046	232T	CC0	N/A
20G10	PUCON3	1	963T-24(N,N)	058-038	413B	CC0	N/A
20G10	PUCON3	2	963T-24(N,N)xf	041-046	245T	CC0	N/A

TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
20G12	GCP3	1	963T-24(N,N)	058-044	000B	CC0	N/A
20G12	GCP3	2	963T-24(N,N)	041-052	032T	CC0	N/A
20G16	EREG	1	963T-24(N,N)	058-044	013T	CC0	N/A
20G16	EREG	2	963T-24(N,N)	041-068	045T	CC0	N/A
20G17	GCPUTM	1	963T-16(N,N)	058-038	236B	CC0	N/A
20G17	GCPUTM	2	963T-16(N,N)	041-022	047T	CC0	N/A
20G18	GCPPSE	1	963T-16(N,N)	058-038	404T	CC0	N/A
20G18	GCPPSE	2	963T-16(N,N)	041-159	033T	CC0	N/A
20G19	GCPPS0	1	963T-16(N,N)	058-038	414T	CC0	N/A
20G19	GCPPS0	2	963T-16(N,N)	141-159	033T	CC0	N/A
20G20	GCPCSE2	1	963T-24(N,N)	058-038	432B	CC0	N/A
20G20	GCPCSE2	2	963T-24(N,N)	024-159	032T	CC0	N/A
20G21	GCPCS02	1	963T-24(N,N)	058-038	445B	CC0	N/A
20G21	GCPCS02	2	963T-24(N,N)	124-159	032T	CC0	N/A
20G22	GCPCSE1	1	963T-24(N,N)	058-044	032B	CC0	N/A
20G22	GCPCSE1	2	963T-24(N,N)	024-029	032T	CC0	N/A
20G23	GCPCS01	1	963T-24(N,N)	058-044	045B	CC0	N/A
20G23	GCPCS01	2	963T-24(N,N)	124-029	032T	CC0	N/A
20G24*	PSMCC2	1	963T-24(N,N)	058-046	400B	CC0	N/A
20G24*	PSMCC2	2	963T-24(N,N)	041-021	013T	CC0	N/A
* MCC Terminal 118 Page May Display Incorrect Status For PS							

TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
20G25†	CSMCC2	1	963T-24(N,N)	058-046	413B	N/A	N/A
20G25†	CSMCC2	2	963T-24(N,N)	024-013	045B	N/A	N/A
20G26*	PSMCC1	1	963T-24(N,N)	058-052	000B	N/A	N/A
20G26*	PSMCC1	2	963T-24(N,N)	041-021	000T	N/A	N/A
20G27†	CSMCC1	1	963T-24(N,N)	058-052	013B	N/A	N/A
20G27†	CSMCC1	2	963T-24(N,N)	024-013	013T	N/A	N/A
20G28	SSDCSA	1	963T-24(N,N)	058-168	000T	SSD0	SSD0
20G28	SSDCSA	2	963T-24(N,N)x	024-021	032T	SSD0	SSD0
20G29	SSDCSB	1	963T-24(N,N)	058-168	013T	SSD0	SSD0
20G29	SSDCSB	2	963T-24(N,N)x	024-045	032T	SSD0	SSD0
20G30	SSDCSH	1	963T-8(N,N)	058-168	401T	SSD0	SSD0
20G30	SSDCSH	2	963T-8(N,N)	024-175	052T	SSD0	SSD0
20G31	SSDCSC	1	963T-24(N,N)	058-174	000T	SSD0	SSD0
20G31	SSDCSC	2	963T-24(N,N)	024-069	032T	SSD0	SSD0
20G32	SSDCSD	1	963T-24(N,N)	058-174	013T	SSD0	SSD0
20G32	SSDCSD	2	963T-24(N,N)	024-103	032T	SSD0	SSD0
20G33	SSDPSC	1	963T-24(N,N)	058-179	000B	SSD0	SSD0
20G33	SSDPSC	2	963T-24(N,N)	041-143	032T	SSD0	SSD0
20G34	SSDPSB	1	963T-24(N,N)	058-177	000B	SSD0	SSD0
20G34	SSDPSB	2	963T-24(N,N)	041-135	032T	SSD0	SSD0
* MCC Terminal 118 Page May Display Incorrect Status For PS † MCC Terminal 118 Page May Display Incorrect Status For CS							

TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
20G35	SSDPSA	1	963T-24(N,N)	058-175	000B	SSD0	SSD0
20G35	SSDPSA	2	963T-24(N,N)	041-135	045T	SSD0	SSD0
20G36	SSDCSG	1	963T-24(N,N)	058-179	013B	SSD0	SSD0
20G36	SSDCSG	2	963T-24(N,N)	024-167	032T	SSD0	SSD0
20G37	SSDCSF	1	963T-24(N,N)	058-177	013B	SSD0	SSD0
20G37	SSDCSF	2	963T-24(N,N)	024-143	032T	SSD0	SSD0
20G38	SSDCSE	1	963T-24(N,N)	058-175	013B	SSD0	SSD0
20G38	SSDCSE	2	963T-24(N,N)	024-119	032T	SSD0	SSD0
20G39	CNTRL3	1	963T-24(N,N)	058-046	232B	CC0	N/A
20G39	CNTRL3	2	963T-24(N,N)	041-046	000T	CC0	N/A
20G41	CNTRL1	1	963T-24(N,N)	158-046	032B	CC1	N/A
20G41	CNTRL1	2	963T-24(N,N)	141-046	032T	CC1	N/A
20G43	CNTRL5	1	963T-24(N,N)	158-046	213B	CC1	N/A
20G43	CNTRL5	2	963T-24(N,N)	141-046	213T	CC1	N/A
20G44	GCP1	1	963T-24(N,N)	158-038	400B	CC1	N/A
20G44	GCP1	2	963T-24(N,N)xf	141-046	232T	CC1	N/A
20G45	PUCON3	1	963T-24(N,N)	158-038	413B	CC1	N/A
20G45	PUCON3	2	963T-24(N,N)xf	141-046	245T	CC1	N/A
20G46	XACC1	1	982SP(B,N)	041-052	000B	*	N/A
20G46	XACC1	2	982SP(B,N)	141-052	000B	*	N/A
* If The CCs Are Duplexed, Remove The Standby CC. Otherwise, No Action Is Necessary							

TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
20G47	XACC2	1	982SP(B,N)	041-052	045B	*	N/A
20G47	XACC2	2	982SP(B,N)	141-052	032B	*	N/A
20G48	XACC3	1	982SP(B,N)	041-052	032B	*	N/A
20G48	XACC3	2	982SP(B,N)	141-052	045B	*	N/A
20G50	GCP3	1	963T-24(N,N)	158-044	000B	CC1	N/A
20G50	GCP3	2	963T-24(N,N)	141-052	032T	CC1	N/A
20G54	EREG	1	963T-24(N,N)	158-044	013T	CC1	N/A
20G54	EREG	2	963T-24(N,N)	141-068	045T	CC1	N/A
20G55	XGCP	1	963T-12(N,N)	058-038	015B	CC0	N/A
20G55	XGCP	2	963T-12(N,N)x	158-056	003T	CC0	N/A
20G56	XGCP	1	963T-12(N,N)	158-038	015B	CC1	N/A
20G56	XGCP	2	963T-12(N,N)x	058-056	003T	CC1	N/A
20G57	XIFBC0	1	963T-24(N,N)	058-038	045B	CC0	N/A
20G57	XIFBC0	2	963T-24(N,N)	158-058	000T	CC0	N/A
20G58	XIFBC0	1	963T-24(N,N)	158-038	045B	CC1	N/A
20G58	XIFBC0	2	963T-24(N,N)	058-058	000T	CC1	N/A
20G59	GCPUTM	1	963T-16(N,N)	158-038	236B	CC1	N/A
20G59	GCPUTM	2	963T-16(N,N)	141-022	047T	CC1	N/A
20G60	XXGCP2	1	963T-12(N,N)	158-038	001B	CC1	N/A
20G60	XXGCP2	2	963T-12(N,N)	041-022	035T	CC1	N/A
* If The CCs Are Duplexed, Remove The Standby CC. Otherwise, No Action Is Necessary							

TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
20G61	XXGCP2	1	963T-12(N,N)	058-038	001B	CC0	N/A
20G61	XXGCP2	2	963T-12(N,N)	141-022	035T	CC0	N/A
20G62	GCPPS0	1	963T-16(N,N)	158-038	414T	CC1	N/A
20G62	GCPPS0	2	963T-16(N,N)	141-159	043T	CC1	N/A
20G63	GCPCSE2	1	963T-24(N,N)	158-038	432B	CC1	N/A
20G63	GCPCSE2	2	963T-24(N,N)	024-175	032T	CC1	N/A
20G64	GCPCS02	1	963T-24(N,N)	158-038	445B	CC1	N/A
20G64	GCPCS02	2	963T-24(N,N)	124-175	032T	CC1	N/A
20G65	GCPCSE1	1	963T-24(N,N)	158-044	032B	CC1	N/A
20G65	GCPCSE1	2	963T-24(N,N)	024-013	032T	CC1	N/A
20G66	GCPCS01	1	963T-24(N,N)	158-044	045B	CC1	N/A
20G66	GCPCS01	2	963T-24(N,N)	124-013	032T	CC1	N/A
20G67	UTMD	1	963T-24(N,N)	158-046	000B	CC1	N/A
20G67	UTMD	2	963T-24(N,N)	141-022	232T	CC1	N/A
20G68	UTMA	1	963T-24(N,N)	158-046	013B	CC1	N/A
20G68	UTMA	2	963T-24(N,N)	141-022	245T	CC1	N/A
20G69	XMCCA2	1	982RW(A,N)	058-046	000T	MUP1	N/A
20G69	XMCCA2	2	963T-24(N,N)	158-078	000T	MUP1	N/A
20G70	XMCCA2	1	982RW(A,N)	158-046	000T	MUP0	N/A
20G70	XMCCA2	2	963T-24(N,N)	058-078	000T	MUP0	N/A
20G71	XMCCA1	1	982RW(A,N)	058-046	013T	MUP1	N/A
20G71	XMCCA1	2	963T-24(N,N)	158-078	013T	MUP1	N/A

TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
20G72	XMCCA1	1	982RW(A,N)	158-046	013T	MUP0	N/A
20G72	XMCCA1	2	963T-24(N,N)	058-078	013T	MUP0	N/A
20G73	XMCCON1	1	982RW(A,N)	058-046	245B	MUP1	N/A
20G73	XMCCON1	2	963T-24(N,N)	158-078	413T	MUP1	N/A
20G74	XMCCON1	1	982RW(A,N)	158-046	245B	MUP0	N/A
20G74	XMCCON1	2	963T-24(N,N)	058-078	413T	MUP0	N/A
20G75*	PSMCC2	1	963T-24(N,N)	158-046	400B	N/A	N/A
20G75*	PSMCC2	2	963T-24(N,N)	141-159	013T	N/A	N/A
20G76†	CSMCC2	1	963T-24(N,N)	158-046	413B	N/A	N/A
20G76†	CSMCC2	2	963T-24(N,N)	124-167	045B	N/A	N/A
20G77*	PSMCC1	1	963T-24(N,N)	158-052	000B	N/A	N/A
20G77*	PSMCC1	2	963T-24(N,N)	141-159	000T	N/A	N/A
20G78†	CSMCC1	1	963T-24(N,N)	158-052	013B	N/A	N/A
20G78†	CSMCC1	2	963T-24(N,N)	124-167	013T	N/A	N/A
20G79	XMCCD1	1	982RY(B,N)	058-052	000T	MUP1	N/A
20G79	XMCCD1	2	963T-24(N,N)	158-084	000T	MUP1	N/A
20G80	XMCCD1	1	982RY(B,N)	158-052	000T	MUP0	N/A
20G80	XMCCD1	2	963T-24(N,N)	058-084	000T	MUP0	N/A
20G81	XMCCON2	1	982RY(B,N)	058-052	013T	MUP1	N/A
20G81	XMCCON2	2	963T-24(N,N)	158-084	013T	MUP1	N/A
* MCC Terminal 118 Page May Display Incorrect Status For PS † MCC Terminal 118 Page May Display Incorrect Status For CS							

TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
20G82	XMCCON2	1	982RY(B,N)	158-052	013T	MUP0	N/A
20G82	XMCCON2	2	963T-24(N,N)	058-084	013T	MUP0	N/A
20G91	SSDCSA	1	963T-24(N,N)	158-168	000T	SSD1	SSD1
20G91	SSDCSA	2	963T-24(N,N)x	124-021	032T	SSD1	SSD1
20G92	SSDCSB	1	963T-24(N,N)	158-168	013T	SSD1	SSD1
20G92	SSDCSB	2	963T-24(N,N)x	124-045	032T	SSD1	SSD1
20G93	SSDCSH	1	963T-8(N,N)	158-168	401T	SSD1	SSD1
20G93	SSDCSH	2	963T-8(N,N)	124-175	052T	SSD1	SSD1
20G94	XSSD	1	963T-8(N,N)	058-175	052T	SSD0	SSD0
20G94	XSSD	2	963T-8(N,N)	158-168	420T	SSD0	SSD0
20G95	XSSD	1	963T-8(N,N)	158-175	052T	SSD1	SSD1
20G95	XSSD	2	963T-8(N,N)	058-168	420T	SSD1	SSD1
20G96	SSDCSC	1	963T-24(N,N)	158-174	000T	SSD1	SSD1
20G96	SSDCSC	2	963T-24(N,N)	124-069	032T	SSD1	SSD1
20G97	SSDCSD	1	963T-24(N,N)	158-174	013T	SSD1	SSD1
20G97	SSDCSD	2	963T-24(N,N)	124-103	032T	SSD1	SSD1
20G98	SSDPSC	1	963T-24(N,N)	158-179	000B	SSD1	SSD1
20G98	SSDPSC	2	963T-24(N,N)	141-143	032T	SSD1	SSD1
20G99	SSDPSB	1	963T-24(N,N)	158-177	000B	SSD1	SSD1
20G99	SSDPSB	2	963T-24(N,N)	141-135	032T	SSD1	SSD1
20G100	SSDPSA	1	963T-24(N,N)	158-175	000B	SSD1	SSD1
20G100	SSDPSA	2	963T-24(N,N)	141-135	045T	SSD1	SSD1

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TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (2D4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
20G101	SSDCSG	1	963T-24(N,N)	158-179	013B	SSD1	SSD1
20G101	SSDCSG	2	963T-24(N,N)	124-167	032T	SSD1	SSD1
20G102	SSDCSF	1	963T-24(N,N)	158-177	013B	SSD1	SSD1
20G102	SSDCSF	2	963T-24(N,N)	124-143	032T	SSD1	SSD1
20G103	SSDCSE	1	963T-24(N,N)	158-175	013B	SSD1	SSD1
20G103	SSDCSE	2	963T-24(N,N)	124-119	032T	SSD1	SSD1
20G106	IBUTM	1	963T-24(N,N)	158-054	000T	CC1	N/A
20G106	IBUTM	2	963T-24(N,N)	141-022	100T	CC1	N/A
20G127	CNTRL3	1	963T-24(N,N)	158-046	232B	CC1	N/A
20G127	CNTRL3	2	963T-24(N,N)	141-046	000T	CC1	N/A
20G129	XMM	1	963T-6(N,N)	058-054	019T	CC0	N/A
20G129	XMM	2	963T-6(N,N)	141-038	116T	CC0	N/A
20G130	XMM	1	963T-6(N,N)	158-054	019T	CC1	N/A
20G130	XMM	2	963T-6(N,N)	041-038	116T	CC1	N/A
20G131	IMM	1	963T-6(N,N)	058-054	016T	CC0	N/A
20G131	IMM	2	963T-6(N,N)	041-038	113T	CC0	N/A
20G132	IMM	1	963T-6(N,N)	158-054	016T	CC1	N/A
20G132	IMM	2	963T-6(N,N)	141-038	113T	CC1	N/A
20G133	INH	1	963T-6(N,N)	058-054	013T	CC0	N/A
20G133	INH	2	963T-6(N,N)	041-102	038B	CC0	N/A
20G134	INH	1	963T-6(N,N)	158-054	013T	CC1	N/A
20G134	INH	2	963T-6(N,N)	141-102	038B	CC1	N/A

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TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
20G135	XALDOC	1	963T-16(N,N)	058-053	047T	*	N/A
20G135	XALDOC	2	963T-16(N,N)	158-053	047T	*	N/A
20G152	AUI09	1	963T-16(N,N)	058-120	543T	AUI0	N/A
20G152	AUI09	2	963T-16(N,N)	070-167	016	AUI0	N/A
20G153	AUI09	1	963T-16(N,N)	158-120	543T	AUI1	N/A
20G153	AUI09	2	963T-16(N,N)	170-167	016	AUI1	N/A
20G154	AUI10	1	963T-16(N,N)	058-120	143T	AUI0	N/A
20G154	AUI10	2	963T-16(N,N)	070-125	016	AUI0	N/A
20G155	AUI10	1	963T-16(N,N)	158-120	143T	AUI1	N/A
20G155	AUI10	2	963T-16(N,N)	170-125	016	AUI1	N/A
20G156	AUI11	1	963T-16(N,N)	058-120	533T	AUI0	N/A
20G156	AUI11	2	963T-16(N,N)	070-167	002	AUI0	N/A
20G157	AUI11	1	963T-16(N,N)	158-120	533T	AUI1	N/A
20G157	AUI11	2	963T-16(N,N)	170-167	002	AUI1	N/A
20G158	AUI12	1	963T-16(N,N)	058-120	133T	AUI0	N/A
20G158	AUI12	2	963T-16(N,N)	070-125	002	AUI0	N/A
20G159	AUI12	1	963T-16(N,N)	158-120	133T	AUI1	N/A
20G159	AUI12	2	963T-16(N,N)	170-125	002	AUI1	N/A
20G160	AUI13	1	963T-16(N,N)	058-120	333T	AUI0	N/A
20G160	AUI13	2	963T-16(N,N)	070-137	002	AUI0	N/A
* If The CCs Are Duplexed, Remove The Standby CC. Otherwise, No Action Is Necessary							

TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
20G161	AUI13	1	963T-16(N,N)	158-120	333T	AUI1	N/A
20G161	AUI13	2	963T-16(N,N)	170-137	002	AUI1	N/A
20G164	PUI01	1	963T-24(N,N)	058-044	032T	CC0	N/A
20G164	PUI01	2	963T-24(N,N)	070-014	300	CC0	N/A
20G165	PUI01	1	963T-24(N,N)	158-044	032T	CC1	N/A
20G165	PUI01	2	963T-24(N,N)	170-014	300	CC1	N/A
20G166	PUI02	1	963T-24(N,N)	058-038	045T	CC0	N/A
20G166	PUI02	2	963T-24(N,N)x	070-014	313	CC0	N/A
20G167	PUI02	1	963T-24(N,N)	158-038	045T	CC1	N/A
20G167	PUI02	2	963T-24(N,N)x	170-014	313	CC1	N/A
20G170	PUI04	1	963T-24(N,N)	041-046	045T	CC0	N/A
20G170	PUI04	2	963T-24(N,N)x	070-021	013	CC0	N/A
20G171	PUI04	1	963T-24(N,N)	141-046	045T	CC1	N/A
20G171	PUI04	2	963T-24(N,N)x	170-021	013	CC1	N/A
20G172	PUI05	1	963T-24(N,N)	058-056	032T	CC0	N/A
20G172	PUI05	2	963T-24(N,N)	070-021	000	CC0	N/A
20G173	PUI05	1	963T-24(N,N)	158-056	032T	CC1	N/A
20G173	PUI05	2	963T-24(N,N)	170-021	000	CC1	N/A
20G174	PUI06	1	963T-24(N,N)	058-038	245T	CC0	N/A
20G174	PUI06	2	963T-24(N,N)x	070-023	013	CC0	N/A
20G175	PUI06	1	963T-24(N,N)	158-038	245T	CC1	N/A
20G175	PUI06	2	963T-24(N,N)x	170-023	013	CC1	N/A

TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
20G178	PUI08	1	963T-24(N,N)	058-056	045T	CC0	N/A
20G178	PUI08	2	963T-24(N,N)	070-030	113	CC0	N/A
20G179	PUI08	1	963T-24(N,N)	158-056	045T	CC1	N/A
20G179	PUI08	2	963T-24(N,N)	170-030	113	CC1	N/A
20G180	PUI09	1	963T-24(N,N)	058-038	432T	CC0	N/A
20G180	PUI09	2	963T-24(N,N)	070-030	300	CC0	N/A
20G181	PUI09	1	963T-24(N,N)	158-038	432T	CC1	N/A
20G181	PUI09	2	963T-24(N,N)	170-030	300	CC1	N/A
20G182	PUI10	1	963T-24(N,N)	058-044	045T	CC0	N/A
20G182	PUI10	2	963T-24(N,N)	070-070	300	CC0	N/A
20G183	PUI10	1	963T-24(N,N)	158-044	045T	CC1	N/A
20G183	PUI10	2	963T-24(N,N)	170-070	300	CC1	N/A
20G184	PUI11	1	963T-24(N,N)	058-038	445T	CC0	N/A
20G184	PUI11	2	963T-24(N,N)	070-086	300	CC0	N/A
20G185	PUI11	1	963T-24(N,N)	158-038	445T	CC1	N/A
20G185	PUI11	2	963T-24(N,N)	170-086	300	CC1	N/A
20G186	GCPI0	1	963T-24(N,N)	058-058	032T	CC0	N/A
20G186	GCPI0	2	963T-24(N,N)x	070-038	500	CC0	N/A
20G187	GCPI0	1	963T-24(N,N)	158-058	032T	CC1	N/A
20G187	GCPI0	2	963T-24(N,N)x	170-038	500	CC1	N/A
20G188	GCPI1	1	963T-24(N,N)	058-038	032T	CC0	N/A
20G188	GCPI1	2	963T-24(N,N)x	070-038	513	CC0	N/A

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CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
20G189	GCPI1	1	963T-24(N,N)	158-038	032T	CC1	N/A
20G189	GCPI1	2	963T-24(N,N)x	170-038	513	CC1	N/A
20G206	OPR0	1	963T-16(N,N)	070-025	003	PUB0	N/A
20G206	OPR0	2	963T-16(N,N)	170-025	003	PUB0	N/A
20G207	OPR1	1	963T-16(N,N)	070-025	015	PUB0	N/A
20G207	OPR1	2	963T-16(N,N)	170-025	015	PUB0	N/A
20G210	1PR0	1	963T-16(N,N)	070-079	003	PUB1	N/A
20G210	1PR0	2	963T-16(N,N)	170-079	003	PUB1	N/A
20G211	1PR1	1	963T-16(N,N)	070-079	015	PUB1	N/A
20G211	1PR1	2	963T-16(N,N)	170-079	015	PUB1	N/A
20G246	GCPPSE	1	963T-16(N,N)	158-038	404T	CC1	N/A
20G246	GCPPSE	2	963T-16(N,N)	041-159	043T	CC1	N/A
20G261	0DUSSR	1	963T-16(N,N)	070-121	015	API0,DUS0	N/A
20G261	0DUSSR	2	963T-16(N,N)	170-121	015	API0,DUS0	N/A
20G262	1DUSSR	1	963T-16(N,N)	070-169	015	API1,DUS1	N/A
20G262	1DUSSR	2	963T-16(N,N)	170-169	015	API1,DUS1	N/A
20G263	DUSSR	1	963T-24(N,N)	070-137	013	CC0	N/A
20G263	DUSSR	2	963T-24(N,N)	058-052	045B	CC0	N/A
20G264	DUSSR	1	963T-24(N,N)	170-137	013	CC1	N/A
20G264	DUSSR	2	963T-24(N,N)	158-052	045B	CC1	N/A
20G265	IBUTMC	1	963T-24(N,N)	158-060	000T	CC1	N/A
20G265	IBUTMC	2	963T-24(N,N)	141-022	145B	CC1	N/A

TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
20G266	IBUTMC	1	963T-24(N,N)	058-060	000T	CC0	N/A
20G266	IBUTMC	2	963T-24(N,N)	041-022	145B	CC0	N/A
20G278	OSGE	1	963T-12(N,N)	070-057	006	CC0	N/A
20G278	OSGE	2	963T-12(N,N)	058-060	045T	CC0	N/A
20G279	OSG0	1	963T-12(N,N)	070-057	000	CC0	N/A
20G279	OSG0	2	963T-12(N,N)	158-060	051T	CC0	N/A
20G280	ISGE	1	963T-12(N,N)	170-057	006	CC1	N/A
20G280	ISGE	2	963T-12(N,N)	058-060	051T	CC1	N/A
20G281	ISG0	1	963T-12(N,N)	170-057	000	CC1	N/A
20G281	ISG0	2	963T-12(N,N)	158-060	045T	CC1	N/A
20G282*	XPSMCC1	1	963T-24(N,N)	141-021	000T	N/A	N/A
20G282*	XPSMCC1	2	963T-24(N,N)	041-159	000T	N/A	N/A
20G283*	XPSMCC2	1	963T-24(N,N)	141-021	013T	N/A	N/A
20G283*	XPSMCC2	2	963T-24(N,N)	041-159	013T	N/A	N/A
20G284†	XCSMCC1	1	963T-24(N,N)	124-013	013T	N/A	N/A
20G284†	XCSMCC1	2	963T-24(N,N)	024-167	013T	N/A	N/A
20G285†	XCSMCC2	1	963T-24(N,N)	124-013	045B	N/A	N/A
20G285†	XCSMCC2	2	963T-24(N,N)	024-167	045B	N/A	N/A
20G290	OSSD0	1	963T-12(N,N)	070-057	013	CC0	N/A
20G290	OSSD0	2	963T-12(N,N)	158-181	051B	CC0	N/A
* MCC Terminal 118 Page May Display Incorrect Status For PS † MCC Terminal 118 Page May Display Incorrect Status For CS							

TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
20G291	1SSDE	1	963T-12(N,N)	170-057	019	CC1	N/A
20G291	1SSDE	2	963T-12(N,N)	058-181	051B	CC1	N/A
20G292	1SSD0	1	963T-12(N,N)	170-057	013	CC1	N/A
20G292	1SSD0	2	963T-12(N,N)	158-181	045B	CC1	N/A
20G293	0SSDE	1	963T-12(N,N)	070-057	019	CC0	N/A
20G293	0SSDE	2	963T-12(N,N)	058-181	045B	CC0	N/A
20G401	1AU01	1C	963T-16(N,N)	170-143	047	AUB1	N/A
20G401	1AU01	2C	963T-16(N,N)	070-143	047	AUB1	N/A
20G401	1AU03	1D	963T-16(N,N)	170-143	035	AUB1	N/A
20G401	1AU03	2D	963T-16(N,N)	070-143	035	AUB1	N/A
20G401	1AU05	1A	963T-16(N,N)	170-144	547	AUB1	N/A
20G401	1AU05	2A	963T-16(N,N)	070-144	547	AUB1	N/A
20G401	1AU07	1B	963T-16(N,N)	170-144	535	AUB1	N/A
20G401	1AU07	2B	963T-16(N,N)	070-144	535	AUB1	N/A
20G402	0AU12	1C	963T-16(N,N)	170-112	547	AUB0	N/A
20G402	0AU12	2C	963T-16(N,N)	070-112	547	AUB0	N/A
20G402	0AU14	1D	963T-16(N,N)	170-112	535	AUB0	N/A
20G402	0AU14	2D	963T-16(N,N)	070-112	535	AUB0	N/A
20G402	0AU20	1A	963T-16(N,N)	170-123	047	AUB0	N/A
20G402	0AU20	2A	963T-16(N,N)	070-123	047	AUB0	N/A
20G402	0AU22	1B	963T-16(N,N)	170-123	035	AUB0	N/A
20G402	0AU22	2B	963T-16(N,N)	070-123	035	AUB0	N/A

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TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
20G403	1PD4	1D	963T-16(N,N)	170-085	035	PUB1	N/A
20G403	1PD4	2D	963T-16(N,N)	070-085	035	PUB1	N/A
20G403	1PD5	1B	963T-16(N,N)	170-086	535	PUB1	N/A
20G403	1PD5	2B	963T-16(N,N)	070-086	535	PUB1	N/A
20G403	1PD6	1C	963T-16(N,N)	170-085	047	PUB1	N/A
20G403	1PD6	2C	963T-16(N,N)	070-085	047	PUB1	N/A
20G403	1PD7	1A	963T-16(N,N)	170-086	547	PUB1	N/A
20G403	1PD7	2A	963T-16(N,N)	070-086	547	PUB1	N/A
20G404	OPD0	1D	963T-16(N,N)	170-013	035	PUB0	N/A
20G404	OPD0	2D	963T-16(N,N)	070-013	035	PUB0	N/A
20G404	OPD1	1B	963T-16(N,N)	170-014	535	PUB0	N/A
20G404	OPD1	2B	963T-16(N,N)	070-014	535	PUB0	N/A
20G404	OPD2	1C	963T-16(N,N)	170-013	047	PUB0	N/A
20G404	OPD2	2C	963T-16(N,N)	070-013	047	PUB0	N/A
20G404	OPD3	1A	963T-16(N,N)	170-014	547	PUB0	N/A
20G404	OPD3	2A	963T-16(N,N)	070-014	547	PUB0	N/A

TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
20G405*	XTM0	1B	963T-16(N,N)	158-078	233T	N/A	N/A
20G405*	XTM0	2B	963T-16(N,N)	058-078	233T	N/A	N/A
20G405*	XTM1	1A	963T-16(N,N)	158-078	243T	N/A	N/A
20G405*	XTM1	2A	963T-16(N,N)	058-078	243T	N/A	N/A
20G405*	XTM2	1D	963T-16(N,N)	158-084	033T	N/A	N/A
20G405*	XTM2	2D	963T-16(N,N)	058-084	033T	N/A	N/A
20G405*	XTM3	1C	963T-16(N,N)	158-084	043T	N/A	N/A
20G405*	XTM3	2C	963T-16(N,N)	058-084	043T	N/A	N/A
20G450	AUI01	1A	963T-24(N,N)	070-158	013	AUI0	N/A
20G450	AUI01	2A	963T-24(N,N)	058-126	013T	AUI0	N/A
20G450	AUI02	1B	963T-24(N,N)	070-156	013	AUI0	N/A
20G450	AUI02	2B	963T-24(N,N)	058-120	413T	AUI0	N/A
20G450	AUI03	1C	963T-24(N,N)	070-154	013	AUI0	N/A
20G450	AUI03	2C	963T-24(N,N)	058-120	213T	AUI0	N/A
20G450	AUI04	1D	963T-24(N,N)	070-152	013	AUI0	N/A
20G450	AUI04	2D	963T-24(N,N)	058-120	013T	AUI0	N/A
* MCC Terminal May Not Be Usable							

TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
20G451	AUI01	1A	963T-24(N,N)	170-158	013	AUI1	N/A
20G451	AUI01	2A	963T-24(N,N)	158-126	013T	AUI1	N/A
20G451	AUI02	1B	963T-24(N,N)	170-156	013	AUI1	N/A
20G451	AUI02	2B	963T-24(N,N)	158-120	413T	AUI1	N/A
20G451	AUI03	1C	963T-24(N,N)	170-154	013	AUI1	N/A
20G451	AUI03	2C	963T-24(N,N)	158-120	213T	AUI1	N/A
20G451	AUI04	1D	963T-24(N,N)	170-152	013	AUI1	N/A
20G451	AUI04	2D	963T-24(N,N)	158-120	013T	AUI1	N/A
20G452	AUI05	1A	963T-24(N,N)	070-158	000	AUI0	N/A
20G452	AUI05	2A	963T-24(N,N)	058-126	000T	AUI0	N/A
20G452	AUI06	1B	963T-24(N,N)	070-156	000	AUI0	N/A
20G452	AUI06	2B	963T-24(N,N)	058-120	400T	AUI0	N/A
20G452	AUI07	1C	963T-24(N,N)	070-154	000	AUI0	N/A
20G452	AUI07	2C	963T-24(N,N)	058-120	200T	AUI0	N/A
20G452	AUI08	1D	963T-24(N,N)	070-152	000	AUI0	N/A
20G452	AUI08	2D	963T-24(N,N)	058-120	000T	AUI0	N/A

TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
20G453	AUI05	1A	963T-24(N,N)	170-158	000	AUI1	N/A
20G453	AUI05	2A	963T-24(N,N)	158-126	000T	AUI1	N/A
20G453	AUI06	1B	963T-24(N,N)	170-156	000	AUI1	N/A
20G453	AUI06	2B	963T-24(N,N)	158-120	400T	AUI1	N/A
20G453	AUI07	1C	963T-24(N,N)	170-154	000	AUI1	N/A
20G453	AUI07	2C	963T-24(N,N)	158-120	200T	AUI1	N/A
20G453	AUI08	1D	963T-24(N,N)	170-152	000	AUI1	N/A
20G453	AUI08	2D	963T-24(N,N)	158-120	000T	AUI1	N/A
20G454	XMM11	1A	963T-24(N,N)	141-038	245B	*	N/A
20G454	XMM11	2A	963T-24(N,N)	041-038	045B	*	N/A
20G454	XMM11	1B	963T-24(N,N)	141-038	045B	*	N/A
20G454	XMM11	2B	963T-24(N,N)	041-038	245B	*	N/A
20G454	XMM12	1C	963T-24(N,N)	141-044	045B	*	N/A
20G454	XMM12	2C	963T-24(N,N)	041-044	032B	*	N/A
20G454	XMM12	1D	963T-24(N,N)	141-044	032B	*	N/A
20G454	XMM12	2D	963T-24(N,N)	041-044	045B	*	N/A
* If The CCs Are Duplexed, Remove The Standby CC. Otherwise, No Action Is Necessary							

TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
20G455	XMM00	1A	963T-24(N,N)	141-038	200B	*	N/A
20G455	XMM00	2A	963T-24(N,N)	041-038	000B	*	N/A
20G455	XMM00	1B	963T-24(N,N)	141-038	000B	*	N/A
20G455	XMM00	2B	963T-24(N,N)	041-038	200B	*	N/A
20G455	XMM02	1C	963T-24(N,N)	141-044	013B	*	N/A
20G455	XMM02	2C	963T-24(N,N)	041-044	000B	*	N/A
20G455	XMM02	1D	963T-24(N,N)	141-044	000B	*	N/A
20G455	XMM02	2D	963T-24(N,N)	041-044	013B	*	N/A
20G456	XMM01A	1A	963T-24(N,N)	141-038	213B	*	N/A
20G456	XMM01A	2A	963T-24(N,N)	041-038	013B	*	N/A
20G456	XMM01B	1B	963T-24(N,N)	141-038	013B	*	N/A
20G456	XMM01B	2B	963T-24(N,N)	041-038	213B	*	N/A
20G456	XMM10C	1C	963T-24(N,N)	141-038	232B	*	N/A
20G456	XMM10C	2C	963T-24(N,N)	041-038	032B	*	N/A
20G456	XMM10D	1D	963T-24(N,N)	141-038	032B	*	N/A
20G456	XMM10D	2D	963T-24(N,N)	041-038	232B	*	N/A
* If The CCs Are Duplexed, Remove The Standby CC. Otherwise, No Action Is Necessary							

TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
20G480	XCNTL1A	1A	982SN(A,N)	141-046	045B	*	N/A
20G480	XCNTL1A	2A	982SN(A,N)	041-046	032B	*	N/A
20G480	XCNTL1B	1B	982SN(A,N)	141-046	032B	*	N/A
20G480	XCNTL1B	2B	982SN(A,N)	041-046	045B	*	N/A
20G480	XGCP2	1C	982SN(A,N)	141-046	232B	*	N/A
20G480	XGCP2	2C	982SN(A,N)	041-046	232B	*	N/A
20G480	XGCP3	1D	982SN(A,N)	141-046	245B	*	N/A
20G480	XGCP3	2D	982SN(A,N)	041-046	245B	*	N/A
20G481	XDBB1	1A	982SN(A,N)	141-046	000B	*	N/A
20G481	XDBB1	2A	982SN(A,N)	041-046	000B	*	N/A
20G481	XDBB2	1B	982SN(A,N)	141-046	013B	*	N/A
20G481	XDBB2	2B	982SN(A,N)	041-046	013B	*	N/A
20G481	XDBB3	1C	982SN(A,N)	141-046	200B	*	N/A
20G481	XDBB3	2C	982SN(A,N)	041-046	200B	*	N/A
20G481	XGCP1	1D	982SN(A,N)	141-046	213B	*	N/A
20G481	XGCP1	2D	982SN(A,N)	041-046	213B	*	N/A
* If The CCs Are Duplexed, Remove The Standby CC. Otherwise, No Action Is Necessary							

TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
20G601	1AU25	1E	963T-16(N,N)	170-171	047	AUB1	N/A
20G601	1AU25	2E	963T-16(N,N)	070-171	047	AUB1	N/A
20G601	1AU27	1F	963T-16(N,N)	170-171	035	AUB1	N/A
20G601	1AU27	2F	963T-16(N,N)	070-171	035	AUB1	N/A
20G601	1AU29	1C	963T-16(N,N)	170-175	047	AUB1	N/A
20G601	1AU29	2C	963T-16(N,N)	070-175	047	AUB1	N/A
20G601	1AU31	1D	963T-16(N,N)	170-175	035	AUB1	N/A
20G601	1AU31	2D	963T-16(N,N)	070-175	035	AUB1	N/A
20G601	1AU33	1A	963T-16(N,N)	170-173	015	AUB1	N/A
20G601	1AU33	2A	963T-16(N,N)	070-173	015	AUB1	N/A
20G601	1AU35	1B	963T-16(N,N)	170-173	003	AUB1	N/A
20G601	1AU35	2B	963T-16(N,N)	070-173	003	AUB1	N/A

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TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
20G602	1AU11	1E	963T-16(N,N)	170-155	047	AUB1	N/A
20G602	1AU11	2E	963T-16(N,N)	070-155	047	AUB1	N/A
20G602	1AU13	1F	963T-16(N,N)	170-155	035	AUB1	N/A
20G602	1AU13	2F	963T-16(N,N)	070-155	035	AUB1	N/A
20G602	1AU15	1C	963T-16(N,N)	170-159	047	AUB1	N/A
20G602	1AU15	2C	963T-16(N,N)	070-159	047	AUB1	N/A
20G602	1AU17	1D	963T-16(N,N)	170-159	035	AUB1	N/A
20G602	1AU17	2D	963T-16(N,N)	070-159	035	AUB1	N/A
20G602	1AU19	1A	963T-16(N,N)	170-160	547	AUB1	N/A
20G602	1AU19	2A	963T-16(N,N)	070-160	547	AUB1	N/A
20G602	1AU21	1B	963T-16(N,N)	170-160	535	AUB1	N/A
20G602	1AU21	2B	963T-16(N,N)	070-160	535	AUB1	N/A

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TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
20G603	0AU24	1E	963T-16(N,N)	170-127	047	AUB0	N/A
20G603	0AU24	2E	963T-16(N,N)	070-127	047	AUB0	N/A
20G603	0AU26	1F	963T-16(N,N)	170-127	035	AUB0	N/A
20G603	0AU26	2F	963T-16(N,N)	070-127	035	AUB0	N/A
20G603	0AU28	1C	963T-16(N,N)	170-128	547	AUB0	N/A
20G603	0AU28	2C	963T-16(N,N)	070-128	547	AUB0	N/A
20G603	0AU30	1D	963T-16(N,N)	170-128	535	AUB0	N/A
20G603	0AU30	2D	963T-16(N,N)	070-128	535	AUB0	N/A
20G603	0AU32	1A	963T-16(N,N)	170-137	047	AUB0	N/A
20G603	0AU32	2A	963T-16(N,N)	070-137	047	AUB0	N/A
20G603	0AU34	1B	963T-16(N,N)	170-137	035	AUB0	N/A
20G603	0AU34	2B	963T-16(N,N)	070-137	035	AUB0	N/A

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TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
20G604	0AU00	1E	963T-16(N,N)	170-096	547	AUB0	N/A
20G604	0AU00	2E	963T-16(N,N)	070-096	547	AUB0	N/A
20G604	0AU02	1F	963T-16(N,N)	170-096	535	AUB0	N/A
20G604	0AU02	2F	963T-16(N,N)	070-096	535	AUB0	N/A
20G604	0AU04	1C	963T-16(N,N)	170-107	047	AUB0	N/A
20G604	0AU04	2C	963T-16(N,N)	070-107	047	AUB0	N/A
20G604	0AU06	1D	963T-16(N,N)	170-107	035	AUB0	N/A
20G604	0AU06	2D	963T-16(N,N)	070-107	035	AUB0	N/A
20G604	0AU08	1A	963T-16(N,N)	170-111	047	AUB0	N/A
20G604	0AU08	2A	963T-16(N,N)	070-111	047	AUB0	N/A
20G604	0AU10	1B	963T-16(N,N)	170-111	035	AUB0	N/A
20G604	0AU10	2B	963T-16(N,N)	070-111	035	AUB0	N/A

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TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
20G605	1PD0	1F	963T-16(N,N)	170-069	035	PUB1	N/A
20G605	1PD0	2F	963T-16(N,N)	070-069	035	PUB1	N/A
20G605	1PD1	1D	963T-16(N,N)	170-070	535	PUB1	N/A
20G605	1PD1	2D	963T-16(N,N)	070-070	535	PUB1	N/A
20G605	1PD2	1E	963T-16(N,N)	170-069	047	PUB1	N/A
20G605	1PD2	2E	963T-16(N,N)	070-069	047	PUB1	N/A
20G605	1PD3	1C	963T-16(N,N)	170-070	547	PUB1	N/A
20G605	1PD3	2C	963T-16(N,N)	070-070	547	PUB1	N/A
20G605	1PR2	1B	963T-16(N,N)	170-079	035	PUB1	N/A
20G605	1PR2	2B	963T-16(N,N)	070-079	035	PUB1	N/A
20G605	1PR3	1A	963T-16(N,N)	170-079	047	PUB1	N/A
20G605	1PR3	2A	963T-16(N,N)	070-079	047	PUB1	N/A

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TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
20G606	OPD4	1D	963T-16(N,N)	170-029	035	PUB0	N/A
20G606	OPD4	2D	963T-16(N,N)	070-029	035	PUB0	N/A
20G606	OPD5	1B	963T-16(N,N)	170-030	535	PUB0	N/A
20G606	OPD5	2B	963T-16(N,N)	070-030	535	PUB0	N/A
20G606	OPD6	1C	963T-16(N,N)	170-029	047	PUB0	N/A
20G606	OPD6	2C	963T-16(N,N)	070-029	047	PUB0	N/A
20G606	OPD7	1A	963T-16(N,N)	170-030	547	PUB0	N/A
20G606	OPD7	2A	963T-16(N,N)	070-030	547	PUB0	N/A
20G606	OPR2	1F	963T-16(N,N)	170-024	035	PUB0	N/A
20G606	OPR2	2F	963T-16(N,N)	070-024	035	PUB0	N/A
20G606	OPR3	1E	963T-16(N,N)	170-024	047	PUB0	N/A
20G606	OPR3	2E	963T-16(N,N)	070-024	047	PUB0	N/A
20G650	PUI00	1A	963T-24(N,N)	070-014	113	CC0	N/A
20G650	PUI00	2A	963T-24(N,N)	041-062	113T	CC0	N/A
20G650	PUI03	1B	963T-24(N,N)	070-014	500	CC0	N/A
20G650	PUI03	2B	963T-24(N,N)	041-062	132T	CC0	N/A
20G650	PUI07	1C	963T-24(N,N)	070-030	100	CC0	N/A
20G650	PUI07	2C	963T-24(N,N)	041-062	145T	CC0	N/A

TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
20G651	PUI00	1A	963T-24(N,N)	170-014	113	CC1	N/A
20G651	PUI00	2A	963T-24(N,N)	141-062	113T	CC1	N/A
20G651	PUI03	1B	963T-24(N,N)	170-014	500	CC1	N/A
20G651	PUI03	2B	963T-24(N,N)	141-062	132T	CC1	N/A
20G651	PUI07	1C	963T-24(N,N)	170-030	100	CC1	N/A
20G651	PUI07	2C	963T-24(N,N)	141-062	145T	CC1	N/A
20G652	IBPUD0	1A	963T-24(N,N)	058-038	000T	CC0	N/A
20G652	IBPUD0	2A	963T-24(N,N)	041-054	200B	CC0	N/A
20G652	IBPUD1	1B	963T-24(N,N)	058-038	013T	CC0	N/A
20G652	IBPUD1	2B	963T-24(N,N)	041-054	213B	CC0	N/A
20G652	PUCON2	1C	963T-24(N,N)	058-044	000T	CC0	N/A
20G652	PUCON2	2C	963T-24(N,N)	041-069	000B	CC0	N/A
20G653	IBPUD0	1A	963T-24(N,N)	158-038	000T	CC1	N/A
20G653	IBPUD0	2A	963T-24(N,N)	141-054	200B	CC1	N/A
20G653	IBPUD1	1B	963T-24(N,N)	158-038	013T	CC1	N/A
20G653	IBPUD1	2B	963T-24(N,N)	141-054	213B	CC1	N/A
20G653	PUCON2	1C	963T-24(N,N)	158-044	000T	CC1	N/A
20G653	PUCON2	2C	963T-24(N,N)	141-069	000B	CC1	N/A

TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
20G654	CNTRL2	1C	963T-24(N,N)	058-038	200B	CC0	N/A
20G654	CNTRL2	2C	963T-24(N,N)	041-046	013T	CC0	N/A
20G654	CNTRL4	1A	963T-24(N,N)	058-046	200B	CC0	N/A
20G654	CNTRL4	2A	963T-24(N,N)	041-046	200T	CC0	N/A
20G654	GCP2	1B	963T-24(N,N)	058-044	013B	CC0	N/A
20G654	GCP2	2B	963T-24(N,N)	041-052	000T	CC0	N/A
20G655	CNTRL2	1C	963T-24(N,N)	158-038	200B	CC1	N/A
20G655	CNTRL2	2C	963T-24(N,N)	141-046	013T	CC1	N/A
20G655	CNTRL4	1A	963T-24(N,N)	158-046	200B	CC1	N/A
20G655	CNTRL4	2A	963T-24(N,N)	141-046	200T	CC1	N/A
20G655	GCP2	1B	963T-24(N,N)	158-044	013B	CC1	N/A
20G655	GCP2	2B	963T-24(N,N)	141-052	000T	CC1	N/A
20G660	SMSR0	1	982AE(N,N)	041-120	245T	CC0	N/A
20G660	SMSR0	2	982AE(N,N)	041-030	200T	CC0	N/A
20G660	SMSR0	3	982AE(N,N)	041-086	100T	CC0	N/A
20G661	SMSR1	1	982AE(N,N)	141-120	245T	CC1	N/A
20G661	SMSR1	2	982AE(N,N)	141-030	200T	CC1	N/A
20G661	SMSR1	3	982AE(N,N)	141-086	100T	CC1	N/A

TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257 -)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
25G1	IBBB3	1	9822AW(A,N)	058-070	013T	CC0	N/A
25G1	IBBB3	2	9822AW(A,N)	041-086	213B	CC0	N/A
25G2	IBBB2	1	9822AW(A,N)	058-070	000T	CC0	N/A
25G2	IBBB2	2	9822AW(A,N)	041-086	200B	CC0	N/A
25G3	IBBB0	1	9822BA(B,N)	058-070	200T	CC0	N/A
25G3	IBBB0	2	9822BA(B,N)	041-096	100B	CC0	N/A
25G4	IBBB1	1	9822BA(B,N)	058-070	213T	CC0	N/A
25G4	IBBB1	2	9822BA(B,N)	041-096	113B	CC0	N/A
25G5	IBNA0	1	9822AW(A,N)	058-070	445T	CC0	N/A
25G5	IBNA0	2	9822AW(A,N)	041-120	045T	CC0	N/A
25G6	IBNA1	1	9822AW(A,N)	058-070	432T	CC0	N/A
25G6	IBNA1	2	9822AW(A,N)	041-120	032T	CC0	N/A
25G7	IBNA2	1	9822BA(B,N)	058-076	045T	CC0	N/A
25G7	IBNA2	2	9822BA(B,N)	041-120	445T	CC0	N/A
25G8	IBNA3	1	9822BA(B,N)	058-076	032T	CC0	N/A
25G8	IBNA3	2	9822BA(B,N)	041-126	045T	CC0	N/A
25G9	IBND2	1	9822BA(B,N)	058-062	213T	CC0	N/A
25G9	IBND2	2	9822BA(B,N)	041-118	032T	CC0	N/A
25G10	IBND0	1	9822BA(B,N)	058-068	013T	CC0	N/A
25G10	IBND0	2	9822BA(B,N)	041-110	032T	CC0	N/A
25G11	IBND3	1	9822BA(B,N)	058-062	200T	CC0	N/A
25G11	IBND3	2	9822BA(B,N)	041-118	045T	CC0	N/A

REPLACE CABLE — 1B PROCESSOR CABINET

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TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
25G12	IBND1	1	9822BA(B,N)	058-068	000T	CC0	N/A
25G12	IBND1	2	9822BA(B,N)	041-110	045T	CC0	N/A
25G13	IBDX1	1	9822BA(B,N)	058-058	013T	CC0	N/A
25G13	IBDX1	2	9822BA(B,N)	041-092	045T	CC0	N/A
25G14	IBDX0	1	9822BA(B,N)	058-060	013T	CC0	N/A
25G14	IBDX0	2	9822BA(B,N)	041-092	032T	CC0	N/A
25G15	IBDX0	1	9822BA(B,N)	158-060	013T	CC1	N/A
25G15	IBDX0	2	9822BA(B,N)	141-092	032T	CC1	N/A
25G16	IBDX1	1	9822BA(B,N)	158-058	013T	CC1	N/A
25G16	IBDX1	2	9822BA(B,N)	141-092	045T	CC1	N/A
25G17	IBBB0	1	9822BA(B,N)	158-070	200T	CC1	N/A
25G17	IBBB0	2	9822BA(B,N)	141-096	100B	CC1	N/A
25G18	IBBB1	1	9822BA(B,N)	158-070	213T	CC1	N/A
25G18	IBBB1	2	9822BA(B,N)	141-096	113B	CC1	N/A
25G19	IBBB3	1	9822AW(A,N)	158-070	013T	CC1	N/A
25G19	IBBB3	2	9822AW(A,N)	141-086	213B	CC1	N/A
25G20	IBBB2	1	9822AW(A,N)	158-070	000T	CC1	N/A
25G20	IBBB2	2	9822AW(A,N)	141-086	200B	CC1	N/A
25G21	IBND0	1	9822BA(B,N)	158-068	013T	CC1	N/A
25G21	IBND0	2	9822BA(B,N)	141-110	032T	CC1	N/A
25G22	IBND1	1	9822BA(B,N)	158-068	000T	CC1	N/A
25G22	IBND1	2	9822BA(B,N)	141-110	045T	CC1	N/A

TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
25G23	IBND2	1	9822BA(B,N)	158-062	213T	CC1	N/A
25G23	IBND2	2	9822BA(B,N)	141-118	032T	CC1	N/A
25G24	IBND3	1	9822BA(B,N)	158-062	200T	CC1	N/A
25G24	IBND3	2	9822BA(B,N)	141-118	045T	CC1	N/A
25G25	IBNA0	1	9822AW(A,N)	158-070	445T	CC1	N/A
25G25	IBNA0	2	9822AW(A,N)	141-120	045T	CC1	N/A
25G26	IBNA1	1	9822AW(A,N)	158-070	432T	CC1	N/A
25G26	IBNA1	2	9822AW(A,N)	141-120	032T	CC1	N/A
25G27	IBNA2	1	9822BA(B,N)	158-076	045T	CC1	N/A
25G27	IBNA2	2	9822BA(B,N)	141-120	445T	CC1	N/A
25G28	IBNA3	1	9822BA(B,N)	158-076	032T	CC1	N/A
25G28	IBNA3	2	9822BA(B,N)	141-126	045T	CC1	N/A
25G29	1IA7	1	9822BA(B,N)	158-076	045B	CC0	N/A
25G29	1IA7	2	9822BA(B,N)	058-054	045B	CC0	N/A
25G30	1IA6	1	9822BA(B,N)	158-076	032B	CC0	N/A
25G30	1IA6	2	9822BA(B,N)	058-054	032B	CC0	N/A
25G31	1IA5	1	9822BJ(B,Y)	158-076	013B	CC0	N/A
25G31	1IA5	2	9822BJ(B,Y)	058-054	013B	CC0	N/A
25G32	1IA4	1	9822BJ(B,Y)	158-076	000B	CC0	N/A
25G32	1IA4	2	9822BJ(B,Y)	058-054	000B	CC0	N/A
25G33	1IA3	1	9822BG(A,Y)	158-070	445B	CC0	N/A
25G33	1IA3	2	9822BG(A,Y)	058-058	045B	CC0	N/A

TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
25G34	1IA2	1	9822BG(A,Y)	158-070	432B	CC0	N/A
25G34	1IA2	2	9822BG(A,Y)	058-058	032B	CC0	N/A
25G35	1IA1	1	9822BG(A,Y)	158-070	413B	CC0	N/A
25G35	1IA1	2	9822BG(A,Y)	058-058	013B	CC0	N/A
25G36	1IA0	1	9822BG(A,Y)	158-070	400B	CC0	N/A
25G36	1IA0	2	9822BG(A,Y)	058-058	000B	CC0	N/A
25G37	0IA7	1	9822BA(B,N)	158-070	245B	IFB0	N/A
25G37	0IA7	2	9822BA(B,N)	058-159	045B	IFB0	N/A
25G38	0IA6	1	9822BA(B,N)	158-070	232B	IFB0	N/A
25G38	0IA6	2	9822BA(B,N)	058-159	032B	IFB0	N/A
25G39	0IA5	1	9822BJ(B,Y)	158-070	213B	IFB0	N/A
25G39	0IA5	2	9822BJ(B,Y)	058-159	013B	IFB0	N/A
25G40	0IA4	1	9822BJ(B,Y)	158-070	200B	IFB0	N/A
25G40	0IA4	2	9822BJ(B,Y)	058-159	000B	IFB0	N/A
25G41	0IA3	1	9822BG(A,Y)	158-070	045B	IFB0	N/A
25G41	0IA3	2	9822BG(A,Y)	058-160	545B	IFB0	N/A
25G42	0IA2	1	9822BG(A,Y)	158-070	032B	IFB0	N/A
25G42	0IA2	2	9822BG(A,Y)	058-160	532B	IFB0	N/A
25G43	0IA1	1	9822BG(A,Y)	158-070	013B	IFB0	N/A
25G43	0IA1	2	9822BG(A,Y)	058-160	513B	IFB0	N/A

TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
25G44	0IA0	1	9822BG(A,Y)	158-070	000B	IFB0	N/A
25G44	0IA0	2	9822BG(A,Y)	058-160	500B	IFB0	N/A
25G45	1ID6	1	9822BH(B,Y)	158-068	045B	CC0	N/A
25G45	1ID6	2	9822BH(B,Y)	058-056	045B	CC0	N/A
25G46	1ID5	1	9822BH(B,Y)	158-068	032B	CC0	N/A
25G46	1ID5	2	9822BH(B,Y)	058-056	032B	CC0	N/A
25G47	1ID4	1	9822BH(B,Y)	158-068	013B	CC0	N/A
25G47	1ID4	2	9822BH(B,Y)	058-056	013B	CC0	N/A
25G48	1ID3	1	9822BH(B,Y)	158-068	000B	CC0	N/A
25G48	1ID3	2	9822BH(B,Y)	058-056	000B	CC0	N/A
25G49	1ID2	1	9822BF(A,Y)	158-062	445B	CC0	N/A
25G49	1ID2	2	9822BH(B,Y)x	058-060	045B	CC0	N/A
25G50	1ID1	1	9822BF(A,Y)	158-062	432B	CC0	N/A
25G50	1ID1	2	9822BH(B,Y)x	058-060	032B	CC0	N/A
25G51	1ID0	1	9822BF(A,Y)	158-062	413B	CC0	N/A
25G51	1ID0	2	9822BH(B,Y)x	058-060	013B	CC0	N/A
25G52	0ID6	1	9822BH(B,Y)	158-062	245B	IFB0	N/A
25G52	0ID6	2	9822BH(B,Y)	058-160	345B	IFB0	N/A
25G53	0ID5	1	9822BH(B,Y)	158-062	232B	IFB0	N/A
25G53	0ID5	2	9822BH(B,Y)	058-160	332B	IFB0	N/A

TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
25G54	0ID4	1	9822BJ(B,Y)	158-062	213B	IFB0	N/A
25G54	0ID4	2	9822BG(A,Y)x	058-167	000B	IFB0	N/A
25G55	0ID3	1	9822BH(B,Y)	158-062	200B	IFB0	N/A
25G55	0ID3	2	9822BH(B,Y)	058-160	300B	IFB0	N/A
25G56	0ID2	1	9822BG(A,Y)	158-062	045B	IFB0	N/A
25G56	0ID2	2	9822BG(A,Y)	058-167	045B	IFB0	N/A
25G57	0ID1	1	9822BG(A,Y)	158-062	032B	IFB0	N/A
25G57	0ID1	2	9822BG(A,Y)	058-167	032B	IFB0	N/A
25G58	0ID0	1	9822BG(A,Y)	158-062	013B	IFB0	N/A
25G58	0ID0	2	9822BG(A,Y)	058-167	013B	IFB0	N/A
25G59	PS00	1	9822BF(A,Y)	141-128	000B	PSB0	N/A
25G59	PS00	2	9822BF(A,Y)	041-168	000B	PSB0	N/A
25G60	PS01	1	9822BF(A,Y)	141-128	013B	PSB1	N/A
25G60	PS01	2	9822BF(A,Y)	041-168	013B	PSB1	N/A
25G61	PS02	1	9822BF(A,Y)	141-128	200B	PSB0	N/A
25G61	PS02	2	9822BF(A,Y)	041-168	200B	PSB0	N/A
25G62	PS03	1	9822BF(A,Y)	141-128	213B	PSB1	N/A
25G62	PS03	2	9822BF(A,Y)	041-168	213B	PSB1	N/A
25G63	PS04	1	9822BH(B,Y)	141-128	400B	PSB0	N/A
25G63	PS04	2	9822BH(B,Y)	041-168	400B	PSB0	N/A

TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
25G64	PS05	1	9822BH(B,Y)	141-128	413B	PSB1	N/A
25G64	PS05	2	9822BH(B,Y)	041-168	413B	PSB1	N/A
25G65	PS06	1	9822BH(B,Y)	141-134	000B	PSB0	N/A
25G65	PS06	2	9822BH(B,Y)	041-174	000B	PSB0	N/A
25G66	PS07	1	9822BH(B,Y)	141-134	013B	PSB1	N/A
25G66	PS07	2	9822BH(B,Y)	041-174	013B	PSB1	N/A
25G67	PS08	1	9822BF(A,Y)	141-104	032B	PSB0	N/A
25G67	PS08	2	9822BF(A,Y)	041-168	032B	PSB0	N/A
25G68	PS09	1	9822BF(A,Y)	141-104	045B	PSB1	N/A
25G68	PS09	2	9822BF(A,Y)	041-168	045B	PSB1	N/A
25G69	PS10	1	9822BF(A,Y)	141-104	232B	PSB0	N/A
25G69	PS10	2	9822BF(A,Y)	041-168	232B	PSB0	N/A
25G70	PS11	1	9822BF(A,Y)	141-104	245B	PSB1	N/A
25G70	PS11	2	9822BF(A,Y)	041-168	245B	PSB1	N/A
25G71	PS12	1	9822BF(A,Y)	141-112	032B	PSB0	N/A
25G71	PS12	2	9822BH(B,Y)x	041-168	432B	PSB0	N/A
25G72	PS13	1	9822BF(A,Y)	141-112	045B	PSB1	N/A
25G72	PS13	2	9822BH(B,Y)x	041-168	445B	PSB1	N/A
25G73	PS14	1	9822BF(A,Y)	141-112	232B	PSB0	N/A
25G73	PS14	2	9822BH(B,Y)x	041-174	032B	PSB0	N/A

TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
25G74	PS15	1	9822BF(A,Y)	141-112	245B	PSB1	N/A
25G74	PS15	2	9822BH(B,Y)x	041-174	045B	PSB1	N/A
25G75	PS16	1	9822BF(A,Y)	041-168	000T	PSB0	N/A
25G75	PS16	2	9822BH(B,Y)x	141-104	432B	PSB0	N/A
25G76	PS17	1	9822BF(A,Y)	041-168	013T	PSB1	N/A
25G76	PS17	2	9822BH(B,Y)x	141-104	445B	PSB1	N/A
25G77	PS18	1	9822BF(A,Y)	041-168	200T	PSB0	N/A
25G77	PS18	2	9822BH(B,Y)x	141-110	032B	PSB0	N/A
25G78	PS19	1	9822BF(A,Y)	041-168	213T	PSB1	N/A
25G78	PS19	2	9822BH(B,Y)x	141-110	045B	PSB1	N/A
25G79	PS20	1	9822BH(B,Y)	041-168	400T	PSB0	N/A
25G79	PS20	2	9822BH(B,Y)	141-112	432B	PSB0	N/A
25G80	PS21	1	9822BH(B,Y)	041-168	413T	PSB1	N/A
25G80	PS21	2	9822BH(B,Y)	141-112	445B	PSB1	N/A
25G81	PS22	1	9822BH(B,Y)	041-174	000T	PSB0	N/A
25G81	PS22	2	9822BH(B,Y)	141-118	032B	PSB0	N/A
25G82	PS23	1	9822BH(B,Y)	041-174	013T	PSB1	N/A
25G82	PS23	2	9822BH(B,Y)	141-118	045B	PSB1	N/A
25G83	PS24	1	9822BB(A,Y)	041-168	033T	PSB0	N/A
25G83	PS24	2	9822BC(B,Y)x	141-104	401T	PSB0	N/A

TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
25G84	PS25	1	9822BB(A,Y)	041-168	043T	PSB1	N/A
25G84	PS25	2	9822BC(B,Y)x	141-104	411T	PSB1	N/A
25G85	PS26	1	9822BB(A,Y)	041-168	233T	PSB0	N/A
25G85	PS26	2	9822BC(B,Y)x	141-110	001T	PSB0	N/A
25G86	PS27	1	9822BB(A,Y)	041-168	243T	PSB1	N/A
25G86	PS27	2	9822BC(B,Y)x	141-110	011T	PSB1	N/A
25G87	PS28	1	9822BC(B,Y)	041-168	433T	PSB0	N/A
25G87	PS28	2	9822BC(B,Y)	141-112	401T	PSB0	N/A
25G88	PS29	1	9822BC(B,Y)	041-168	443T	PSB1	N/A
25G88	PS29	2	9822BC(B,Y)	141-112	411T	PSB1	N/A
25G89	PS30	1	9822BC(B,Y)	041-174	033T	PSB0	N/A
25G89	PS30	2	9822BC(B,Y)	141-118	001T	PSB0	N/A
25G90	PS31	1	9822BC(B,Y)	041-174	043T	PSB1	N/A
25G90	PS31	2	9822BC(B,Y)	141-118	011T	PSB1	N/A
25G91	CS00	1	9822BK(A,Y)	024-086	013B	CSB0	N/A
25G91	CS00	2	9822BG(A,Y)	041-120	032B	CSB0	N/A
25G91	CS00	3	9822BG(A,Y)	141-120	032B	CSB0	N/A
25G91	CS00	4	9822BK(A,Y)	124-086	013B	CSB0	N/A

TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
25G92	CS01	1	9822BK(A,Y)	024-096	000B	CSB1	N/A
25G92	CS01	2	9822BG(A,Y)	041-120	045B	CSB1	N/A
25G92	CS01	3	9822BG(A,Y)	141-120	045B	CSB1	N/A
25G92	CS01	4	9822BK(A,Y)	124-096	000B	CSB1	N/A
25G93	CS02	1	9822BK(A,Y)	024-086	213B	CSB0	N/A
25G93	CS02	2	9822BG(A,Y)	041-120	232B	CSB0	N/A
25G93	CS02	3	9822BG(A,Y)	141-120	232B	CSB0	N/A
25G93	CS02	4	9822BK(A,Y)	124-086	213B	CSB0	N/A
25G94	CS03	1	9822BK(A,Y)	024-096	200B	CSB1	N/A
25G94	CS03	2	9822BG(A,Y)	041-120	245B	CSB1	N/A
25G94	CS03	3	9822BG(A,Y)	141-120	245B	CSB1	N/A
25G94	CS03	4	9822BK(A,Y)	124-096	200B	CSB1	N/A
25G95	CS04	1	9822BL(B,Y)	024-086	413B	CSB0	N/A
25G95	CS04	2	9822BJ(B,Y)	041-120	432B	CSB0	N/A
25G95	CS04	3	9822BJ(B,Y)	141-120	432B	CSB0	N/A
25G95	CS04	4	9822BL(B,Y)	124-086	413B	CSB0	N/A
25G96	CS05	1	9822BL(B,Y)	024-096	400B	CSB1	N/A
25G96	CS05	2	9822BJ(B,Y)	041-120	445B	CSB1	N/A
25G96	CS05	3	9822BJ(B,Y)	141-120	445B	CSB1	N/A
25G96	CS05	4	9822BL(B,Y)	124-096	400B	CSB1	N/A

TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
25G97	CS06	1	9822BL(B,Y)	024-092	013B	CSB0	N/A
25G97	CS06	2	9822BJ(B,Y)	041-126	032B	CSB0	N/A
25G97	CS06	3	9822BJ(B,Y)	141-126	032B	CSB0	N/A
25G97	CS06	4	9822BL(B,Y)	124-092	013B	CSB0	N/A
25G98	CS07	1	9822BL(B,Y)	024-102	000B	CSB1	N/A
25G98	CS07	2	9822BJ(B,Y)	041-126	045B	CSB1	N/A
25G98	CS07	3	9822BJ(B,Y)	141-126	045B	CSB1	N/A
25G98	CS07	4	9822BL(B,Y)	124-102	000B	CSB1	N/A
25G99	CS08	1	9822BK(A,Y)	024-086	045B	CSB0	N/A
25G99	CS08	2	9822BG(A,Y)	041-104	000B	CSB0	N/A
25G99	CS08	3	9822BG(A,Y)	141-104	000B	CSB0	N/A
25G99	CS08	4	9822BK(A,Y)	124-086	045B	CSB0	N/A
25G100	CS09	1	9822BK(A,Y)	024-096	032B	CSB1	N/A
25G100	CS09	2	9822BG(A,Y)	041-104	013B	CSB1	N/A
25G100	CS09	3	9822BG(A,Y)	141-104	013B	CSB1	N/A
25G100	CS09	4	9822BK(A,Y)	124-096	032B	CSB1	N/A
25G101	CS10	1	9822BK(A,Y)	024-086	245B	CSB0	N/A
25G101	CS10	2	9822BG(A,Y)	041-104	200B	CSB0	N/A
25G101	CS10	3	9822BG(A,Y)	141-104	200B	CSB0	N/A
25G101	CS10	4	9822BK(A,Y)	124-086	245B	CSB0	N/A

TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
25G102	CS11	1	9822BK(A,Y)	024-096	232B	CSB1	N/A
25G102	CS11	2	9822BG(A,Y)	041-104	213B	CSB1	N/A
25G102	CS11	3	9822BG(A,Y)	141-104	213B	CSB1	N/A
25G102	CS11	4	9822BK(A,Y)	124-096	232B	CSB1	N/A
25G103	CS12	1	9822BL(B,Y)	024-086	445B	CSB0	N/A
25G103	CS12	2	9822BG(A,Y)x	041-112	000B	CSB0	N/A
25G103	CS12	3	9822BG(A,Y)x	141-112	000B	CSB0	N/A
25G103	CS12	4	9822BL(B,Y)	124-086	445B	CSB0	N/A
25G104	CS13	1	9822BL(B,Y)	024-096	432B	CSB1	N/A
25G104	CS13	2	9822BG(A,Y)x	041-112	013B	CSB1	N/A
25G104	CS13	3	9822BG(A,Y)x	141-112	013B	CSB1	N/A
25G104	CS13	4	9822BL(B,Y)	124-096	432B	CSB1	N/A
25G105	CS14	1	9822BL(B,Y)	024-092	045B	CSB0	N/A
25G105	CS14	2	9822BG(A,Y)x	041-112	200B	CSB0	N/A
25G105	CS14	3	9822BG(A,Y)x	141-112	200B	CSB0	N/A
25G105	CS14	4	9822BL(B,Y)	124-092	045B	CSB0	N/A
25G106	CS15	1	9822BL(B,Y)	024-102	032B	CSB1	N/A
25G106	CS15	2	9822BG(A,Y)x	041-112	213B	CSB1	N/A
25G106	CS15	3	9822BG(A,Y)x	141-112	213B	CSB1	N/A
25G106	CS15	4	9822BL(B,Y)	124-102	032B	CSB1	N/A

TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
25G107	CS16	1	9822BK(A,Y)	041-104	000T	CSB0	N/A
25G107	CS16	2	9822BG(A,Y)	024-086	013T	CSB0	N/A
25G107	CS16	3	9822BG(A,Y)	124-086	013T	CSB0	N/A
25G107	CS16	4	9822BK(A,Y)	141-104	000T	CSB0	N/A
25G108	CS17	1	9822BK(A,Y)	141-104	013T	CSB1	N/A
25G108	CS17	2	9822BG(A,Y)	124-096	000T	CSB1	N/A
25G108	CS17	3	9822BG(A,Y)	024-096	000T	CSB1	N/A
25G108	CS17	4	9822BK(A,Y)	041-104	013T	CSB1	N/A
25G109	CS18	1	9822BK(A,Y)	041-104	200T	CSB0	N/A
25G109	CS18	2	9822BG(A,Y)	024-086	213T	CSB0	N/A
25G109	CS18	3	9822BG(A,Y)	124-086	213T	CSB0	N/A
25G109	CS18	4	9822BK(A,Y)	141-104	200T	CSB0	N/A
25G110	CS19	1	9822BK(A,Y)	141-104	213T	CSB1	N/A
25G110	CS19	2	9822BG(A,Y)	124-096	200T	CSB1	N/A
25G110	CS19	3	9822BG(A,Y)	024-096	200T	CSB1	N/A
25G110	CS19	4	9822BK(A,Y)	041-104	213T	CSB1	N/A
25G111	CS20	1	9822BK(A,Y)	041-112	000T	CSB0	N/A
25G111	CS20	2	9822BJ(B,Y)x	024-086	413T	CSB0	N/A
25G111	CS20	3	9822BJ(B,Y)x	124-086	413T	CSB0	N/A
25G111	CS20	4	9822BK(A,Y)	141-112	000T	CSB0	N/A

TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
25G112	CS21	1	9822BK(A,Y)	141-112	013T	CSB1	N/A
25G112	CS21	2	9822BJ(B,Y)x	124-096	400T	CSB1	N/A
25G112	CS21	3	9822BJ(B,Y)x	024-096	400T	CSB1	N/A
25G112	CS21	4	9822BK(A,Y)	041-112	013T	CSB1	N/A
25G113	CS22	1	9822BK(A,Y)	041-112	200T	CSB0	N/A
25G113	CS22	2	9822BJ(B,Y)x	024-092	013T	CSB0	N/A
25G113	CS22	3	9822BJ(B,Y)x	124-092	013T	CSB0	N/A
25G113	CS22	4	9822BK(A,Y)	141-112	200T	CSB0	N/A
25G114	CS23	1	9822BK(A,Y)	141-112	213T	CSB1	N/A
25G114	CS23	2	9822BJ(B,Y)x	124-102	000T	CSB1	N/A
25G114	CS23	3	9822BJ(B,Y)x	024-102	000T	CSB1	N/A
25G114	CS23	4	9822BK(A,Y)	041-112	213T	CSB1	N/A
28G1 *	OPD0	1	963T-20-16(N,N)	170-014	134	PUB0	N/A
28G1 *	OPD0	2	End 2 Connected To PU0-028-332			PUB0	N/A
28G2 *	OPD1	1	963T-20-16(N,N)	170-021	034	PUB0	N/A
28G2 *	OPD1	2	End 2 Connected To PU0-008-132			PUB0	N/A
28G3 *	OPD2	1	963T-20-16(N,N)	170-014	146	PUB0	N/A
28G3 *	OPD2	2	End 2 Connected To PU0-008-332			PUB0	N/A
28G4 *	OPD3	1	963T-20-16(N,N)	170-021	046	PUB0	N/A
28G4 *	OPD3	2	End 2 Connected To PU0-018-132			PUB0	N/A
* 1B Processor Spliced Peripheral Retrofit Cables ED4A257-28G1 Through ED4A257-28G24 Should Be Replaced With Replacement Cable ED4A257-30G1							

TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
28G5 *	OPD4	1	963T-20-16(N,N)	170-030	134	PUB0	N/A
28G5 *	OPD4	2	End 2 Connected To PU0-018-332			PUB0	N/A
28G6 *	OPD5	1	963T-20-16(N,N)	170-037	034	PUB0	N/A
28G6 *	OPD5	2	End 2 Connected To PU0-028-132			PUB0	N/A
28G7 *	OPD6	1	963T-20-16(N,N)	170-030	146	PUB0	N/A
28G7 *	OPD6	2	End 2 Connected To PU0-038-132			PUB0	N/A
28G8 *	OPD7	1	963T-20-16(N,N)	170-037	046	PUB0	N/A
28G8 *	OPD7	2	End 2 Connected To PU0-038-332			PUB0	N/A
28G9 *	1PD0	1	963T-20-16(N,N)	170-070	134	PUB1	N/A
28G9 *	1PD0	2	End 2 Connected To PU1-028-332			PUB1	N/A
28G10 *	1PD1	1	963T-20-16(N,N)	170-077	034	PUB1	N/A
28G10 *	1PD1	2	End 2 Connected To PU1-008-132			PUB1	N/A
28G11 *	1PD2	1	963T-20-16(N,N)	170-070	146	PUB1	N/A
28G11 *	1PD2	2	End 2 Connected To PU1-008-332			PUB1	N/A
28G12 *	1PD3	1	963T-20-16(N,N)	170-077	046	PUB1	N/A
28G12 *	1PD3	2	End 2 Connected To PU1-018-132			PUB1	N/A
28G13 *	1PD4	1	963T-20-16(N,N)	170-086	134	PUB1	N/A
28G13 *	1PD4	2	End 2 Connected To PU1-018-332			PUB1	N/A
28G14 *	1PD5	1	963T-20-16(N,N)	170-093	034	PUB1	N/A
28G14 *	1PD5	2	End 2 Connected To PU1-028-132			PUB1	N/A
* 1B Processor Spliced Peripheral Retrofit Cables ED4A257-28G1 Through ED4A257-28G24 Should Be Replaced With Replacement Cable ED4A257-30G1							

TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
28G15*	1PD6	1	963T-20-16(N,N)	170-086	146	PUB1	N/A
28G15*	1PD6	2	End 2 Connected To PU1-038-132			PUB1	N/A
28G16*	1PD7	1	963T-20-16(N,N)	170-093	046	PUB1	N/A
28G16*	1PD7	2	End 2 Connected To PU1-038-332			PUB1	N/A
28G17*	OPR0	1	963T-20-16(N,N)	170-027	002	PUB0	N/A
28G17*	OPR0	2	End 2 Connected To PU0-048-132			PUB0	N/A
28G18*	OPR1	1	963T-20-16(N,N)	170-027	014	PUB0	N/A
28G18*	OPR1	2	End 2 Connected To PU0-048-332			PUB0	N/A
28G19*	OPR2	1	963T-20-16(N,N)	170-026	034	PUB0	N/A
28G19*	OPR2	2	End 2 Connected To PU0-058-132			PUB0	N/A
28G20*	OPR3	1	963T-20-16(N,N)	170-026	046	PUB0	N/A
28G20*	OPR3	2	End 2 Connected To PU0-058-332			PUB0	N/A
28G21*	1PR0	1	963T-20-16(N,N)	170-081	002	PUB1	N/A
28G21*	1PR0	2	End 2 Connected To PU1-048-132			PUB1	N/A
28G22*	1PR1	1	963T-20-16(N,N)	170-081	014	PUB1	N/A
28G22*	1PR1	2	End 2 Connected To PU1-048-332			PUB1	N/A
28G23*	1PR2	1	963T-20-16(N,N)	170-081	034	PUB1	N/A
28G23*	1PR2	2	End 2 Connected To PU1-058-132			PUB1	N/A
28G24*	1PR3	1	963T-20-16(N,N)	170-081	046	PUB1	N/A
28G24*	1PR3	2	End 2 Connected To PU1-058-332			PUB1	N/A
* 1B Processor Spliced Peripheral Retrofit Cables ED4A257-28G1 Through ED4A257-28G24 Should Be Replaced With Replacement Cable ED4A257-30G1							

TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
28G25*	0AU00	1	963T-20-16(N,N)	170-103	046	AUB0	N/A
28G25*	0AU00	2	End 2 Connected To AU0-008-332			AUB0	N/A
28G26*	0AU02	1	963T-20-16(N,N)	170-103	034	AUB0	N/A
28G26*	0AU02	2	End 2 Connected To AU0-078-132			AUB0	N/A
28G27*	0AU04	1	963T-20-16(N,N)	170-109	046	AUB0	N/A
28G27*	0AU04	2	End 2 Connected To AU0-018-132			AUB0	N/A
28G28*	0AU06	1	963T-20-16(N,N)	170-109	034	AUB0	N/A
28G28*	0AU06	2	End 2 Connected To AU0-078-332			AUB0	N/A
28G29*	0AU08	1	963T-20-16(N,N)	170-112	146	AUB0	N/A
28G29*	0AU08	2	End 2 Connected To AU0-038-132			AUB0	N/A
28G30*	0AU10	1	963T-20-16(N,N)	170-112	134	AUB0	N/A
28G30*	0AU10	2	End 2 Connected To AU0-068-132			AUB0	N/A
28G31*	0AU12	1	963T-20-16(N,N)	170-119	046	AUB0	N/A
28G31*	0AU12	2	End 2 Connected To AU0-028-332			AUB0	N/A
28G32*	0AU14	1	963T-20-16(N,N)	170-119	034	AUB0	N/A
28G32*	0AU14	2	End 2 Connected To AU0-058-332			AUB0	N/A
28G33†	0AU16AC	1	963T-20-16(N,N)	070-121	046	AUB0	N/A
28G33†	0AU16AC	2	End 2 Connected To AU0-088&108-132			AUB0	N/A
* 1B Processor Spliced Peripheral Retrofit Cables ED4A257-28G25 Through ED4A257-28G32 Should Be Replaced With Replacement Cable ED4A257-30G25 † 1B Processor Spliced Peripheral Retrofit Cables ED4A257-28G33 and ED4A257-28G34 Should Be Replaced With Replacement Cable ED4A257-30G33							

TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
Group (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
28G34*	0AU16BD	1	963T-20-16(N,N)	170-121	046	AUB0	N/A
28G34*	0AU16BD	2	End 2 Connected To AU0-088&108-332			AUB0	N/A
28G35†	0AU18A	1	963T-20-16(N,N)	070-121	034	AUB0	N/A
28G35†	0AU18A	2	End 2 Connected To AU0-098-132			AUB0	N/A
28G36†	0AU18B	1	963T-20-16(N,N)	170-121	034	AUB0	N/A
28G36†	0AU18B	2	End 2 Connected To AU0-098-332			AUB0	N/A
28G37†	0AU20	1	963T-20-16(N,N)	170-125	046	AUB0	N/A
28G37†	0AU20	2	End 2 Connected To AU0-008-132			AUB0	N/A
28G38†	0AU22	1	963T-20-16(N,N)	170-125	034	AUB0	N/A
28G38†	0AU22	2	End 2 Connected To AU0-068-332			AUB0	N/A
28G39†	0AU24	1	963T-20-16(N,N)	170-128	146	AUB0	N/A
28G39†	0AU24	2	End 2 Connected To AU0-028-132			AUB0	N/A
28G40†	0AU26	1	963T-20-16(N,N)	170-128	134	AUB0	N/A
28G40†	0AU26	2	End 2 Connected To AU0-058-132			AUB0	N/A
28G41†	0AU28	1	963T-20-16(N,N)	170-135	046	AUB0	N/A
28G41†	0AU28	2	End 2 Connected To AU0-018-332			AUB0	N/A
28G42†	0AU30	1	963T-20-16(N,N)	170-135	034	AUB0	N/A
28G42†	0AU30	2	End 2 Connected To AU0-048-332			AUB0	N/A
* 1B Processor Spliced Peripheral Retrofit Cables ED4A257-28G33 and ED4A257-28G34 Should Be Replaced With Replacement Cable ED4A257-30G33							
† 1B Processor Spliced Peripheral Retrofit Cables ED4A257-28G35 Through ED4A257-28G56 Should Be Replaced With Replacement Cable ED4A257-30G25							

TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257 -)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
28G43 *	0AU32	1	963T-20-16(N,N)	170-139	046	AUB0	N/A
28G43 *	0AU32	2	End 2 Connected To AU0-038-332			AUB0	N/A
28G44 *	0AU34	1	963T-20-16(N,N)	170-139	034	AUB0	N/A
28G44 *	0AU34	2	End 2 Connected To AU0-048-132			AUB0	N/A
28G45 *	1AU01	1	963T-20-16(N,N)	070-144	146	AUB1	N/A
28G45 *	1AU01	2	End 2 Connected To AU1-018-132			AUB1	N/A
28G46 *	1AU03	1	963T-20-16(N,N)	070-144	134	AUB1	N/A
28G46 *	1AU03	2	End 2 Connected To AU1-078-332			AUB1	N/A
28G47 *	1AU05	1	963T-20-16(N,N)	070-151	046	AUB1	N/A
28G47 *	1AU05	2	End 2 Connected To AU1-008-332			AUB1	N/A
28G48 *	1AU07	1	963T-20-16(N,N)	070-151	034	AUB1	N/A
28G48 *	1AU07	2	End 2 Connected To AU1-078-132			AUB1	N/A
28G49 *	1AU09A	1	963T-20-16(N,N)	070-153	046	AUB1	N/A
28G49 *	1AU09A	2	End 2 Connected To AU1-098-132			AUB1	N/A
28G50 *	1AU09B	1	963T-20-16(N,N)	170-153	046	AUB1	N/A
28G50 *	1AU09B	2	End 2 Connected To AU1-098-332			AUB1	N/A
28G51 *	1AU11	1	963T-20-16(N,N)	070-157	046	AUB1	N/A
28G51 *	1AU11	2	End 2 Connected To AU1-038-332			AUB1	N/A
28G52 *	1AU13	1	963T-20-16(N,N)	070-157	034	AUB1	N/A
28G52 *	1AU13	2	End 2 Connected To AU1-038-132			AUB1	N/A
* 1B Processor Spliced Retrofit Cables ED4A257-28G35 Through ED4A257-28G56 Should Be Replaced With Replacement Cable ED4A257-30G25							

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TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
28G53 *	1AU15	1	963T-20-16(N,N)	070-160	146	AUB1	N/A
28G53 *	1AU15	2	End 2 Connected To AU1-038-132			AUB1	N/A
28G54 *	1AU17	1	963T-20-16(N,N)	070-160	134	AUB1	N/A
28G54 *	1AU17	2	End 2 Connected To AU1-068-132			AUB1	N/A
28G55 *	1AU19	1	963T-20-16(N,N)	070-167	046	AUB1	N/A
28G55 *	1AU19	2	End 2 Connected To AU1-028-332			AUB1	N/A
28G56 *	1AU21	1	963T-20-16(N,N)	070-167	034	AUB1	N/A
28G56 *	1AU21	2	End 2 Connected To AU1-058-332			AUB1	N/A
28G57 †	1AU23AC	1	963T-20-16(N,N)	070-169	046	AUB1	N/A
28G57 †	1AU23AC	2	End 2 Connected To AU1-088&108-132			AUB1	N/A
28G58 †	1AU23BD	1	963T-20-16(N,N)	170-169	046	AUB1	N/A
28G58 †	1AU23BD	2	End 2 Connected To AU1-088&108-332			AUB1	N/A
28G59 ‡	1AU25	1	963T-20-16(N,N)	070-173	046	AUB1	N/A
28G59 ‡	1AU25	2	End 2 Connected To AU1-008-132			AUB1	N/A
28G60 ‡	1AU27	1	963T-20-16(N,N)	070-173	034	AUB1	N/A
28G60 ‡	1AU27	2	End 2 Connected To AU1-068-332			AUB1	N/A
28G61 ‡	1AU29	1	963T-20-16(N,N)	070-176	146	AUB1	N/A
28G61 ‡	1AU29	2	End 2 Connected To AU1-028-132			AUB1	N/A
* 1B Processor Spliced Peripheral Retrofit Cables ED4A257-28G35 Through ED4A257-28G56 Should Be Replaced With Replacement Cable ED4A257-30G25							
† 1B Processor Spliced Peripheral Retrofit Cables ED4A257-28G57 and ED4A257-28G58 Should Be Replaced With Replacement Cable ED4A257-30G33							
‡ 1B Processor Spliced Peripheral Retrofit Cables ED4A257-28G59 Through ED4A257-28G66 Should Be Replaced With Replacement Cable ED4A257-30G25							

TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
28G62 *	1AU31	1	963T-20-16(N,N)	070-176	134	AUB1	N/A
28G62 *	1AU31	2	End 2 Connected To AU1-058-132			AUB1	N/A
28G63 *	1AU33	1	963T-20-16(N,N)	070-175	014	AUB1	N/A
28G63 *	1AU33	2	End 2 Connected To AU1-018-332			AUB1	N/A
28G64 *	1AU35	1	963T-20-16(N,N)	070-175	002	AUB1	N/A
28G64 *	1AU35	2	End 2 Connected To AU1-048-332			AUB1	N/A
28G65 *	0DUSSR	1	963T-20-16(N,N)	170-123	014	API0, DUS0	N/A
28G65 *	0DUSSR	2	End 2 Connected To AU0-118-132			API0, DUS0	N/A
28G66 *	1DUSSR	1	963T-20-16(N,N)	170-171	014	API1, DUS1	N/A
28G66 *	1DUSSR	2	End 2 Connected To AU1-118-132			API1, DUS1	N/A
28G67 †	GCP1A	1	963T-20-16(N,N)	070-047	034	CC0	N/A
28G67 †	GCP1A	2	End 2 Connected To CC0-()-132			CC0	N/A
28G68 †	GCP1B	1	963T-20-16(N,N)	170-047	034	CC1	N/A
28G68 †	GCP1B	2	End 2 Connected To CC1-()-132			CC1	N/A
28G69 †	GCP2A	1	963T-20-16(N,N)	070-045	034	CC0	N/A
28G69 †	GCP2A	2	End 2 Connected To CC0-()-132			CC0	N/A
* 1B Processor Spliced Peripheral Retrofit Cables ED4A257-28G59 Through ED4A257-28G66 Should Be Replaced With Replacement Cable ED4A257-30G25							
† 1B Processor Spliced Peripheral Retrofit Cables ED4A257-28G67 Through ED4A257-28G82 Should Be Replaced With Replacement Cable ED4A257-30G67. The 4ESS End of ED4A257-30G67 May Need To Be Modified. If Existing Cable Is Hardwired To The 4ESS, Then The Connector Must Be Removed Before The Termination Can Be Completed							

TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
28G70 *	GCP2B	1	963T-20-16(N,N)	170-045	034	CC1	N/A
28G70 *	GCP2B	2	End 2 Connected To CC1-()-132			CC1	N/A
28G71 *	GCP3A	1	963T-20-16(N,N)	070-047	046	CC0	N/A
28G71 *	GCP3A	2	End 2 Connected To CC0-()-132			CC0	N/A
28G71 *	GCP3A	1	963T-20-16(N,N)	070-047	046	CC0	N/A
28G71 *	GCP3A	2	End 2 Connected To CC0-()-132			CC0	N/A
28G72 *	GCP3B	1	963T-20-16(N,N)	170-047	046	CC1	N/A
28G72 *	GCP3B	2	End 2 Connected To CC1-()-132			CC1	N/A
28G73 *	GCP4A	1	963T-20-16(N,N)	070-045	046	CC0	N/A
28G73 *	GCP4A	2	End 2 Connected To CC0-()-132			CC0	N/A
28G74 *	GCP4B	1	963T-20-16(N,N)	170-045	046	CC1	N/A
28G74 *	GCP4B	2	End 2 Connected To CC1-()-132			CC1	N/A
28G75 *	GCP5A	1	963T-20-16(N,N)	070-047	002	CC0	N/A
28G75 *	GCP5A	2	End 2 Connected To CC0-018-132			CC0	N/A
28G76 *	GCP5B	1	963T-20-16(N,N)	170-047	002	CC1	N/A
28G76 *	GCP5B	2	End 2 Connected To CC1-018-132			CC1	N/A
28G77 *	GCP6A	1	963T-20-16(N,N)	070-045	002	CC0	N/A
28G77 *	GCP6A	2	End 2 Connected To CC0-018-332			CC0	N/A
* 1B Processor Spliced Peripheral Retrofit Cables ED4A257-28G67 Through ED4A257-28G82 Should Be Replaced With Replacement Cable ED4A257-30G67. The 4ESS End of ED4A257-30G67 May Need To Be Modified. If Existing Cable Is Hardwired To The 4ESS, Then The Connector Must Be Removed Before The Termination Can Be Completed							

TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
28G78 *	GCP6B	1	963T-20-16(N,N)	170-045	002	CC1	N/A
28G78 *	GCP6B	2	End 2 Connected To CC1-018-332			CC1	N/A
28G79 *	GCP7A	1	963T-20-16(N,N)	070-047	014	CC0	N/A
28G79 *	GCP7A	2	End 2 Connected To CC0-028-132			CC0	N/A
28G80 *	GCP7B	1	963T-20-16(N,N)	170-047	014	CC1	N/A
28G80 *	GCP7B	2	End 2 Connected To CC1-028-132			CC1	N/A
28G81 *	GCP8A	1	963T-20-16(N,N)	070-045	014	CC0	N/A
28G81 *	GCP8A	2	End 2 Connected To CC0-028-332			CC0	N/A
28G82 *	GCP8B	1	963T-20-16(N,N)	170-045	014	CC1	N/A
28G82 *	GCP8B	2	End 2 Connected To CC1-028-332			CC1	N/A
28G83 †	GCP9A	1	963T-20-16(N,N)	070-051	034	CC0	N/A
28G83 †	GCP9A	2	End 2 Connected To PU0-068-132			CC0	N/A
28G84 †	GCP9B	1	963T-20-16(N,N)	170-051	034	CC1	N/A
28G84 †	GCP9B	2	End 2 Connected To PU0-068-332			CC1	N/A
28G85 †	GCP10A	1	963T-20-16(N,N)	070-051	046	CC0	N/A
28G85 †	GCP10A	2	End 2 Connected To PU1-068-132			CC0	N/A
* 1B Processor Spliced Peripheral Retrofit Cables ED4A257-28G67 Through ED4A257-28G82 Should Be Replaced With Replacement Cable ED4A257-30G67. The 4ESS End of ED4A257-30G67 May Need To Be Modified. If Existing Cable Is Hardwired To The 4ESS, Then The Connector Must Be Removed Before The Termination Can Be Completed							
† 1B Processor Spliced Peripheral Retrofit Cables ED4A257-28G83 Through ED4A257-28G102 Should Be Replaced With Replacement Cable ED4A257-30G1							

TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
28G85*	GCP10A	1	963T-20-16(N,N)	070-051	046	CC0	N/A
28G85*	GCP10A	2	End 2 Connected To PU1-068-132			CC0	N/A
28G86*	GCP10B	1	963T-20-16(N,N)	170-051	046	CC1	N/A
28G86*	GCP10B	2	End 2 Connected To PU1-068-332			CC1	N/A
28G87*	GCP11A	1	963T-20-16(N,N)	070-053	034	CC0	N/A
28G87*	GCP11A	2	End 2 Connected To PU0-078-132			CC0	N/A
28G88*	GCP11B	1	963T-20-16(N,N)	170-053	034	CC1	N/A
28G88*	GCP11B	2	End 2 Connected To PU0-078-332			CC1	N/A
28G89*	GCP12A	1	963T-20-16(N,N)	070-053	046	CC0	N/A
28G89*	GCP12A	2	End 2 Connected To PU1-078-132			CC0	N/A
28G90*	GCP12B	1	963T-20-16(N,N)	170-053	046	CC1	N/A
28G90*	GCP12B	2	End 2 Connected To PU1-078-332			CC1	N/A
28G91*	GCP13A	1	963T-20-16(N,N)	070-055	034	CC0	N/A
28G91*	GCP13A	2	End 2 Connected To PU0-088-132			CC0	N/A
28G92*	GCP13B	1	963T-20-16(N,N)	170-055	034	CC1	N/A
28G92*	GCP13B	2	End 2 Connected To PU0-088-332			CC1	N/A
28G93*	GCP14A	1	963T-20-16(N,N)	070-055	046	CC0	N/A
28G93*	GCP14A	2	End 2 Connected To PU1-088-132			CC0	N/A
28G94*	GCP14B	1	963T-20-16(N,N)	170-055	046	CC1	N/A
28G94*	GCP14B	2	End 2 Connected To PU1-088-332			CC1	N/A
* 1B Processor Spliced Peripheral Retrofit Cables ED4A257-28G83 Through ED4A257-28G102 Should Be Replaced With Replacement Cable ED4A257-30G1							

TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
28G95*	GCP15A	1	963T-20-16(N,N)	070-057	034	CC0	N/A
28G95*	GCP15A	2	End 2 Connected To PU0-098-132			CC0	N/A
28G96*	GCP15B	1	963T-20-16(N,N)	170-057	034	CC1	N/A
28G96*	GCP15B	2	End 2 Connected To PU0-098-332			CC1	N/A
28G97*	GCP16A	1	963T-20-16(N,N)	070-057	046	CC0	N/A
28G97*	GCP16A	2	End 2 Connected To PU1-098-132			CC0	N/A
28G98*	GCP16B	1	963T-20-16(N,N)	170-057	046	CC1	N/A
28G98*	GCP16B	2	End 2 Connected To PU1-098-332			CC1	N/A
28G99*	GCP17A	1	963T-20-16(N,N)	070-059	034	CC0	N/A
28G99*	GCP17A	2	End 2 Connected To PU0-108-132			CC0	N/A
28G100*	GCP17B	1	963T-20-16(N,N)	170-059	034	CC1	N/A
28G100*	GCP17B	2	End 2 Connected To PU0-108-332			CC1	N/A
28G101*	GCP18A	1	963T-20-16(N,N)	070-059	046	CC0	N/A
28G101*	GCP18A	2	End 2 Connected To PU1-108-132			CC0	N/A
28G102*	GCP18B	1	963T-20-16(N,N)	170-059	046	CC1	N/A
28G102*	GCP18B	2	End 2 Connected To PU1-108-332			CC1	N/A
* 1B Processor Spliced Peripheral Retrofit Cables ED4A257-28G83 Through ED4A257-28G102 Should Be Replaced With Replacement Cable ED4A257-30G1.							

TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
28G105*	GCP21A	1	963T-20-16(N,N)	070-061	014	CC0	N/A
28G105*	GCP21A	2	End 2 Connected To CC0-038-132			CC0	N/A
28G106*	GCP21B	1	963T-20-16(N,N)	170-061	014	CC1	N/A
28G106*	GCP21B	2	End 2 Connected To CC1-038-132			CC1	N/A
28G107*	GCP22A	1	963T-20-16(N,N)	070-059	014	CC0	N/A
28G107*	GCP22A	2	End 2 Connected To CC0-038-332			CC0	N/A
28G108*	GCP22B	1	963T-20-16(N,N)	170-059	014	CC1	N/A
28G108*	GCP22B	2	End 2 Connected To CC1-038-332			CC1	N/A
28G109*	GCP23A	1	963T-20-16(N,N)	070-051	002	CC0	N/A
28G109*	GCP23A	2	End 2 Connected To CC0-()-132			CC0	N/A
28G110*	GCP23B	1	963T-20-16(N,N)	170-051	002	CC1	N/A
28G110*	GCP23B	2	End 2 Connected To CC1-()-132			CC1	N/A
28G111*	GCP24A	1	963T-20-16(N,N)	070-051	014	CC0	N/A
28G111*	GCP24A	2	End 2 Connected To CC0-()-132			CC0	N/A
28G112*	GCP24B	1	963T-20-16(N,N)	170-051	014	CC1	N/A
28G112*	GCP24B	2	End 2 Connected To CC1-()-132			CC1	N/A
* 1B Processor Spliced Peripheral Retrofit Cables ED4A257-28G105 Through ED4A257-28G112 Should Be Replaced With Replacement Cable ED4A257-30G67. The 4ESS End of ED4A257-30G67 May Need To Be Modified. If Existing Cable Is Hardwired To The 4ESS, Then The Connector Must Be Removed Before The Termination Can Be Completed							

TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
28G115*	GCP28A	1	963T-20-16(N,N)	170-055	002	CC0	N/A
28G115*	GCP28A	2	End 2 Connected To PU0-118-332			CC0	N/A
28G116*	GCP28B	1	963T-20-16(N,N)	170-055	002	CC1	N/A
28G116*	GCP28B	2	End 2 Connected To PU0-118-332			CC1	N/A
28G117*	GCP29A	1	963T-20-16(N,N)	070-059	002	CC0	N/A
28G117*	GCP29A	2	End 2 Connected To PU1-118-132			CC0	N/A
28G118*	GCP29B	1	963T-20-16(N,N)	170-059	002	CC1	N/A
28G118*	GCP29B	2	End 2 Connected To PU1-118-332			CC1	N/A
28G119†	APIA	1	963T-20-16(N,N)	058-181	002T	SSD0	SSD0
28G119†	APIA	2	End 2 Connected To SSD-008-132			SSD0	SSD0
28G120†	APIB	1	963T-20-16(N,N)	158-181	002T	SSD1	SSD1
28G120†	APIB	2	End 2 Connected To SSD-018-132			SSD1	SSD1
28G121†	DUSA	1	963T-20-16(N,N)	058-181	014T	SSD0	SSD0
28G121†	DUSA	2	End 2 Connected To SSD-008-332			SSD0	SSD0
28G122†	DUSB	1	963T-20-16(N,N)	158-181	014T	SSD1	SSD1
28G122†	DUSB	2	End 2 Connected To SSD-018-332			SSD1	SSD1
* 1B Processor Spliced Peripheral Retrofit Cables ED4A257-28G115 Through ED4A257-28G118 Should Be Replaced With Replacement Cable ED4A257-30G1							
† 1B Processor Spliced Peripheral Retrofit Cables ED4A257-28G119 Through ED4A257-28G134 Should Be Replaced With Replacement Cable ED4A257-30G67. The 4ESS End of ED4A257-30G67 May Need To Be Modified. If Existing Cable Is Hardwired To The 4ESS, Then The Connector Must Be Removed Before The Termination Can Be Completed							

TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257 -)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
28G123*	PCD0A	1	963T-20-16(N,N)	058-179	002T	SSD0	SSD0
28G123*	PCD0A	2	End 2 Connected To SSD-048-332			SSD0	SSD0
28G124*	PCD0B	1	963T-20-16(N,N)	158-179	002T	SSD1	SSD1
28G124*	PCD0B	2	End 2 Connected To SSD-058-132			SSD1	SSD1
28G125*	PCD1A	1	963T-20-16(N,N)	058-179	014T	SSD0	SSD0
28G125*	PCD1A	2	End 2 Connected To SSD-048-132			SSD0	SSD0
28G126*	PCD1B	1	963T-20-16(N,N)	158-179	014T	SSD1	SSD1
28G126*	PCD1B	2	End 2 Connected To SSD-058-332			SSD1	SSD1
28G127*	TUC01A	1	963T-20-16(N,N)	058-177	002T	SSD0	SSD0
28G127*	TUC01A	2	End 2 Connected To SSD-068-132			SSD0	SSD0
28G128*	TUC01B	1	963T-20-16(N,N)	158-177	002T	SSD1	SSD1
28G128*	TUC01B	2	End 2 Connected To SSD-068-332			SSD1	SSD1
28G129*	TUC23A	1	963T-20-16(N,N)	058-177	014T	SSD0	SSD0
28G129*	TUC23	2	End 2 Connected To SSD-078-132			SSD0	SSD0
28G130*	TUC23B	1	963T-20-16(N,N)	158-177	014T	SSD1	SSD1
28G130*	TUC23B	2	End 2 Connected To SSD-078-332			SSD1	SSD1
28G131*	IOP0A	1	963T-20-16(N,N)	058-177	034T	SSD0	SSD0
28G131*	IOP0A	2	End 2 Connected To SSD-028-132			SSD0	SSD0
* 1B Processor Spliced Peripheral Retrofit Cables ED4A257-28G119 Through ED4A257-28G134 Should Be Replaced With Replacement Cable ED4A257-30G67. The 4ESS End of ED4A257-30G67 May Need To Be Modified. If Existing Cable Is Hardwired To The 4ESS, Then The Connector Must Be Removed Before The Termination Can Be Completed							

TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257 -)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
28G132 *	IOP0A	1	963T-20-16(N,N)	158-177	034T	SSD1	SSD1
28G132 *	IOP0A	2	End 2 Connected To SSD-028-332			SSD1	SSD1
28G133 *	IOP1A	1	963T-20-16(N,N)	058-177	046T	SSD0	SSD0
28G133 *	IOP1A	2	End 2 Connected To SSD-038-132			SSD0	SSD0
28G134 *	IOP1B	1	963T-20-16(N,N)	158-177	046T	SSD1	SSD1
28G134 *	IOP1B	2	End 2 Connected To SSD-038-332			SSD1	SSD1
28G135 †	API0	1	963T-20-16(N,N)	070-121	001	API0	DUS0
28G135 †	API0	2	End 2 Connected To AU0-118-332			API0	DUS0
28G136 †	API1	1	963T-20-16(N,N)	170-171	001	API1	DUS1
28G136 †	API1	2	End 2 Connected To AU1-118-332			API1	DUS1
28G139A ††	SALMS	1	963T-20	058-046	547T	SSD0	SSD0
28G139A ††	SALMS	2	End 2 Connected To SSD-088-132			SSD0	SSD0
* 1B Processor Spliced Peripheral Retrofit Cables ED4A257-28G119 Through ED4A257-28G134 Should Be Replaced With Replacement Cable ED4A257-30G67. The 4ESS End of ED4A257-30G67 May Need To Be Modified. If Existing Cable Is Hardwired To The 4ESS, Then The Connector Must Be Removed Before The Termination Can Be Completed † 1B Processor Spliced Peripheral Retrofit Cables ED4A257-28G135 and ED4A257-28G136 Should Be Replaced With Replacement Cable ED4A257-30G25 †† 1B Processor Spliced Peripheral Retrofit Cable ED4A257-28G139A Should Be Replaced With Replacement Cable ED4A257-30G139A. The 4ESS End of ED4A257-30G139A May Need To Be Modified. If Existing Cable Is Hardwired To 4ESS, Then The Connector Must Be Removed Before The Termination Can Be Completed							

TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
28G140A*	GCP19A27	2A	963T-20-16(N,N)	070-061	034	CC1	N/A
28G140A*	GCP19A27	2	End 2 Connected To CC0-008-132			CC1	N/A
28G140A*	GCP19A27	2B	963T-20-16(N,N)	070-055	014	CC1	N/A
28G140A*	GCP19A27	2	End 2 Connected To CC0-008-132			CC1	N/A
28G141A*	GCP19B27	2A	963T-20-16(N,N)	170-061	034	CC1	N/A
28G141A*	GCP19B27	2	End 2 Connected To CC1-008-132			CC1	N/A
28G141A*	GCP19B27	2B	963T-20-16(N,N)	170-055	014	CC1	N/A
28G141A*	GCP19B27	2	End 2 Connected To CC1-008-132			CC1	N/A
943BC			BTR	070-014	134	PUB0	N/A
943BC			BTR	070-014	146	PUB0	N/A
943BC			BTR	070-021	034	PUB0	N/A
943BC			BTR	070-021	046	PUB0	N/A
943BC			BTR	070-026	034	PUB0	N/A
943BC			BTR	070-026	046	PUB0	N/A
943BC			BTR	070-027	002	PUB0	N/A
943BC			BTR	070-027	014	PUB0	N/A
943BC			BTR	070-030	134	PUB0	N/A
943BC			BTR	070-030	146	PUB0	N/A
943BC			BTR	070-037	034	PUB0	N/A
* 1B Processor Spliced Perpherial Retrofit Cables ED4A257-28G140A Through ED4A257-28G141A Should Be Replaced With Replacement Cable ED4A257-30G140A. The 4ESS End of ED4A257-30G140A May Need To Be Modified. If Existing Cable Is Hardwired To The 4ESS, Then The Connector Must Be Removed Before The Termination Can Be Completed							

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TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257 -)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
943BC			BTR	070-037	046	PUB0	N/A
943BC			BTR	070-070	134	PUB1	N/A
943BC			BTR	070-070	146	PUB1	N/A
943BC			BTR	070-077	034	PUB1	N/A
943BC			BTR	070-077	046	PUB1	N/A
943BC			BTR	070-081	002	PUB1	N/A
943BC			BTR	070-081	014	PUB1	N/A
943BC			BTR	070-081	034	PUB1	N/A
943BC			BTR	070-081	046	PUB1	N/A
943BC			BTR	070-086	134	PUB1	N/A
943BC			BTR	070-086	146	PUB1	N/A
943BC			BTR	070-093	034	PUB1	N/A
943BC			BTR	070-093	046	PUB1	N/A
943BC			BTR	070-103	034	AUB0	N/A
943BC			BTR	070-103	046	AUB0	N/A
943BC			BTR	070-109	034	AUB0	N/A
943BC			BTR	070-109	046	AUB0	N/A
943BC			BTR	070-112	134	AUB0	N/A
943BC			BTR	070-112	146	AUB0	N/A
943BC			BTR	070-119	034	AUB0	N/A
943BC			BTR	070-119	046	AUB0	N/A
943BC			BTR	070-123	014	AUB0	N/A

TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
943BC			BTR	070-125	034	AUB0	N/A
943BC			BTR	070-125	046	AUB0	N/A
943BC			BTR	070-128	134	AUB0	N/A
943BC			BTR	070-128	146	AUB0	N/A
943BC			BTR	070-135	034	AUB0	N/A
943BC			BTR	070-135	046	AUB0	N/A
943BC			BTR	070-139	034	AUB0	N/A
943BC			BTR	070-139	046	AUB0	N/A
943BC			BTR	070-171	014	API0, DUS0	N/A
943BC			BTR	170-144	134	AUB1	N/A
943BC			BTR	170-144	146	AUB1	N/A
943BC			BTR	170-151	034	AUB1	N/A
943BC			BTR	170-151	046	AUB1	N/A
943BC			BTR	170-157	034	AUB1	N/A
943BC			BTR	170-157	046	AUB1	N/A
943BC			BTR	170-160	134	AUB1	N/A
943BC			BTR	170-160	146	AUB1	N/A
943BC			BTR	170-167	034	AUB1	N/A
943BC			BTR	170-167	046	AUB1	N/A
943BC			BTR	170-173	034	AUB1	N/A
943BC			BTR	170-173	046	AUB1	N/A
943BC			BTR	170-175	002	AUB1	N/A

TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
943BC			BTR	170-175	104	AUB1	N/A
943BC			BTR	170-176	134	AUB1	N/A
943BC			BTR	170-176	146	AUB1	N/A
9822AH			BTR	041-104	032B	PSB0	N/A
9822AH			BTR	041-104	045B	PSB1	N/A
9822AH			BTR	041-104	232B	PSB0	N/A
9822AH			BTR	041-104	245B	PSB1	N/A
9822AH			BTR	041-112	032B	PSB0	N/A
9822AH			BTR	041-112	045B	PSB1	N/A
9822AH			BTR	041-112	232B	PSB0	N/A
9822AH			BTR	041-112	245B	PSB1	N/A
9822AH			BTR	041-128	000B	PSB0	N/A
9822AH			BTR	041-128	013B	PSB1	N/A
9822AH			BTR	041-128	200B	PSB0	N/A
9822AH			BTR	041-128	213B	PSB1	N/A
9822AH			BTR	058-070	000B	CC0	N/A
9822AH			BTR	058-070	013B	CC0	N/A
9822AH			BTR	058-070	032B	CC0	N/A
9822AH			BTR	058-070	045B	CC0	N/A
9822AH			BTR	058-070	400B	IFB0	N/A
9822AH			BTR	058-070	413B	IFB0	N/A
9822AH			BTR	058-070	432B	IFB0	N/A

TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257 -)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
9822AH			BTR	058-070	445B	IFB0	N/A
9822AH			BTR	141-168	000B	PSB0	N/A
9822AH			BTR	141-168	000T	PSB0	N/A
9822AH			BTR	141-168	013B	PSB1	N/A
9822AH			BTR	141-168	013T	PSB1	N/A
9822AH			BTR	141-168	032B	PSB0	N/A
9822AH			BTR	141-168	045B	PSB1	N/A
9822AH			BTR	141-168	200B	PSB0	N/A
9822AH			BTR	141-168	200T	PSB0	N/A
9822AH			BTR	141-168	213B	PSB1	N/A
9822AH			BTR	141-168	213T	PSB1	N/A
9822AH			BTR	141-168	232B	PSB0	N/A
9822AH			BTR	141-168	245B	PSB1	N/A
9822AH			BTR	158-058	000B	IFB0	N/A
9822AH			BTR	158-058	013B	IFB0	N/A
9822AH			BTR	158-058	032B	IFB0	N/A
9822AH			BTR	158-058	045B	IFB0	N/A
9822AH			BTR	158-160	500B	CC0	N/A
9822AH			BTR	158-160	513B	CC0	N/A
9822AH			BTR	158-160	532B	CC0	N/A
9822AH			BTR	158-160	545B	CC0	N/A
9822AH			BTR	158-167	000B	CC0	N/A

TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
9822AHA			BTR	058-062	013B	CC0	N/A
9822AHA			BTR	058-062	032B	CC0	N/A
9822AHA			BTR	058-062	045B	CC0	N/A
9822AHA			BTR	058-062	413B	IFB0	N/A
9822AHA			BTR	058-062	432B	IFB0	N/A
9822AHA			BTR	058-062	445B	IFB0	N/A
9822AHA			BTR	158-167	013B	CC0	N/A
9822AHA			BTR	158-167	032B	CC0	N/A
9822AHA			BTR	158-167	045B	CC0	N/A
9822AJ			BTR	041-104	432B	PSB0	N/A
9822AJ			BTR	041-104	445B	PSB1	N/A
9822AJ			BTR	041-110	032B	PSB0	N/A
9822AJ			BTR	041-110	045B	PSB1	N/A
9822AJ			BTR	041-112	432B	PSB0	N/A
9822AJ			BTR	041-112	445B	PSB1	N/A
9822AJ			BTR	041-118	032B	PSB0	N/A
9822AJ			BTR	041-118	045B	PSB1	N/A
9822AJ			BTR	041-128	400B	PSB0	N/A
9822AJ			BTR	041-128	413B	PSB1	N/A
9822AJ			BTR	041-134	000B	PSB0	N/A
9822AJ			BTR	041-134	013B	PSB1	N/A
9822AJ			BTR	058-062	200B	CC0	N/A

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TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
9822AJ			BTR	058-062	213B	CC0	N/A
9822AJ			BTR	058-062	232B	CC0	N/A
9822AJ			BTR	058-062	245B	CC0	N/A
9822AJ			BTR	058-068	000B	IFB0	N/A
9822AJ			BTR	058-068	013B	IFB0	N/A
9822AJ			BTR	058-068	032B	IFB0	N/A
9822AJ			BTR	058-068	045B	IFB0	N/A
9822AJ			BTR	141-168	400B	PSB0	N/A
9822AJ			BTR	141-168	400T	PSB0	N/A
9822AJ			BTR	141-168	413B	PSB1	N/A
9822AJ			BTR	141-168	413T	PSB1	N/A
9822AJ			BTR	141-168	432B	PSB0	N/A
9822AJ			BTR	141-168	445B	PSB1	N/A
9822AJ			BTR	141-174	000B	PSB0	N/A
9822AJ			BTR	141-174	000T	PSB1	N/A
9822AJ			BTR	141-174	013B	PSB0	N/A
9822AJ			BTR	141-174	013T	PSB1	N/A
9822AJ			BTR	141-174	032B	PSB0	N/A
9822AJ			BTR	141-174	045B	PSB1	N/A
9822AJ			BTR	158-056	000B	IFB0	N/A
9822AJ			BTR	158-056	013B	IFB0	N/A
9822AJ			BTR	158-056	032B	IFB0	N/A

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TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257-)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
9822AJ			BTR	158-056	045B	IFB0	N/A
9822AJ			BTR	158-160	300B	CC0	N/A
9822AJ			BTR	158-160	332B	CC0	N/A
9822AJ			BTR	158-160	345B	CC0	N/A
9822AJA			BTR	058-070	200B	CC0	N/A
9822AJA			BTR	058-070	213B	CC0	N/A
9822AJA			BTR	058-070	232B	CC0	N/A
9822AJA			BTR	058-070	245B	CC0	N/A
9822AJA			BTR	058-076	000B	IFB0	N/A
9822AJA			BTR	058-076	013B	IFB0	N/A
9822AJA			BTR	058-076	032B	IFB0	N/A
9822AJA			BTR	058-076	045B	IFB0	N/A
9822AJA			BTR	158-054	000B	IFB0	N/A
9822AJA			BTR	158-054	013B	IFB0	N/A
9822AJA			BTR	158-054	032B	IFB0	N/A
9822AJA			BTR	158-054	045B	IFB0	N/A
9822AJA			BTR	158-060	013B	IFB0	N/A
9822AJA			BTR	158-060	032B	IFB0	N/A
9822AJA			BTR	158-060	045B	IFB0	N/A
9822AJA			BTR	158-159	000B	CC0	N/A
9822AJA			BTR	158-159	013B	CC0	N/A

TABLE A (Contd) REPLACEABLE 1B PROCESSOR CABLES							
CABLE				CONNECTOR		ASSOCIATED UNITS	
GROUP (ED4A257 -)	NAME	END	TYPE	PIN ARRAY LOCATION (EQL)	LOWER RIGHT PIN LOCATION	TO BE REMOVED FROM SERVICE	TO HAVE POWER REMOVED
9822AJA			BTR	158-159	032B	CC0	N/A
9822AJA			BTR	158-159	045B	CC0	N/A
9822BD			BTR	041-104	401T	PSB0	N/A
9822BD			BTR	041-104	411T	PSB1	N/A
9822BD			BTR	041-110	001T	PSB0	N/A
9822BD			BTR	041-110	011T	PSB1	N/A
9822BD			BTR	041-112	401T	PSB0	N/A
9822BD			BTR	041-112	411T	PSB1	N/A
9822BD			BTR	041-118	001T	PSB0	N/A
9822BD			BTR	041-118	011T	PSB1	N/A
9822BD			BTR	141-168	433T	PSB1	N/A
9822BD			BTR	141-168	443T	PSB0	N/A
9822BD			BTR	141-174	033T	PSB1	N/A
9822BD			BTR	141-174	043T	PSB0	N/A
9822BE			BTR	141-168	033T	PSB0	N/A
9822BE			BTR	141-168	043T	PSB1	N/A
9822BE			BTR	141-168	233T	PSB0	N/A
9822BE			BTR	141-168	243T	PSB1	N/A

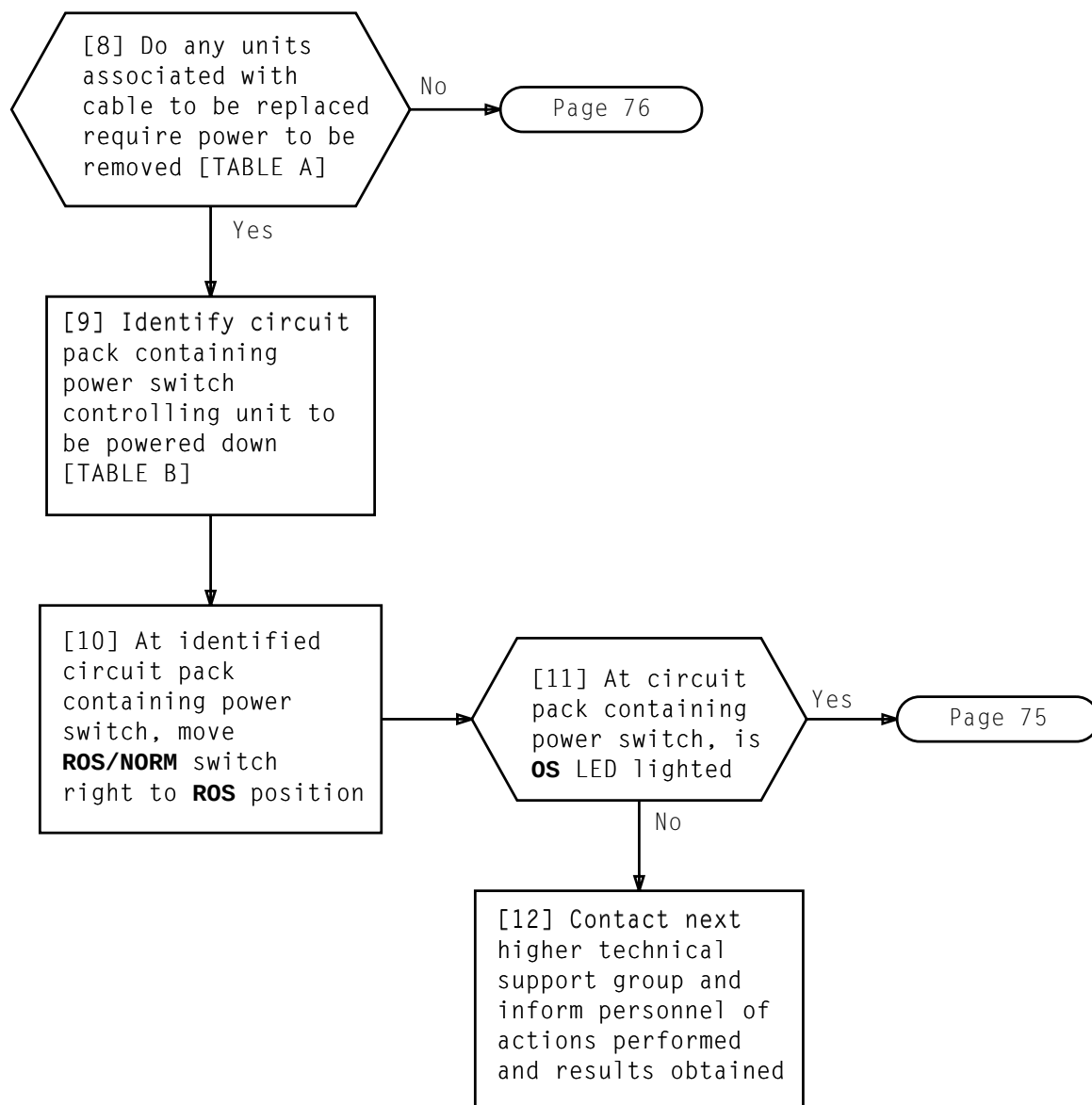
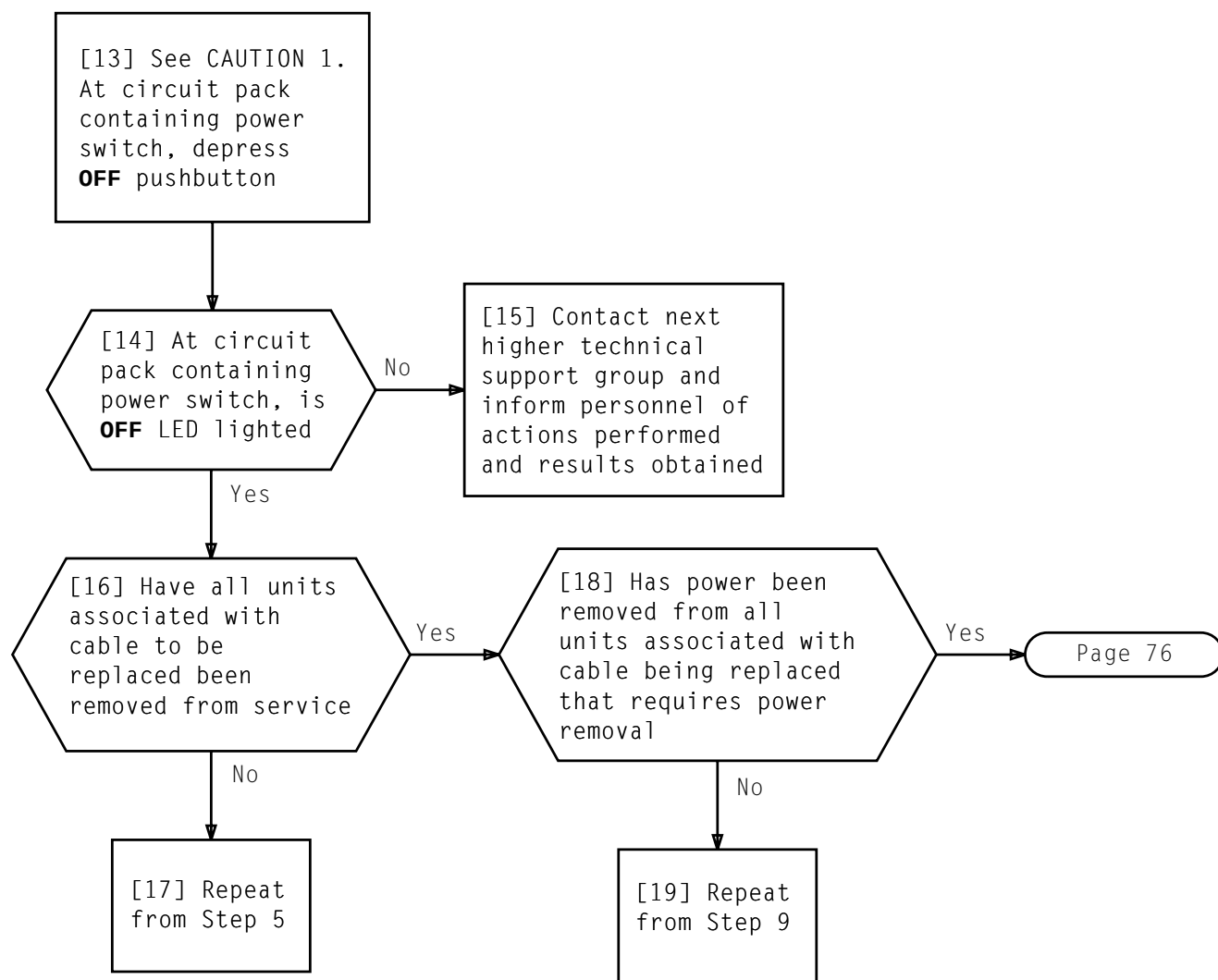


TABLE B 1B PROCESSOR UNIT POWER SWITCH IDENTIFIERS AND LOCATIONS								
UNIT	CIRCUIT PACK CONTAINING POWER SWITCH		UNIT	CIRCUIT PACK CONTAINING POWER SWITCH		UNIT	CIRCUIT PACK CONTAINING POWER SWITCH	
	IDENTIFIER	LOCATION		IDENTIFIER	LOCATION		IDENTIFIER	LOCATION
CC	KLW11	41-014	CS2	KLW01	024-176	CS23	KLW01	124-136
AUI	KLW18	58-120	CS3	KLW01	124-176	CS24	KLW01	024-054
MUP	KLW25	58-068	CS4	KLW01	024-014	CS25	KLW01	124-054
SSD	KLW15	58-168	CS5	KLW01	124-014	CS26	KLW01	024-128
XPWR	KLW23	24-030	CS6	KLW01	024-168	CS27	KLW01	124-128
PS0	KLW02	041-128	CS7	KLW01	124-168	CS28	KLW01	024-062
PS1	KLW02	141-128	CS8	KLW01	024-022	CS29	KLW01	124-062
PS2	KLW02	041-136	CS9	KLW01	124-022	CS30	KLW01	024-120
PS3	KLW02	141-136	CS10	KLW01	024-160	CS31	KLW01	124-120
PS4	KLW02	041-144	CS11	KLW01	124-160	CS32	KLW01	024-070
PS5	KLW02	141-144	CS12	KLW01	024-030	CS33	KLW01	124-070
PS6	KLW02	041-152	CS13	KLW01	124-030	CS34	KLW01	024-112
PS7	KLW02	141-152	CS14	KLW01	024-152	CS35	KLW01	124-112
PS8	KLW02	041-160	CS15	KLW01	124-152	CS36	KLW01	024-078
PS9	KLW02	141-160	CS16	KLW01	024-038	CS37	KLW01	124-078
PS10	KLW02	041-168	CS17	KLW01	124-038	CS38	KLW01	024-104
PS11	KLW02	141-168	CS18	KLW01	024-144	CS39	KLW01	124-104
PS12	KLW02	041-176	CS19	KLW01	124-144	CSB 0 BUFFER	KLW26	24-086
PS13	KLW02	141-176	CS20	KLW01	024-046			
CS0	KLW01	024-006	CS21	KLW01	124-046	CSB 1 BUFFER	KLW27	24-096
CS1	KLW01	124-006	CS22	KLW01	024-136			

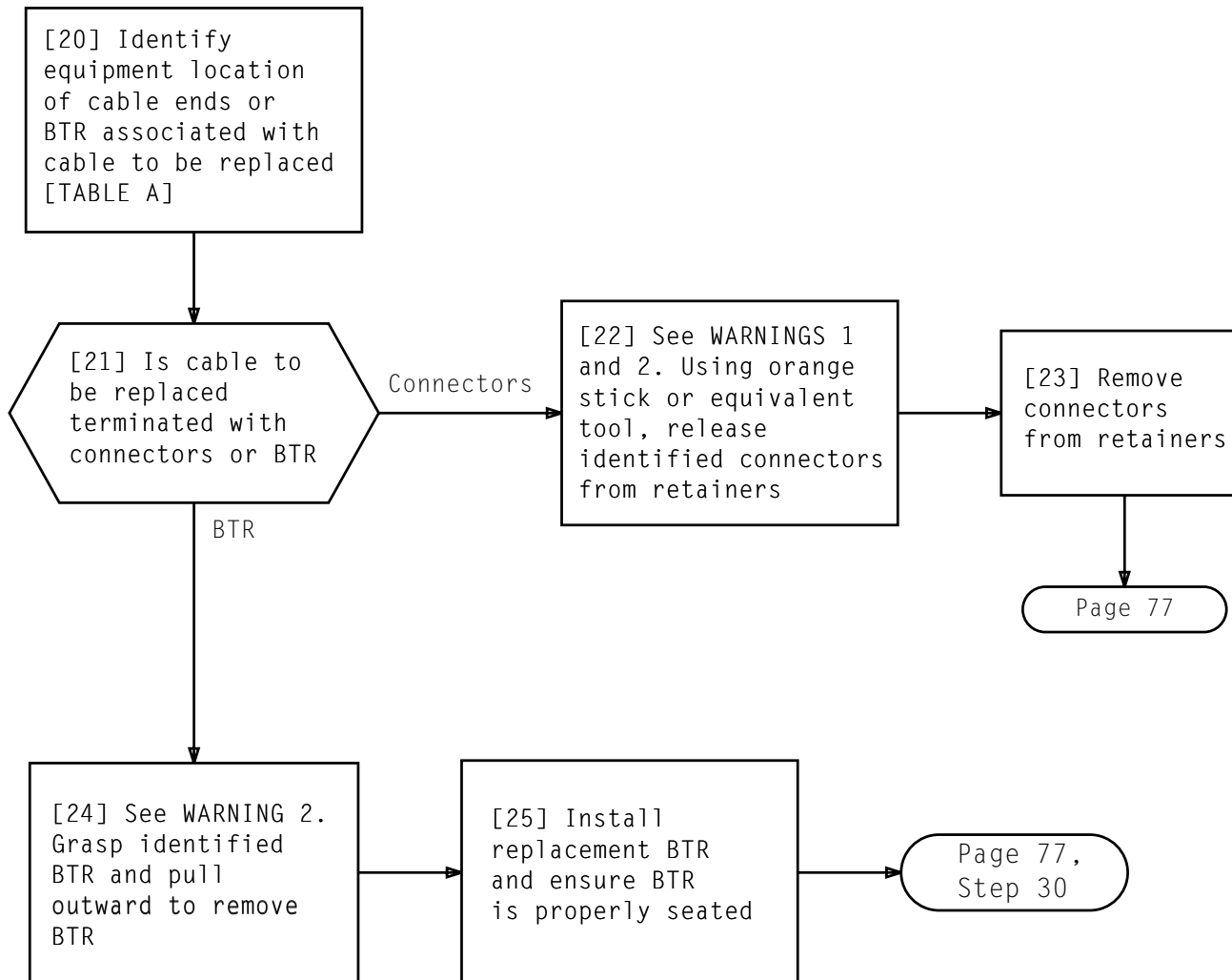
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CAUTION 1

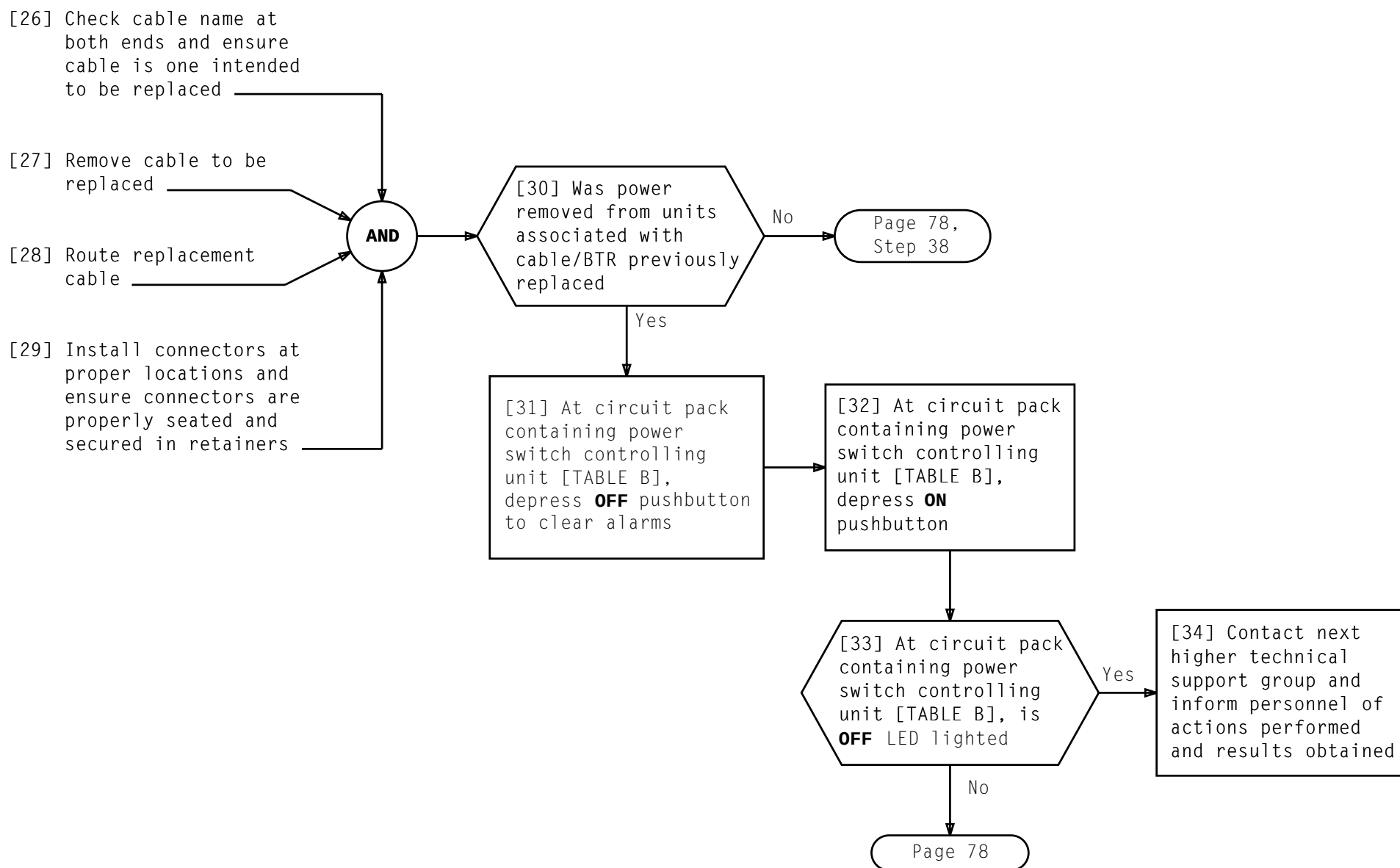
Powering down an out-of-service unit should not cause system recovery actions (interrupts, phases, etc.) to be initiated. If system recovery actions are initiated when powering down an OOS unit, another unit may be at fault. Immediately confirm that the switch is processing calls. If there are indications of a continuing outage, power up the unit previously powered down. If there are no indications of a continuing outage, determine the unit that caused the system recovery actions to be initiated and correct the fault in that unit before continuing the work associated with unit originally powered down

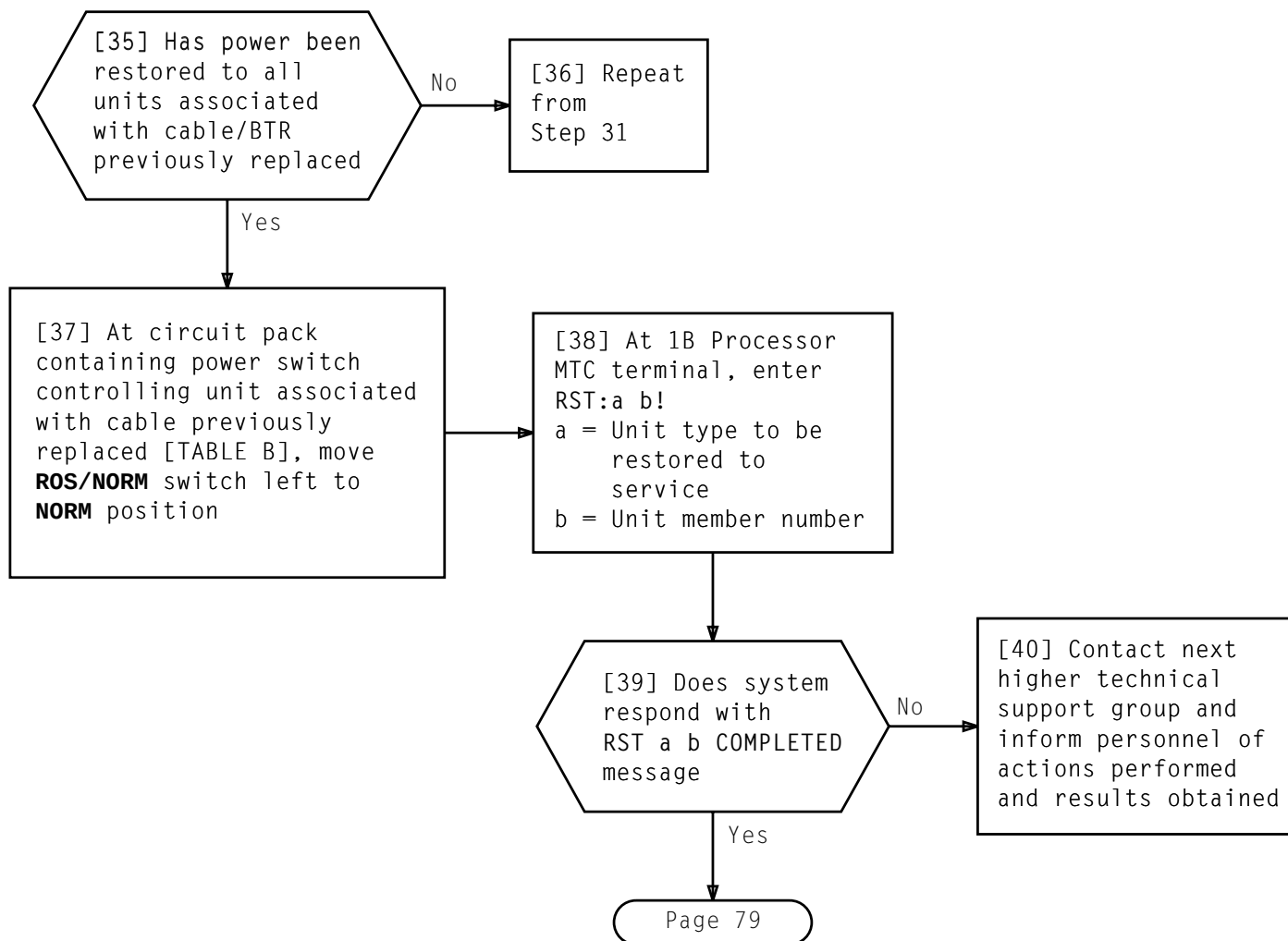


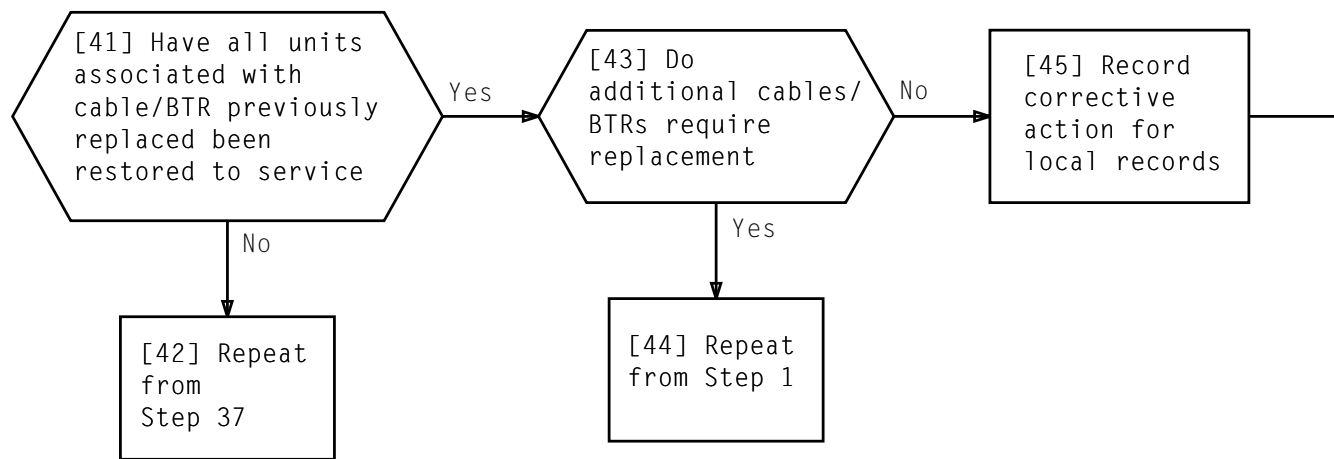
WARNINGS

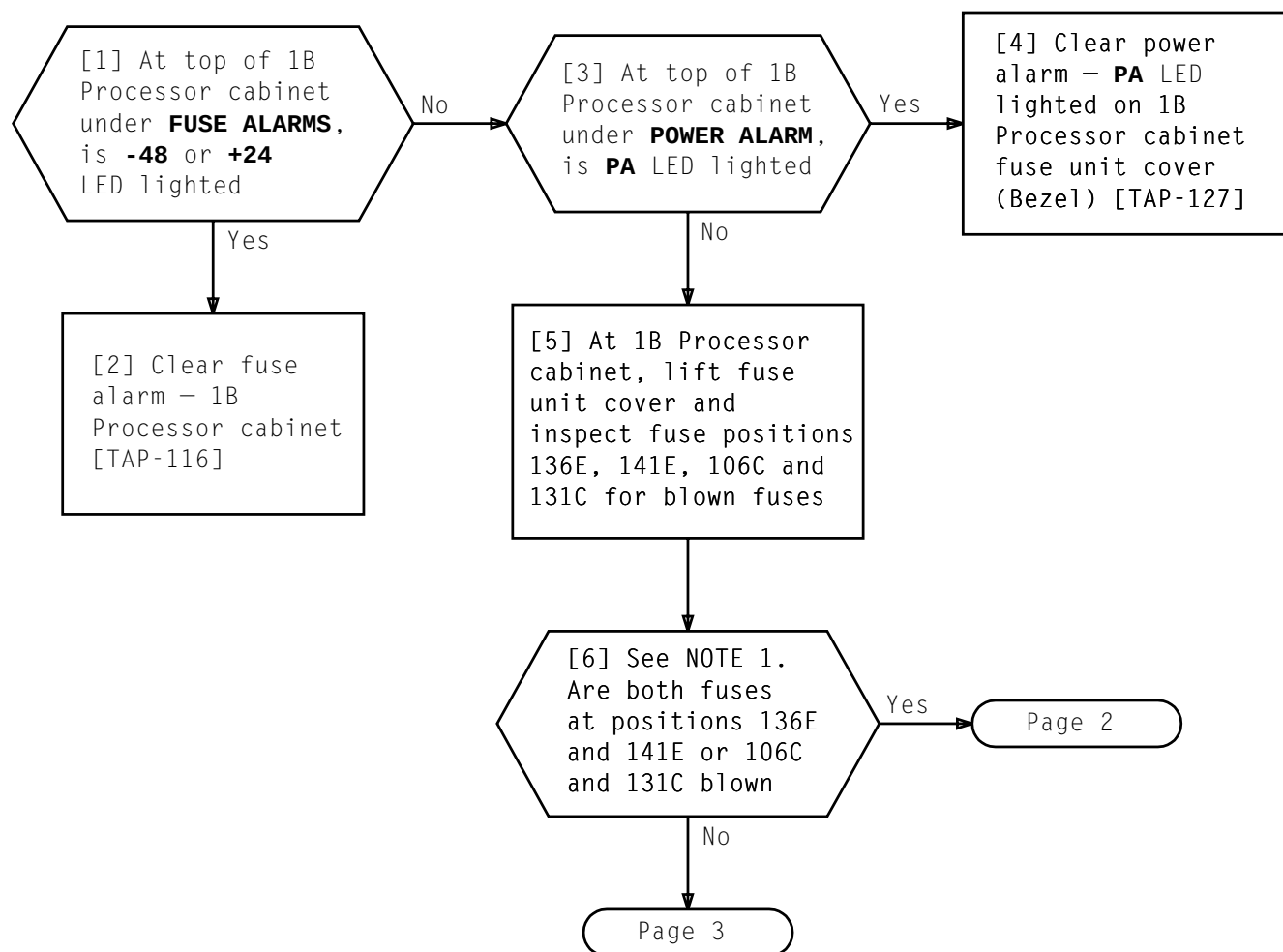
1. *Do not use any form of metallic tool to release connectors from retainers. The use of such tool can possibly cause severe service interruptions and/or equipment damage.*
2. *A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins*

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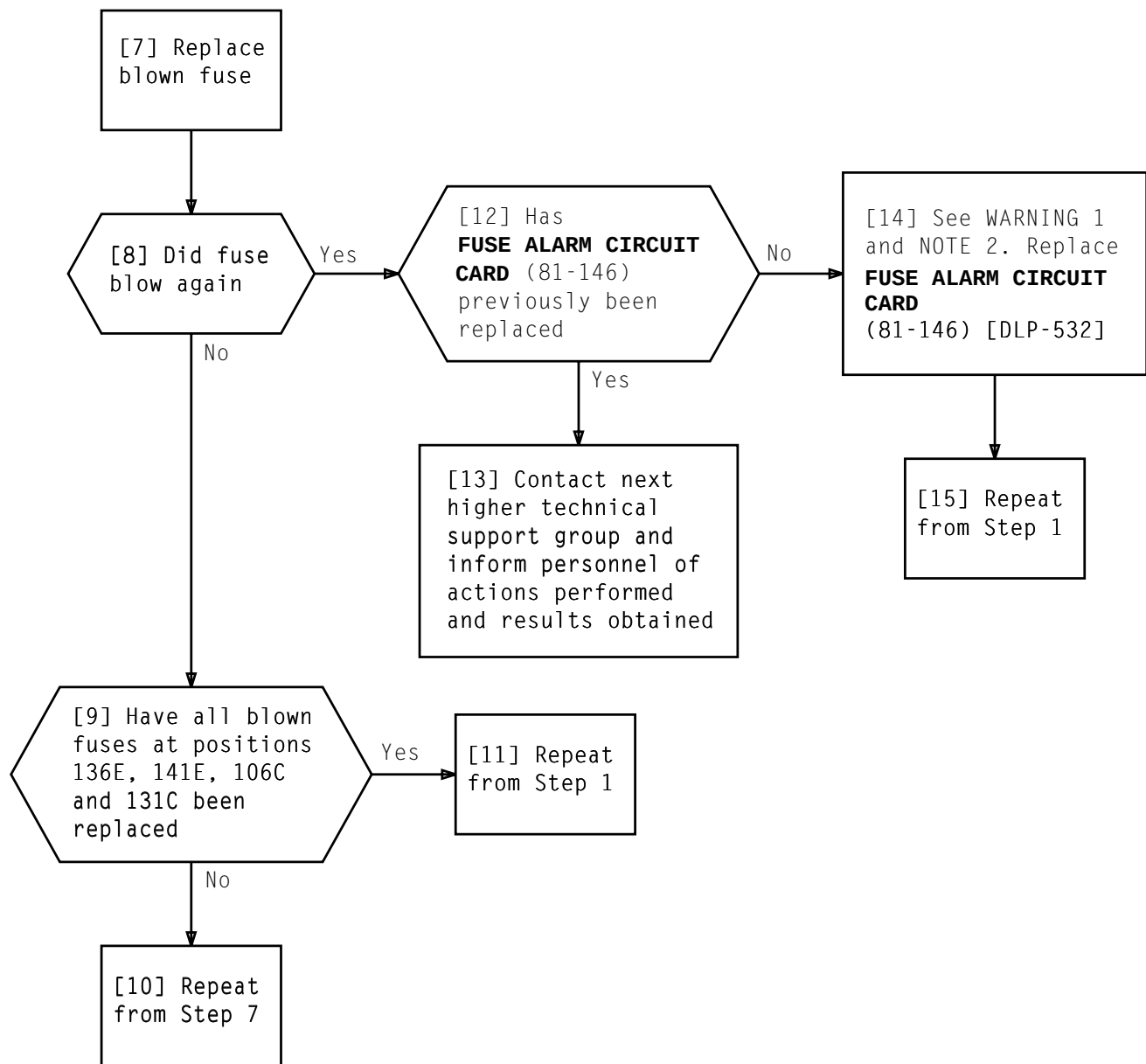






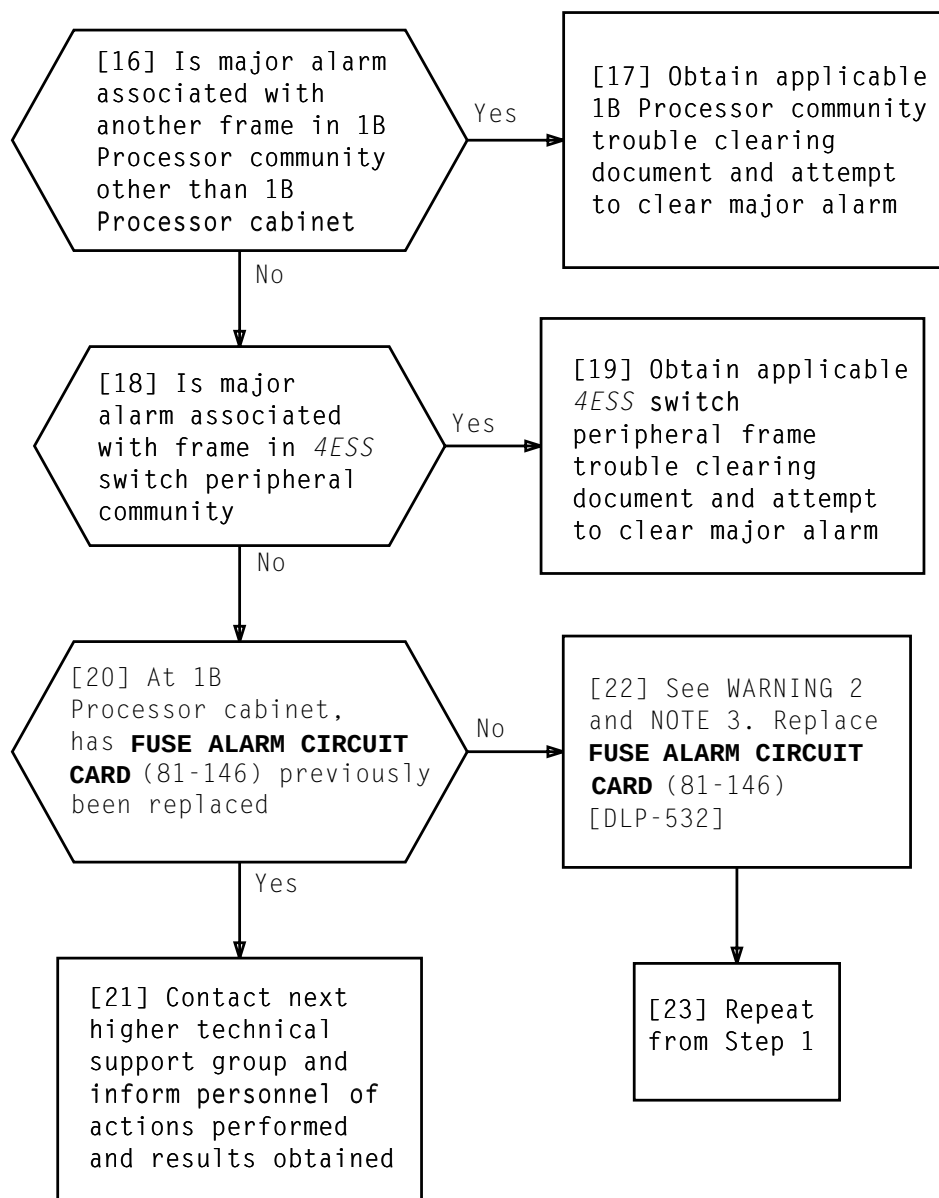
NOTE 1
Fuses at positions 136E and 141E control the +24V fuse alarm circuitry that lights the 1B Processor cabinet **PA** LED. In addition, fuses at positions 106C and 131C control the –48V fuse alarm circuitry that lights the 1B Processor Cabinet **PA** LED. Therefore, if either pair of these fuses is blown and there is an associated power alarm to be reported to the 1B Processor cabinet **PA** LED, the **PA** LED will not light

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NOTE 2
Excessive force is not required to seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 1
A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins



CLEAR MAJOR ALARM – 1B PROCESSOR CABINET

NOTE 3
Excessive force is not required to seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 2
A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

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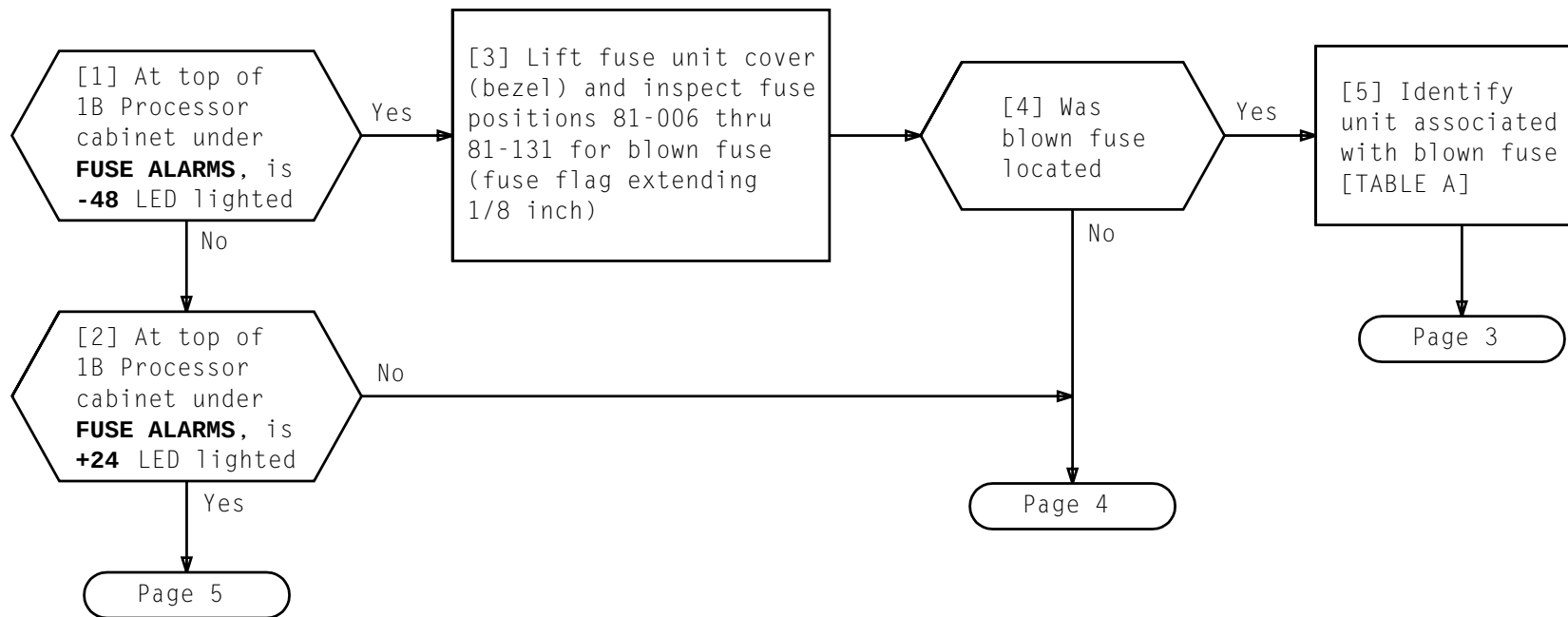
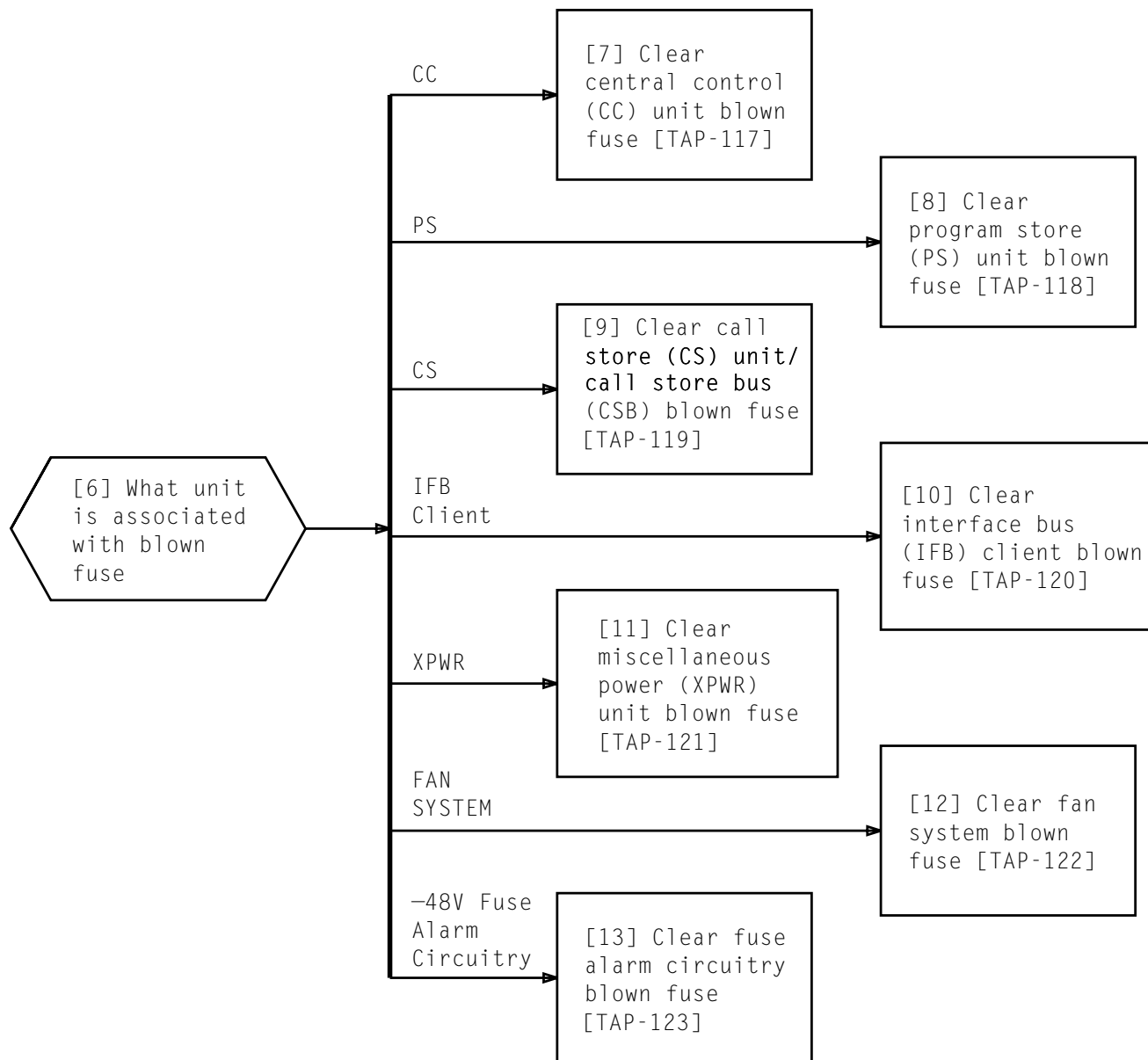


TABLE A -48V FUSE LOCATIONS AND ASSOCIATED UNITS			
BLOWN FUSE LOCATION	ASSOCIATED UNIT	BLOWN FUSE LOCATION	ASSOCIATED UNIT
81-006	Central Control (CC)	81-086	Call Store (CS)
81-011		81-091	
81-016		81-096 (C, D or E)	
81-021	Miscellaneous Power (XPWR)	81-101	
81-026	Fan System	81-106 (A or B)	
81-031		81-111	
81-036		81-116	
81-041		81-121 (C, D or E)	
81-046	Program Store (PS)	81-126	
81-051 (A or B)		81-131 (A or B)	
81-066		81-106 C 81-131 C	
81-071 (A or B)			
81-051 (D or E)	Interface Bus (IFB) Client		-48 Volt Fuse Alarm Circuitry
81-056			
81-061			
81-071 (D or E)			
81-076			
81-081			

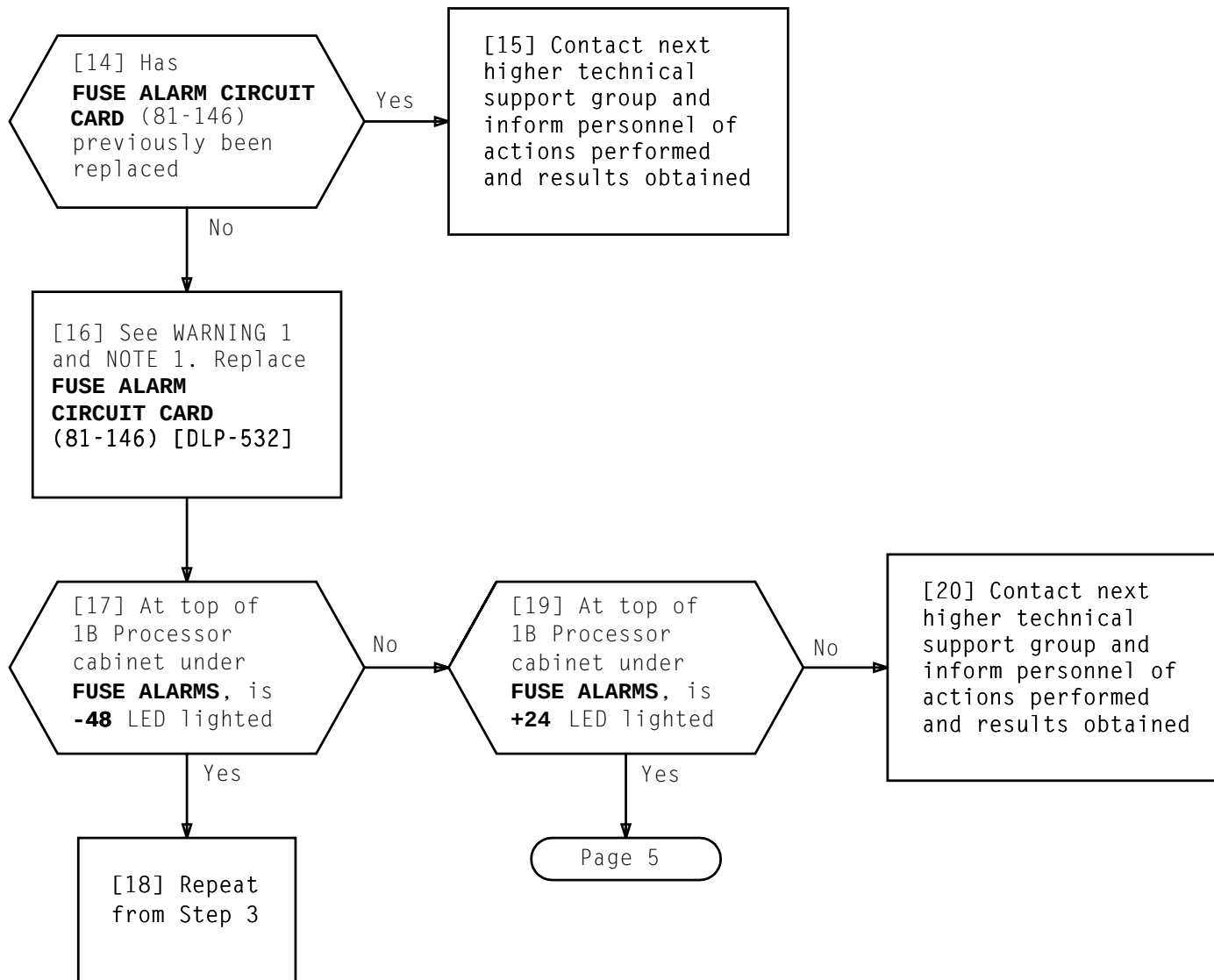
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CLEAR FUSE ALARM – 1B PROCESSOR CABINET

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NOTE 1
Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 1
A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

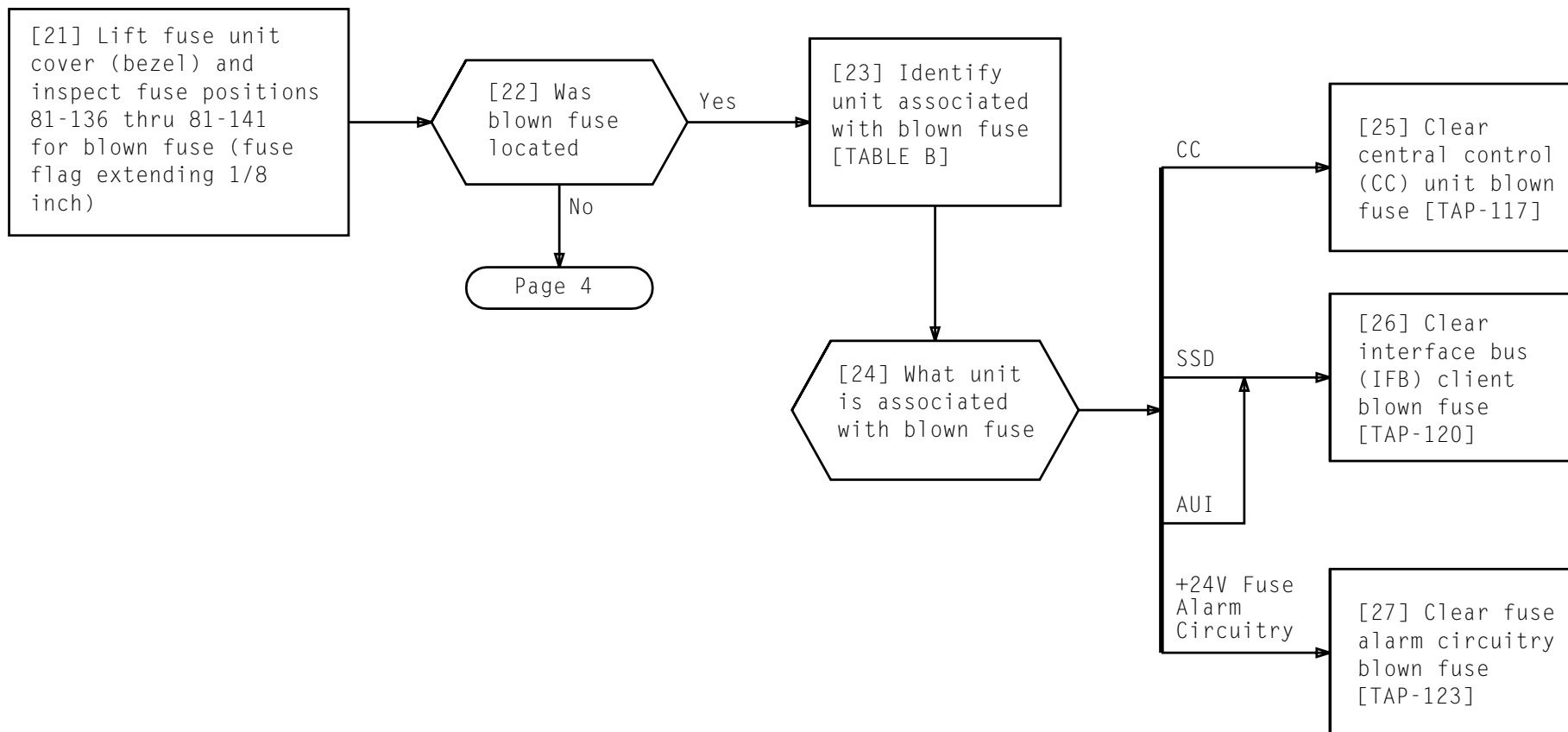
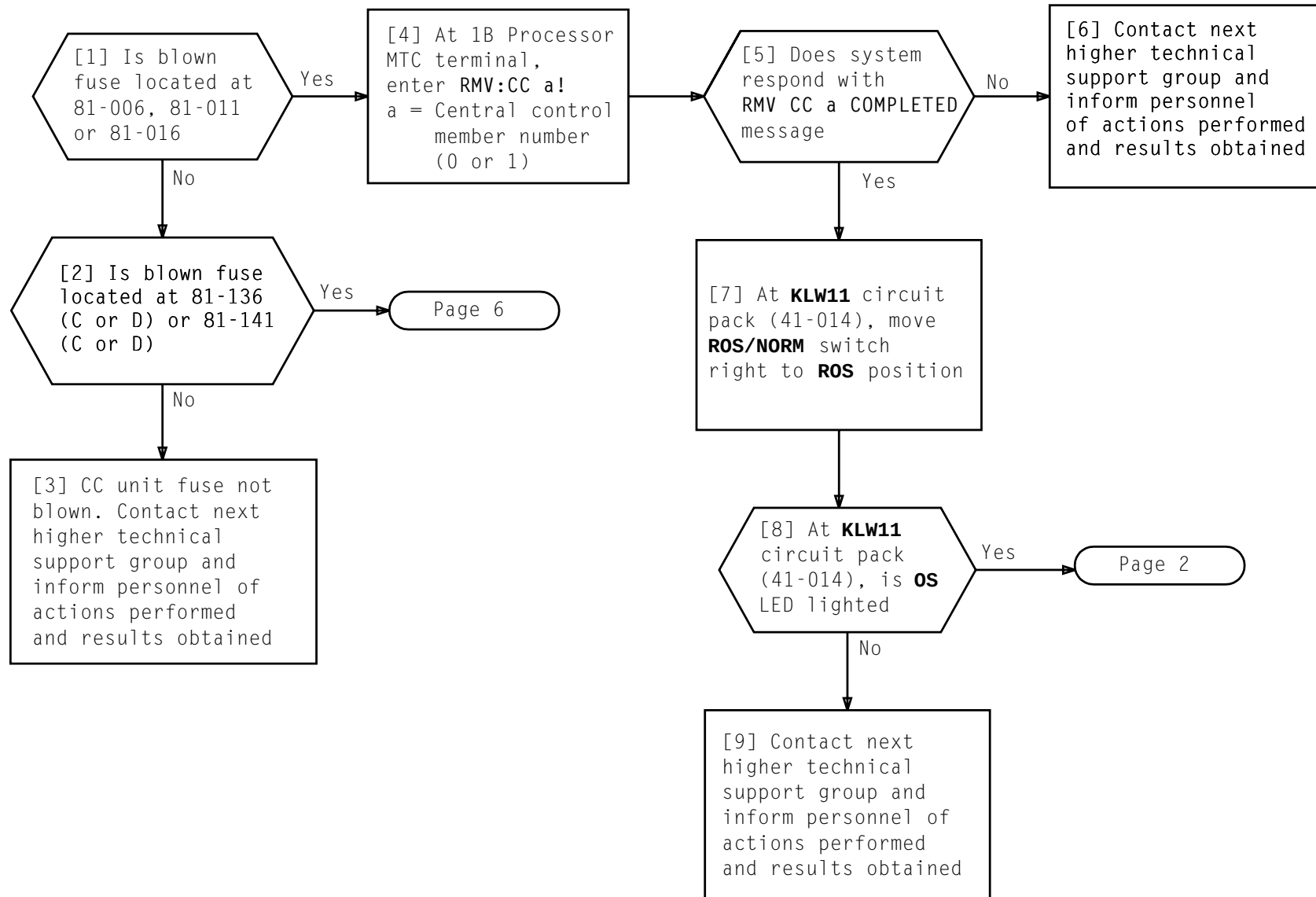


TABLE B +24V FUSE LOCATIONS AND ASSOCIATED UNITS	
BLOWN FUSE LOCATION	ASSOCIATED UNIT
81-136 (C or D)	Central Control (CC)
81-141 (C or D)	
81-136A	Scan and Signal Distributor (SSD)
81-141A	
81-136B	Auxiliary Unit Interface (AUI)
81-141B	
81-136E	+24 Volt Fuse Alarm Circuitry
81-141E	

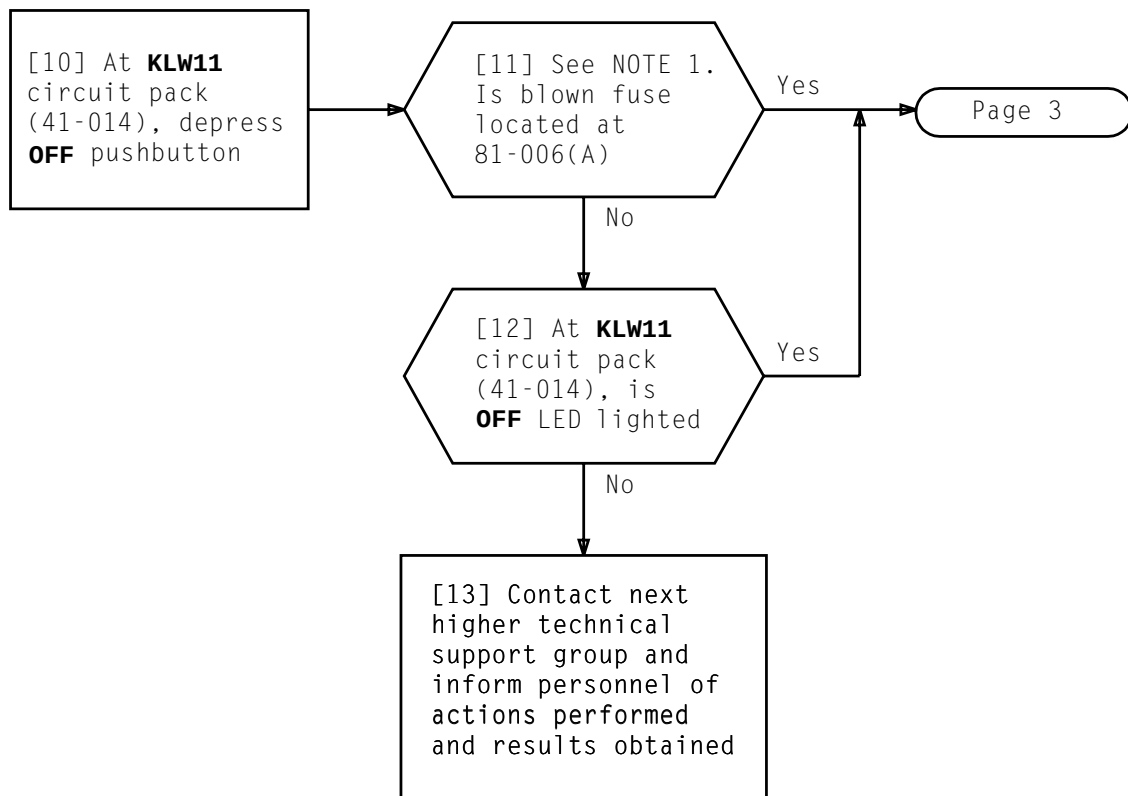
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CLEAR CENTRAL CONTROL (CC) UNIT BLOWN FUSE

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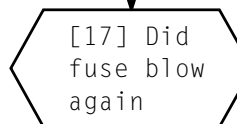


NOTE 1
CC fuse located at 81-006(A) controls the power to **KWL11** circuit pack **OFF** LED. Therefore, when the fuse at this location is blown, the **OFF** LED will not light when the **OFF** pushbutton is depressed

[14] Identify circuit pack associated with blown fuse [TABLE A]

[15] See WARNING 1. Unseat identified circuit pack

[16] See WARNING 2. Replace blown fuse



Yes

[18] A possible short exists in -48V wiring between fuse and circuit pack. Contact next higher technical support group and inform personnel of actions performed and results obtained

No

[19] See WARNING 1 and NOTE 2. Seat circuit pack previously unseated

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NOTE 2

Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

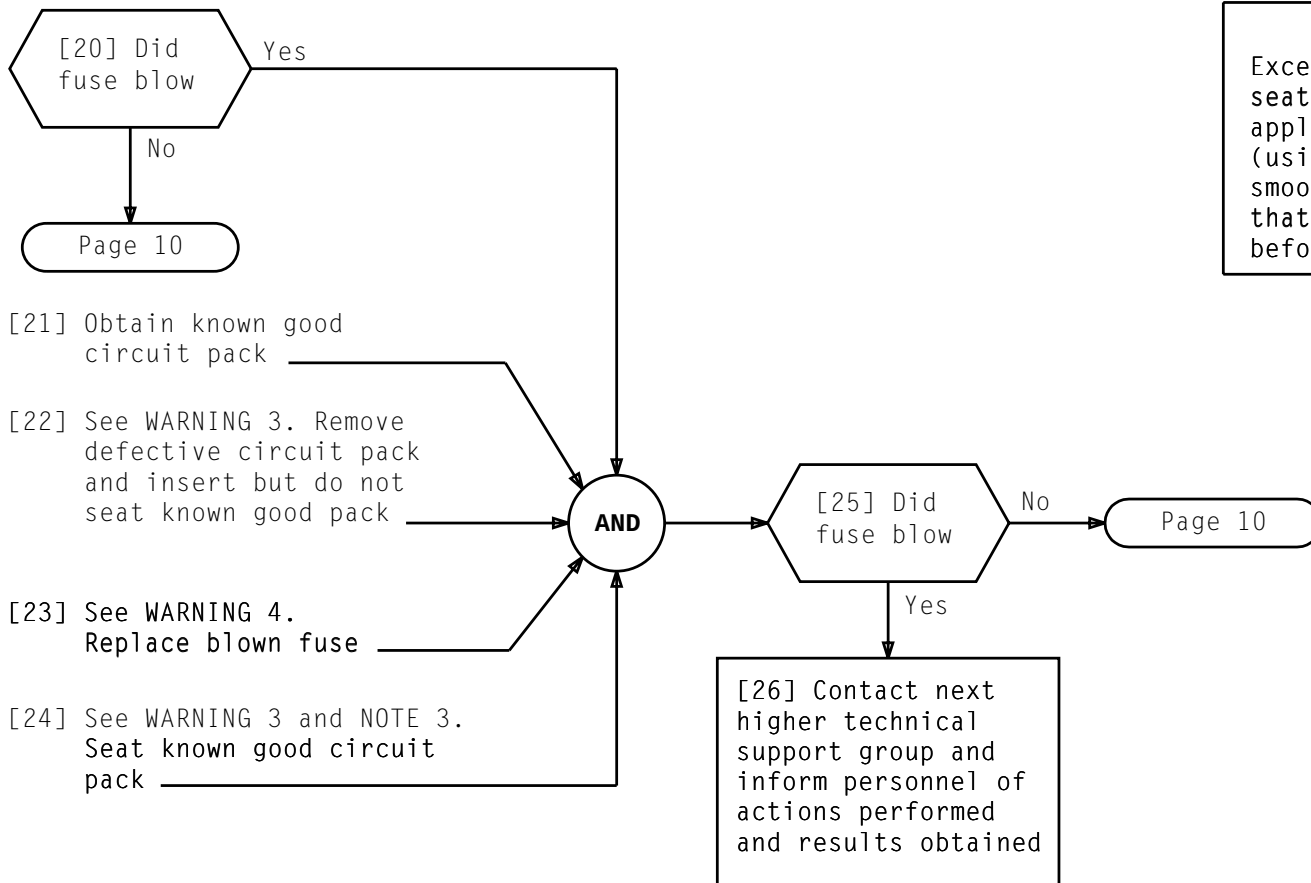
WARNINGS

1. A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins
2. When inserting and removing fuses, care must be taken to ensure fuses are pushed in and pulled out straight. Failure to push/pull fuses straight can exert excessive pressure on fuse assembly causing fuse assembly to crack or completely break off and lodge in fuse circuit card

TABLE A CENTRAL CONTROL UNIT FUSES AND ASSOCIATED CIRCUIT PACKS									
BLOWN FUSE			CIRCUIT PACK		BLOWN FUSE			CIRCUIT PACK	
IDENTIFIER	LOCATION	TYPE	IDENTIFIER	LOCATION	IDENTIFIER	LOCATION	TYPE	IDENTIFIER	LOCATION
CC1	81-006A	80D (5A, GREEN)	KLW11	41-014	PUBA	81-136C	80A (1 1/3A, WHITE)	UN339	70-014
CC2	81-006B		KLW11	41-014					70-030
CC3	81-006C		KLW11	41-014					70-070
CC4	81-006D		KLW11	41-014					70-086
CC5	81-006E		KLW11	41-014	PUBB	81-141C	80A (1 1/3A, WHITE)	UN339	70-014
CC6	81-011A		KLW11	41-014					70-030
CC7	81-011B		KLW12	58-014					70-070
CC8	81-011C		KLW12	58-014					70-086
CC9	81-011D		KLW12	58-014	GCPA	81-136D	80A (1 1/3A, WHITE)	UN340	70-038
CC10	81-011E		KLW12	58-014					70-062
CC11	81-016A	80B (2A, ORANGE)	KLW12	58-014	GCPB	81-141D	80A (1 1/3A, WHITE)	UN340	70-038
CC12	81-016B		KLW12	58-014					70-062
CC13	81-016C		KLW3	41-104					
CC14	81-016D		KLW4	41-112					
CC15	81-016E		KLW22	41-120					

CLEAR CENTRAL CONTROL (CC) UNIT BLOWN FUSE

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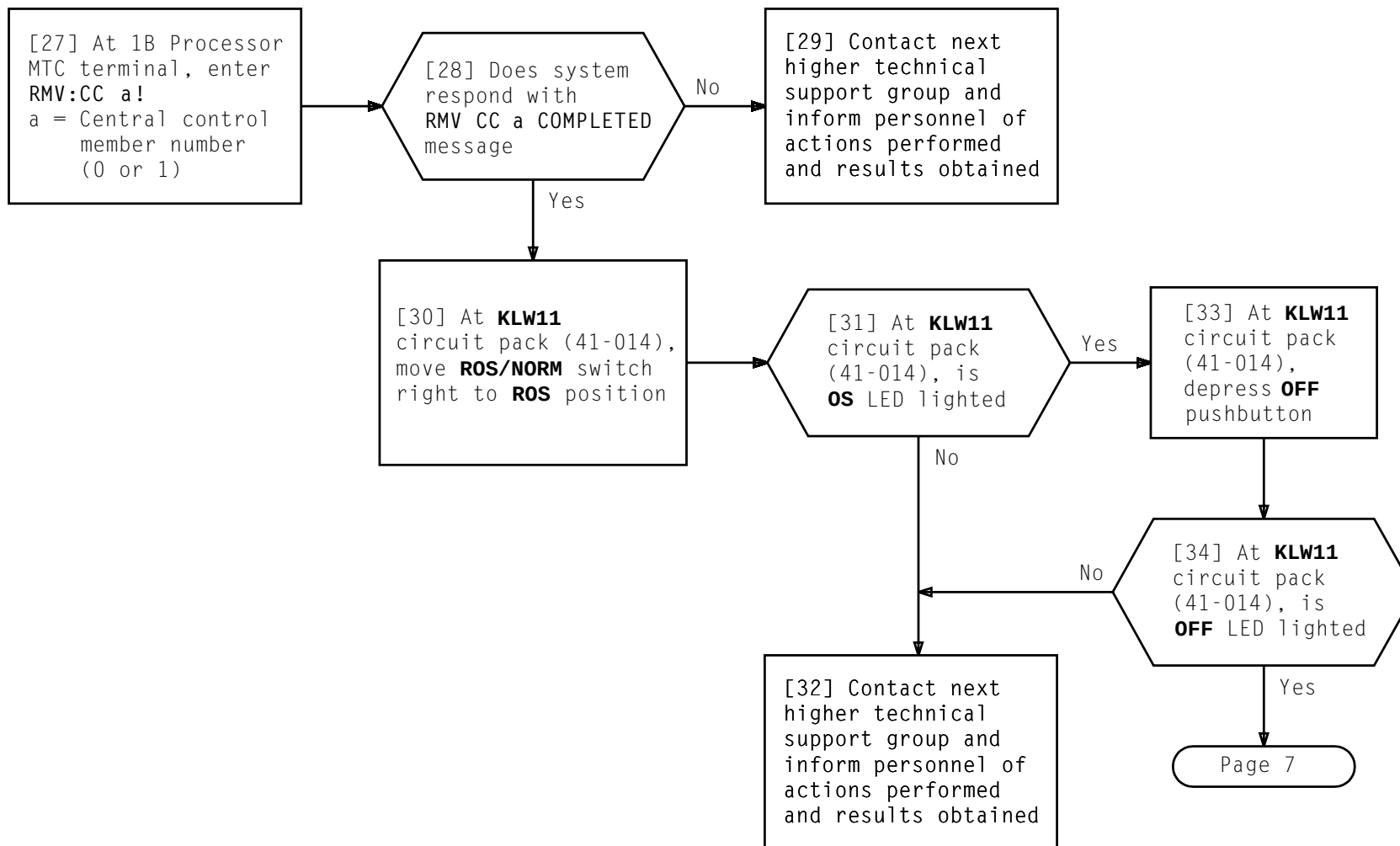


NOTE 3

Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNINGS

3. A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins
4. When inserting and removing fuses, care must be taken to ensure fuses are pushed in and pulled out straight. Failure to push/pull fuses straight can exert excessive pressure on fuse assembly causing fuse assembly to crack or completely break off and lodge in fuse circuit card



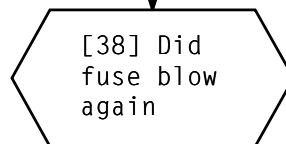
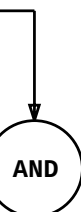
CLEAR CENTRAL CONTROL (CC) UNIT BLOWN FUSE

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[35] Identify all circuit packs associated with blown fuse [TABLE A]

[36] See WARNING 5. Unseat all identified circuit packs

[37] See WARNING 6. Replace blown fuse

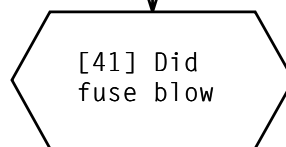


Yes

[39] A possible short exists in +24V wiring between fuse and circuit pack. Contact next higher technical support group and inform personnel of actions performed and results obtained

No

[40] See WARNING 5 and NOTE 4. Seat first circuit pack in group previously unseated [TABLE A]



No

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Yes

Page 8

NOTE 4

Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNINGS

5. A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins
6. When inserting and removing fuses, care must be taken to ensure fuses are pushed in and pulled out straight. Failure to push/pull fuses straight can exert excessive pressure on fuse assembly causing fuse assembly to crack or completely break off and lodge in fuse circuit card

[42] Obtain known good circuit pack

[43] See WARNING 7.
Remove defective circuit pack and insert but do not seat known good pack

[44] See WARNING 8. Replace blown fuse

[45] See WARNING 7 and NOTE 5.
Seat known good circuit pack

AND

[46] Did fuse blow again

No

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Yes

[47] Contact next higher technical support group and inform personnel of actions performed and results obtained

NOTE 5

Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

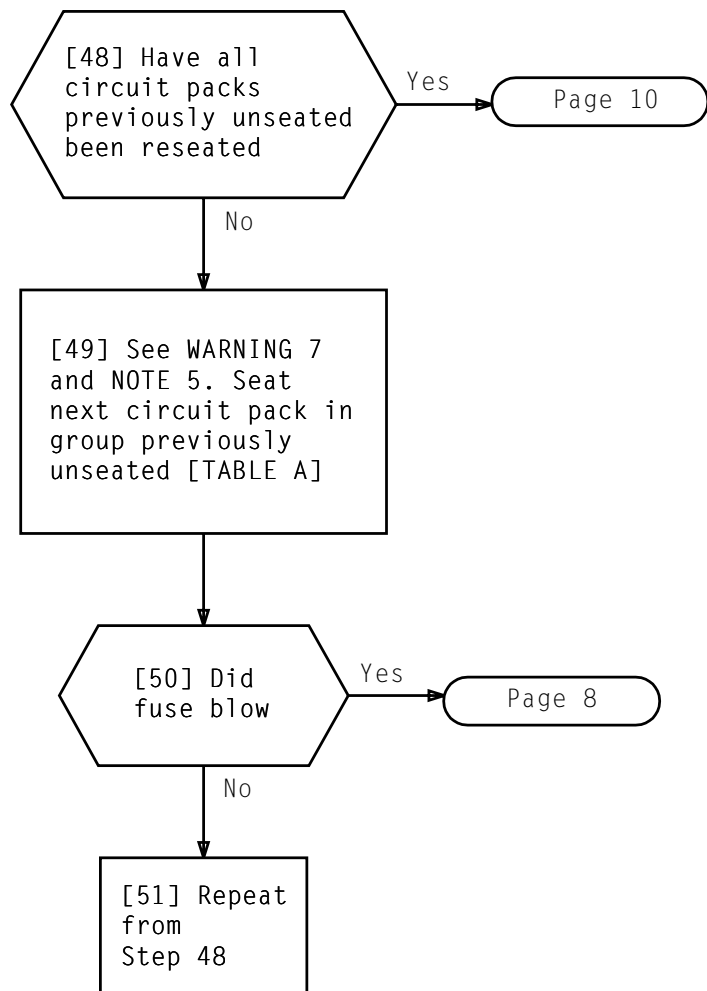
WARNINGS

7. A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins
8. When inserting and removing fuses, care must be taken to ensure fuses are pushed in and pulled out straight. Failure to push/pull fuses straight can exert excessive pressure on fuse assembly causing fuse assembly to crack or completely break off and lodge in fuse circuit card

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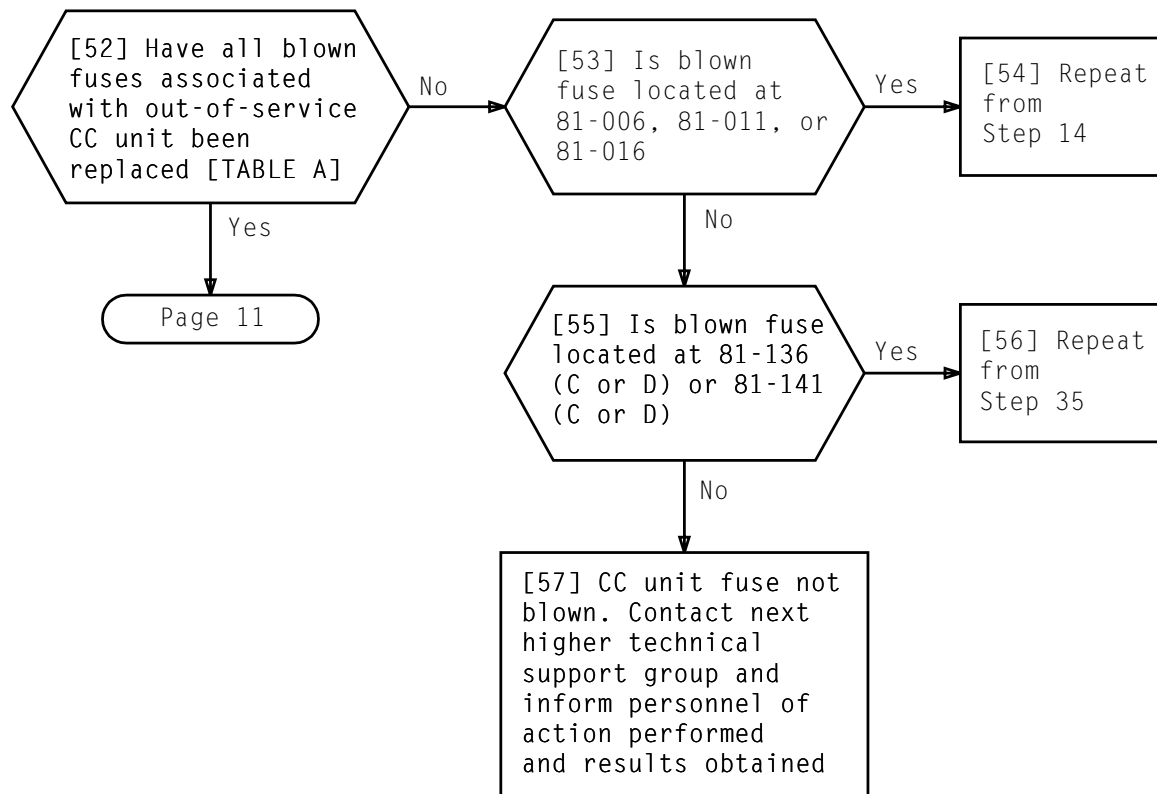
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CLEAR CENTRAL CONTROL (CC) UNIT BLOWN FUSE

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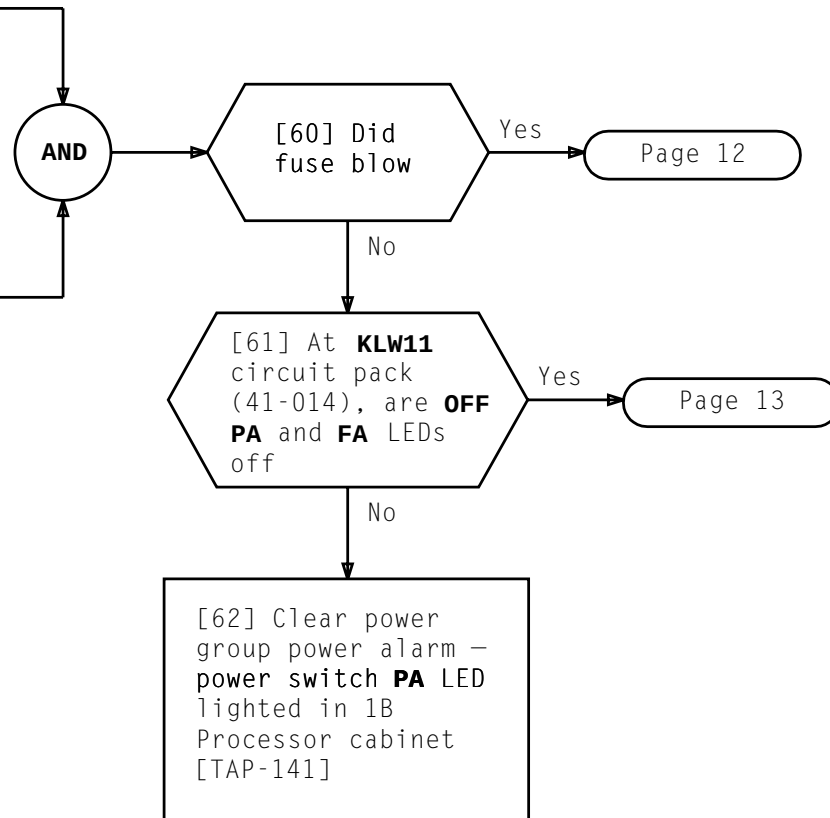


CLEAR CENTRAL CONTROL (CC) UNIT BLOWN FUSE

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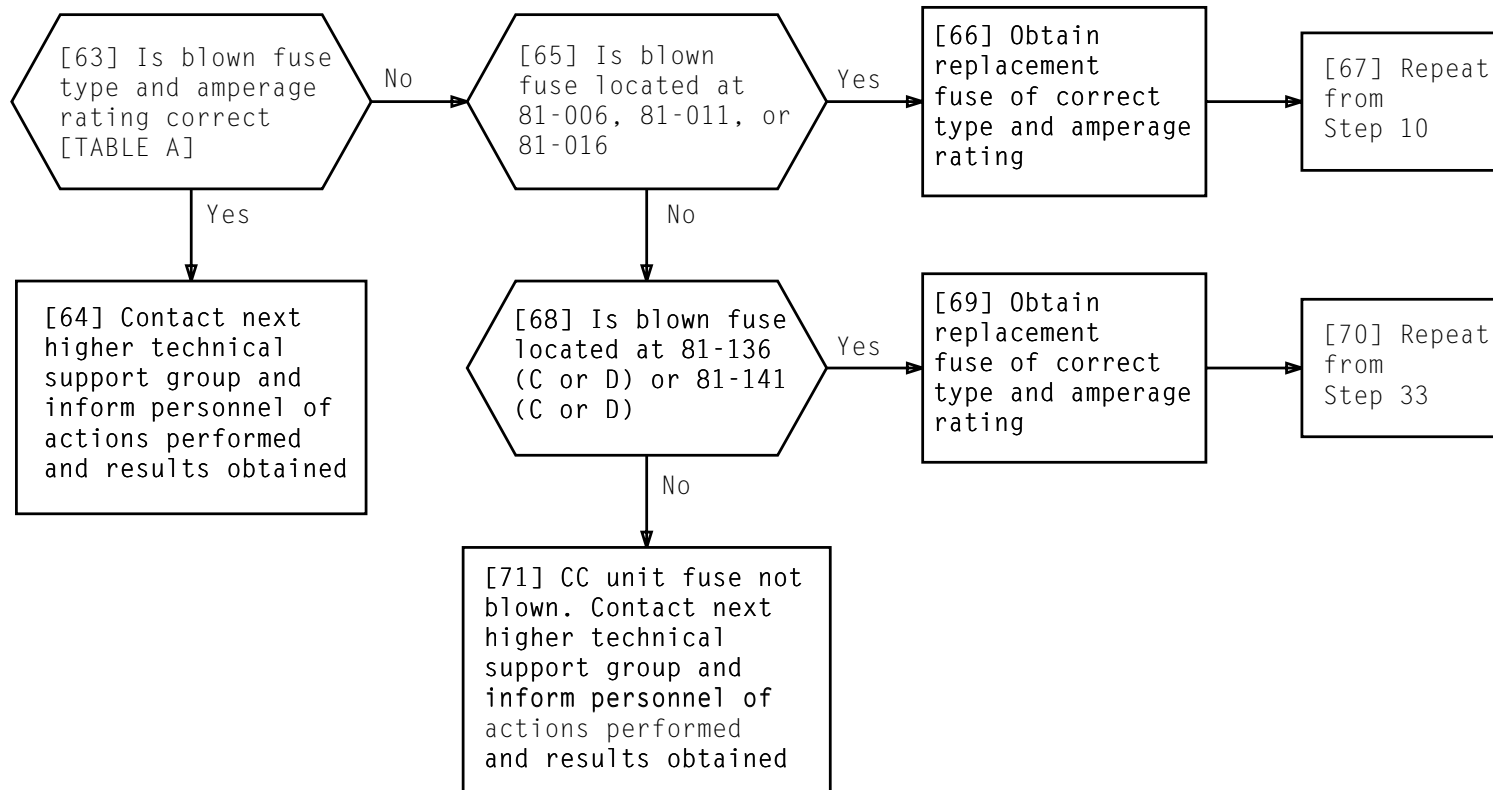
[58] At **KLW11** circuit pack (41-014), depress **OFF** pushbutton to clear alarms

[59] At **KLW11** circuit pack (41-014), depress **ON** pushbutton



CLEAR CENTRAL CONTROL (CC) UNIT BLOWN FUSE

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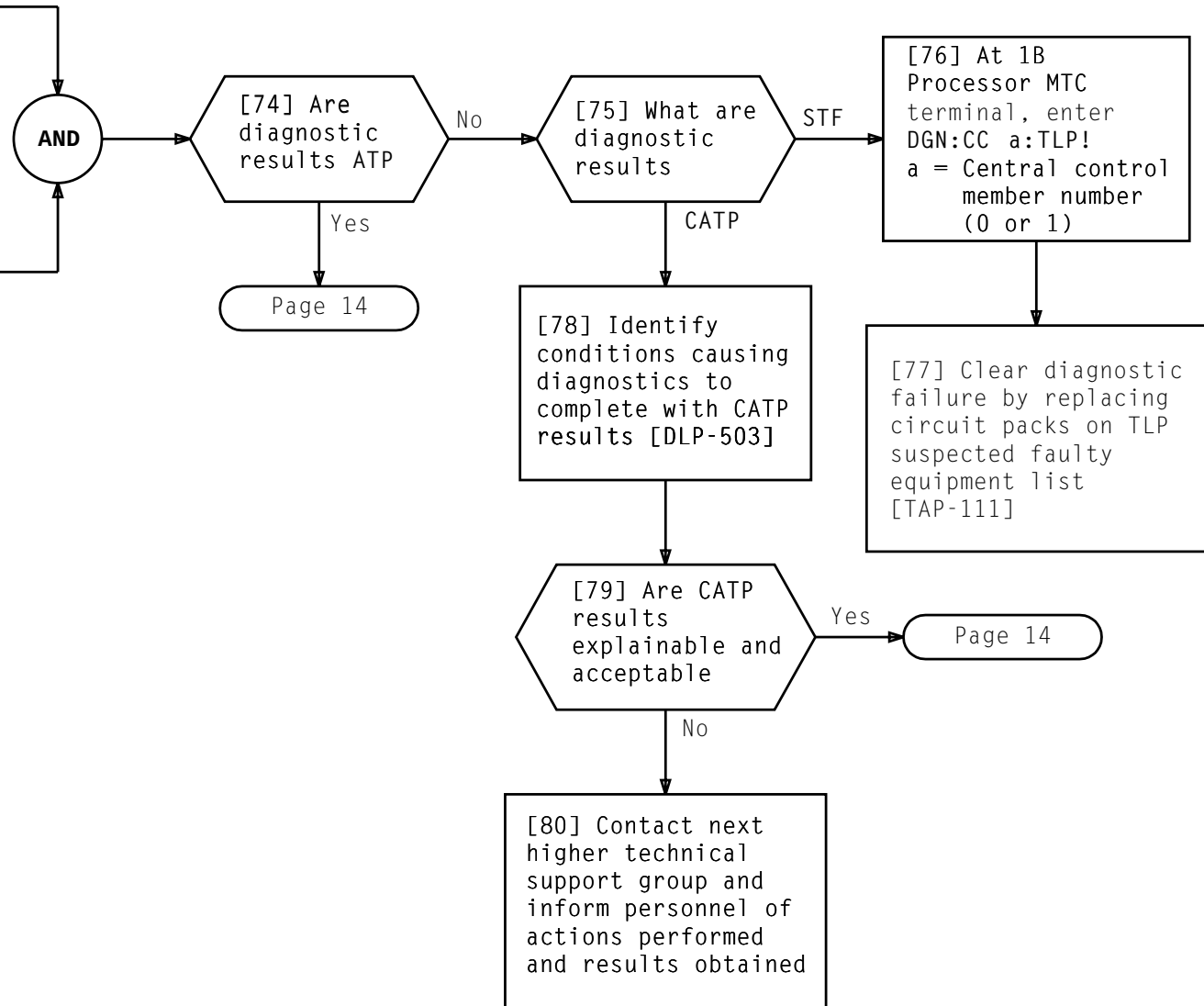


CLEAR CENTRAL CONTROL (CC) UNIT BLOWN FUSE

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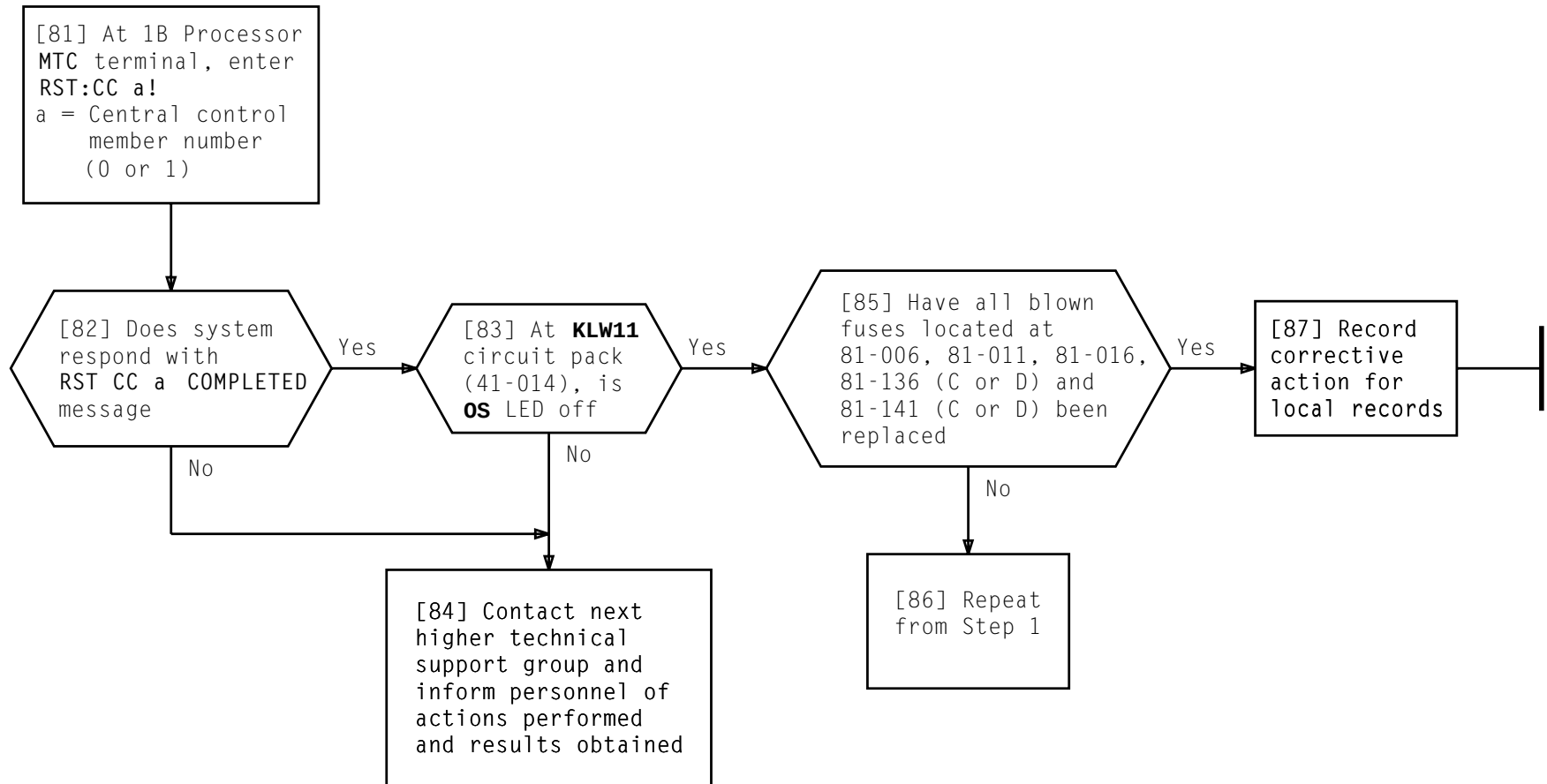
[72] At **KLW11** circuit pack
(41-014), move **ROS/NORM**
switch left to **NORM**
position

[73] Allow ample time for
diagnostics to complete



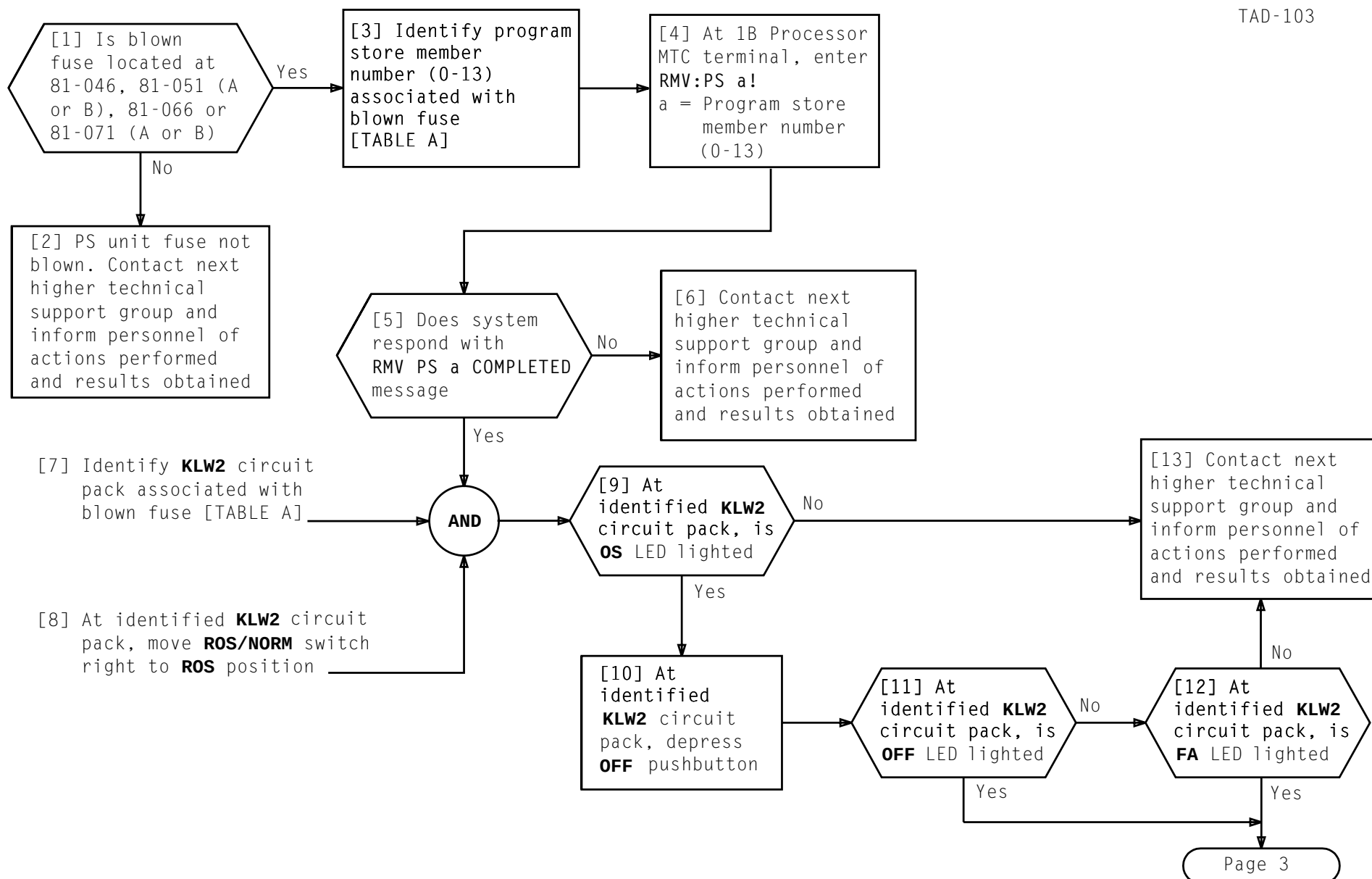
CLEAR CENTRAL CONTROL (CC) UNIT BLOWN FUSE

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CLEAR CENTRAL CONTROL (CC) UNIT BLOWN FUSE

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CLEAR PROGRAM STORE (PS) UNIT BLOWN FUSE

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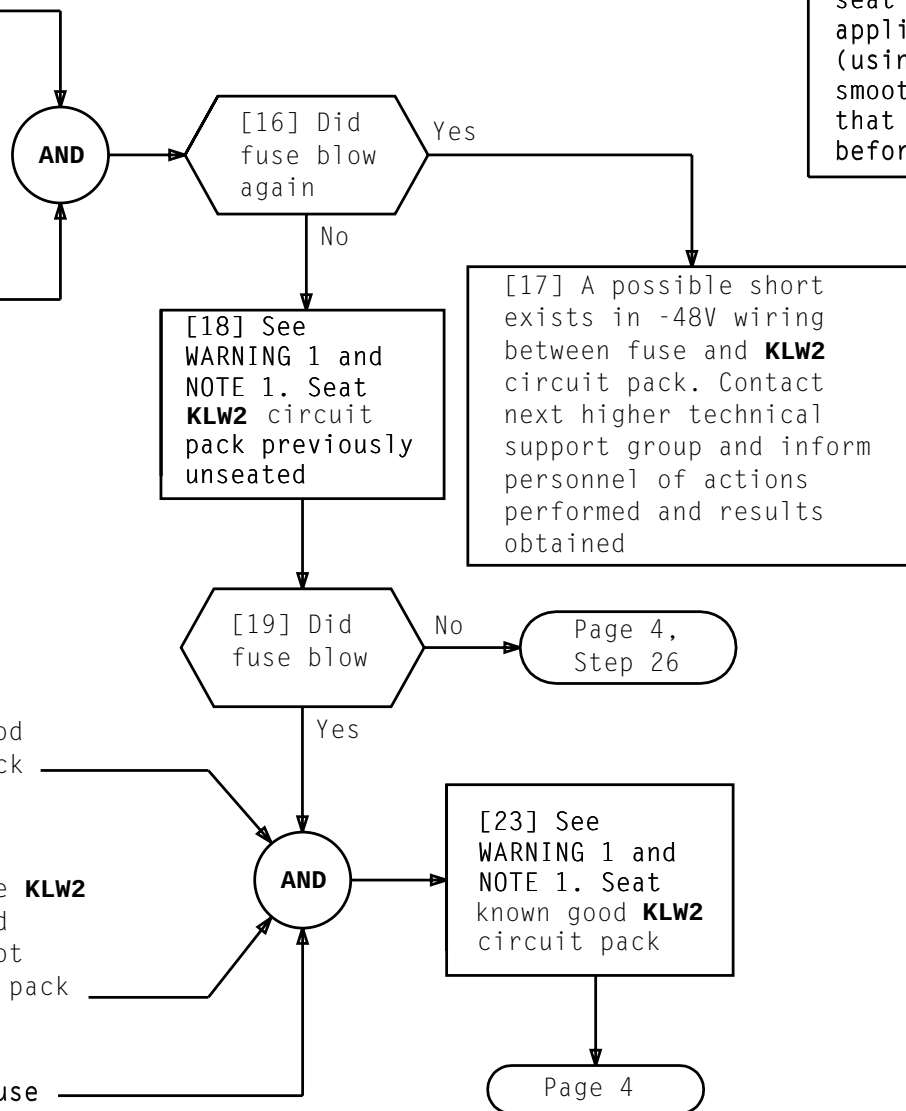
TABLE A PROGRAM STORE FUSES AND ASSOCIATED CIRCUIT PACKS							
BLOWN FUSE		CIRCUIT PACK		BLOWN FUSE		CIRCUIT PACK	
IDENTIFIER	LOCATION	IDENTIFIER	LOCATION	IDENTIFIER	LOCATION	IDENTIFIER	LOCATION
PS0A	081-046A	KLW2 (PS0)	041-128	PS0B	081-066A	KLW2 (PS0)	041-128
PS1A	181-046A	KLW2 (PS1)	141-128	PS1B	181-066A	KLW2 (PS1)	141-128
PS2A	081-046B	KLW2 (PS2)	041-136	PS2B	081-066B	KLW2 (PS2)	041-136
PS3A	181-046B	KLW2 (PS3)	141-136	PS3B	181-066B	KLW2 (PS3)	141-136
PS4A	081-046C	KLW2 (PS4)	041-144	PS4B	081-066C	KLW2 (PS4)	041-144
PS5A	181-046C	KLW2 (PS5)	141-144	PS5B	181-066C	KLW2 (PS5)	141-144
PS6A	081-046D	KLW2 (PS6)	041-152	PS6B	081-066D	KLW2 (PS6)	041-152
PS7A	181-046D	KLW2 (PS7)	141-152	PS7B	181-066D	KLW2 (PS7)	141-152
PS8A	081-046E	KLW2 (PS8)	041-160	PS8B	081-066E	KLW2 (PS8)	041-160
PS9A	181-046E	KLW2 (PS9)	141-160	PS9B	181-066E	KLW2 (PS9)	141-160
PS10A	081-051A	KLW2 (PS10)	041-168	PS10B	081-071A	KLW2 (PS10)	041-168
PS11A	181-051A	KLW2 (PS11)	141-168	PS11B	181-071A	KLW2 (PS11)	141-168
PS12A	081-051B	KLW2 (PS12)	041-176	PS12B	081-071B	KLW2 (PS12)	041-176
PS13A	181-051B	KLW2 (PS13)	141-176	PS13B	181-071B	KLW2 (PS13)	141-176

CLEAR PROGRAM STORE (PS) UNIT BLOWN FUSE

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[14] See WARNING 1. Unseat **KLW2** circuit pack associated with blown fuse

[15] See WARNING 2. Replace blown fuse

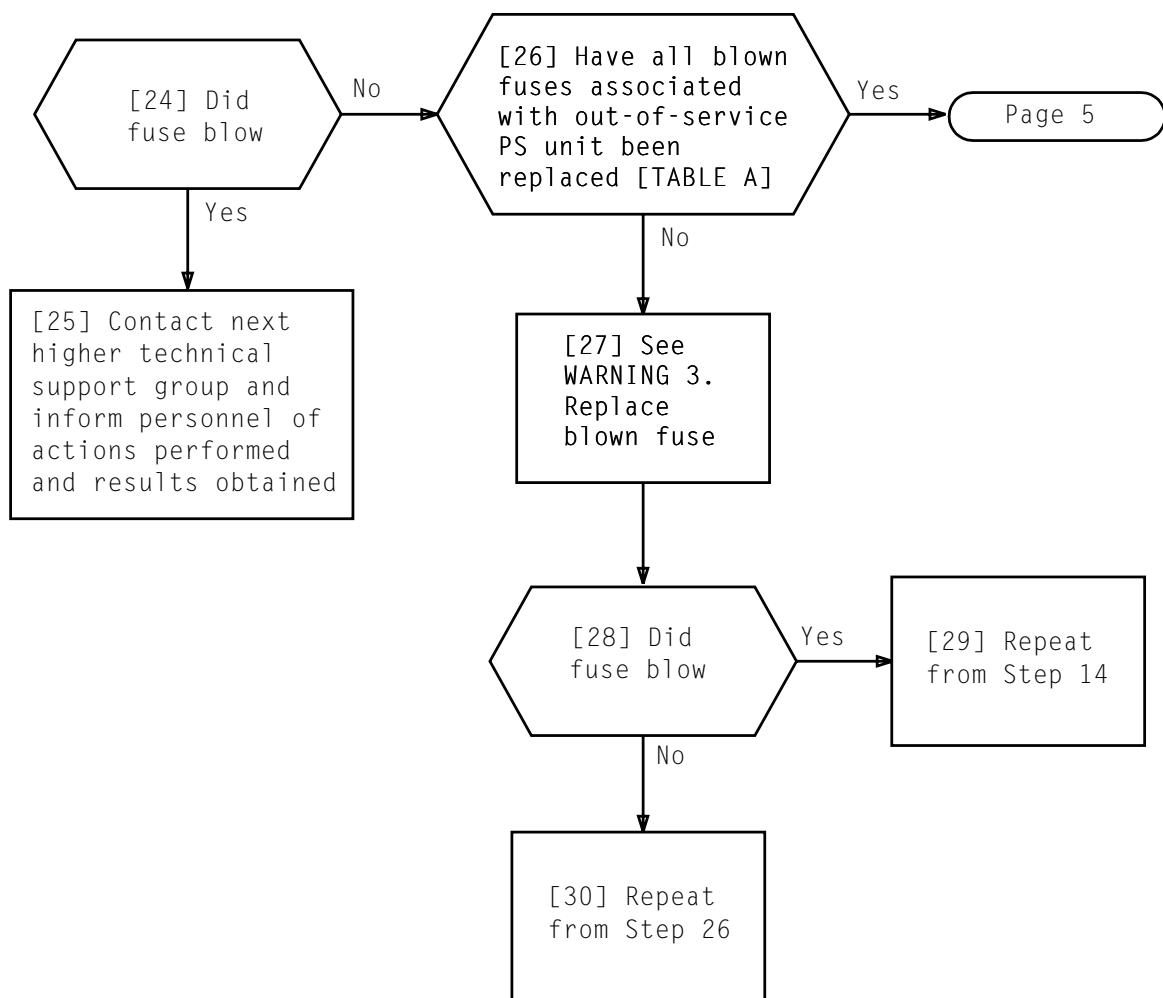


NOTE 1

Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNINGS

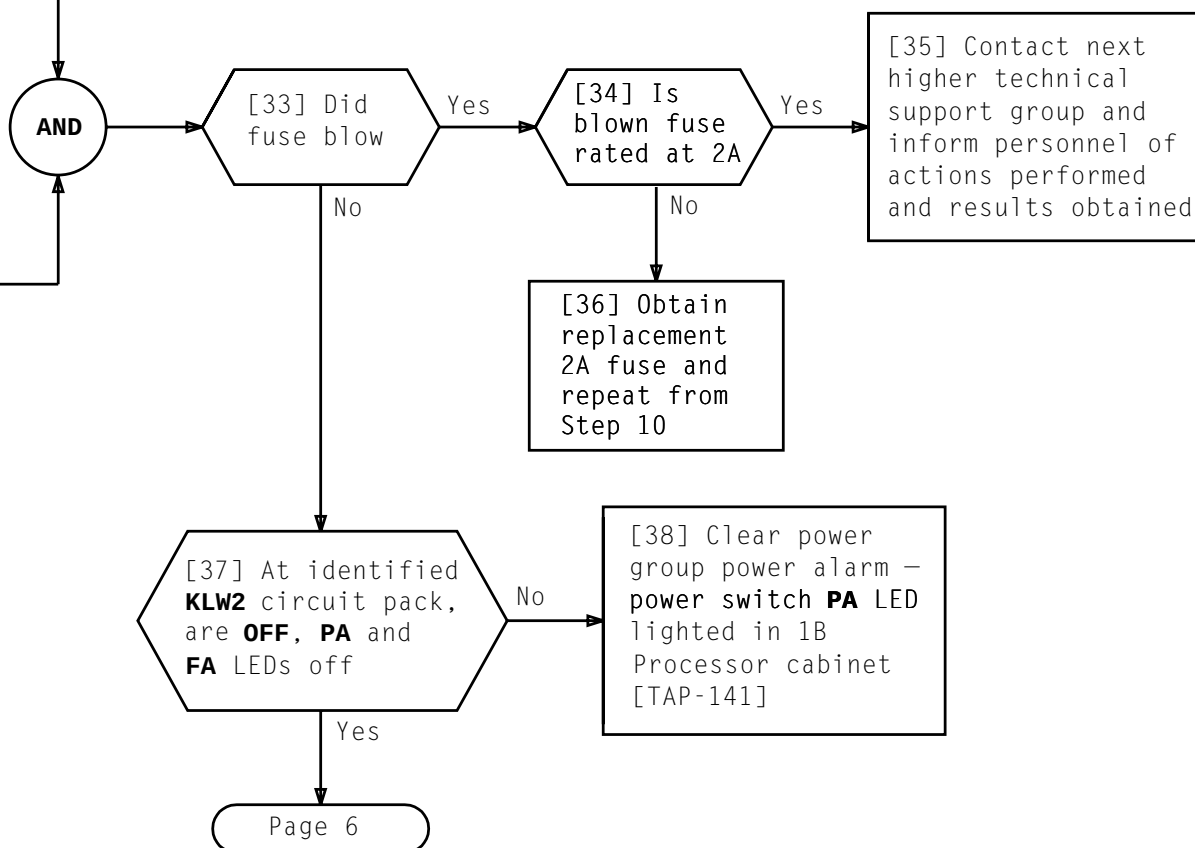
1. A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins
2. When inserting and removing fuses, care must be taken to ensure fuses are pushed in and pulled out straight. Failure to push/pull fuses straight can exert excessive pressure on fuse assembly causing fuse assembly to crack or completely break off and lodge in fuse circuit card



WARNING 3
When inserting and removing fuses, care must be taken to ensure fuses are pushed in and pulled out straight. Failure to push/pull fuses straight can exert excessive pressure on fuse assembly causing fuse assembly to crack or completely break off and lodge in fuse circuit card

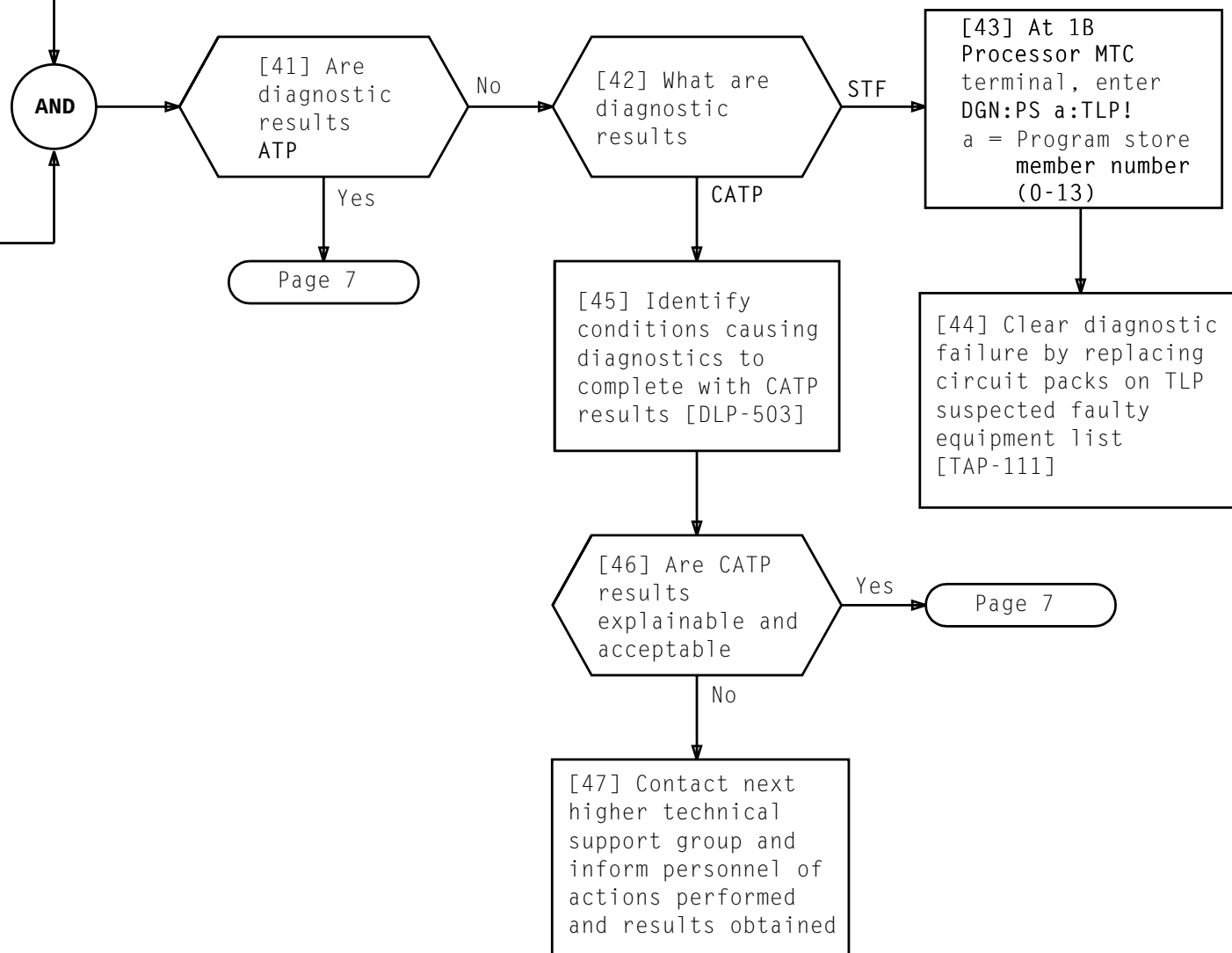
[31] At identified
KLW2 circuit pack,
depress **OFF**
pushbutton to
clear alarms

[32] At identified
KLW2 circuit pack,
depress **ON**
pushbutton



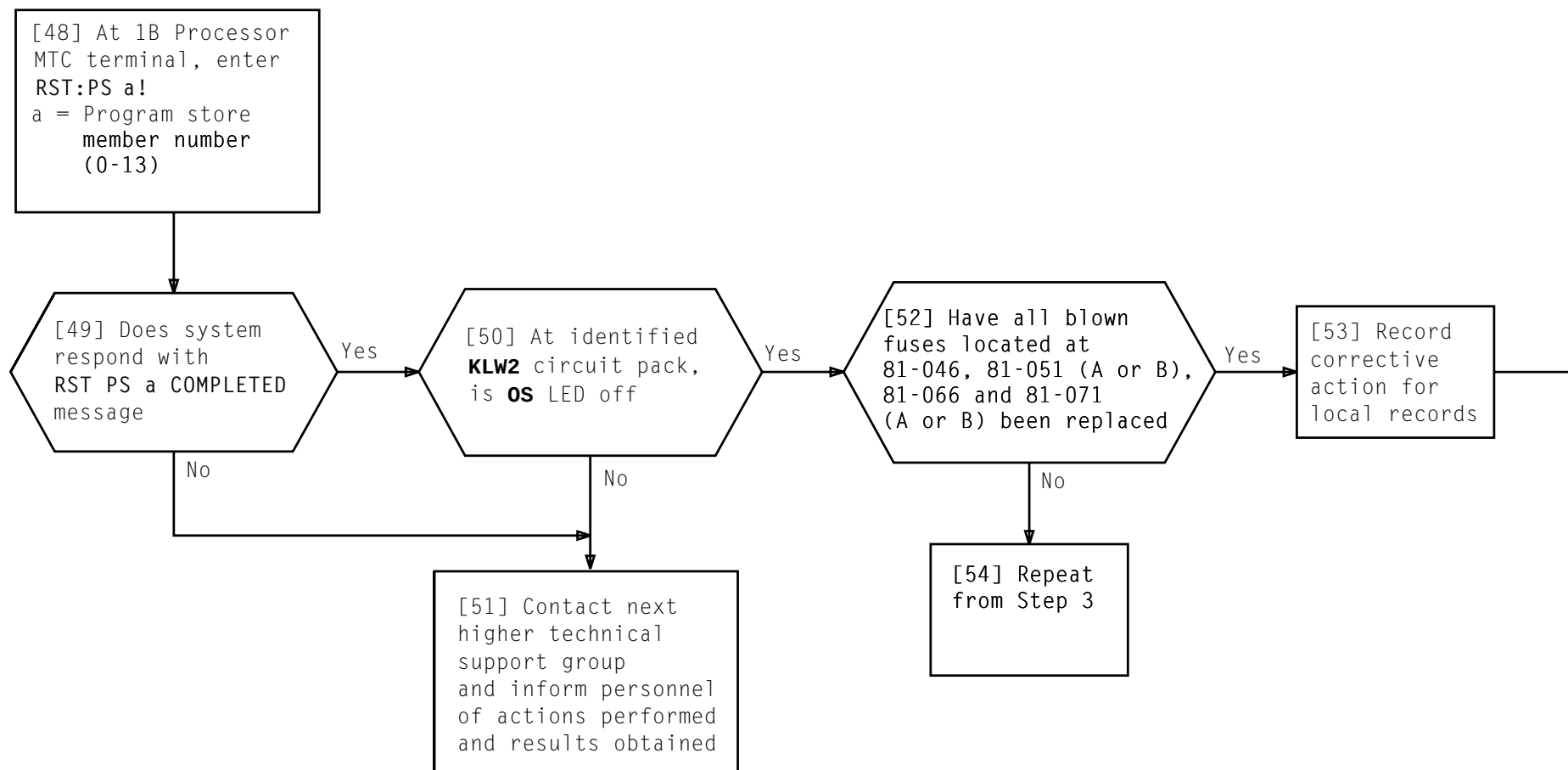
[39] At identified **KLW2** circuit pack, move **ROS/NORM** switch left to **NORM** position

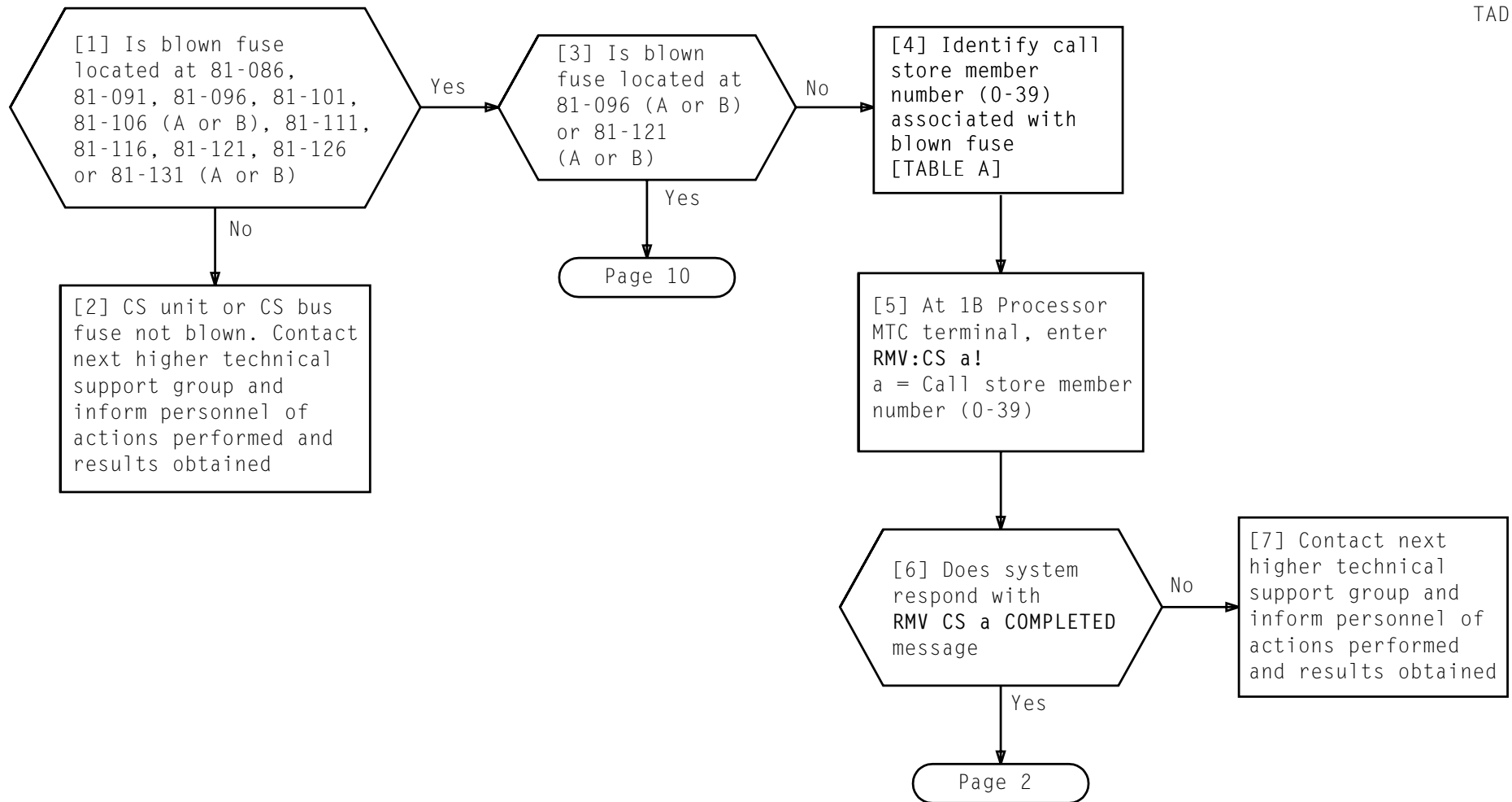
[40] Allow ample time for diagnostics to complete



CLEAR PROGRAM STORE (PS) UNIT BLOWN FUSE

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CLEAR CALL STORE (CS) UNIT/CALL STORE BUS (CSB) BLOWN FUSE

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[8] Identify **KLW1** circuit pack associated with blown fuse [TABLE A]

[9] At identified **KLW1** circuit pack, move **ROS/NORM** switch right to **ROS** position

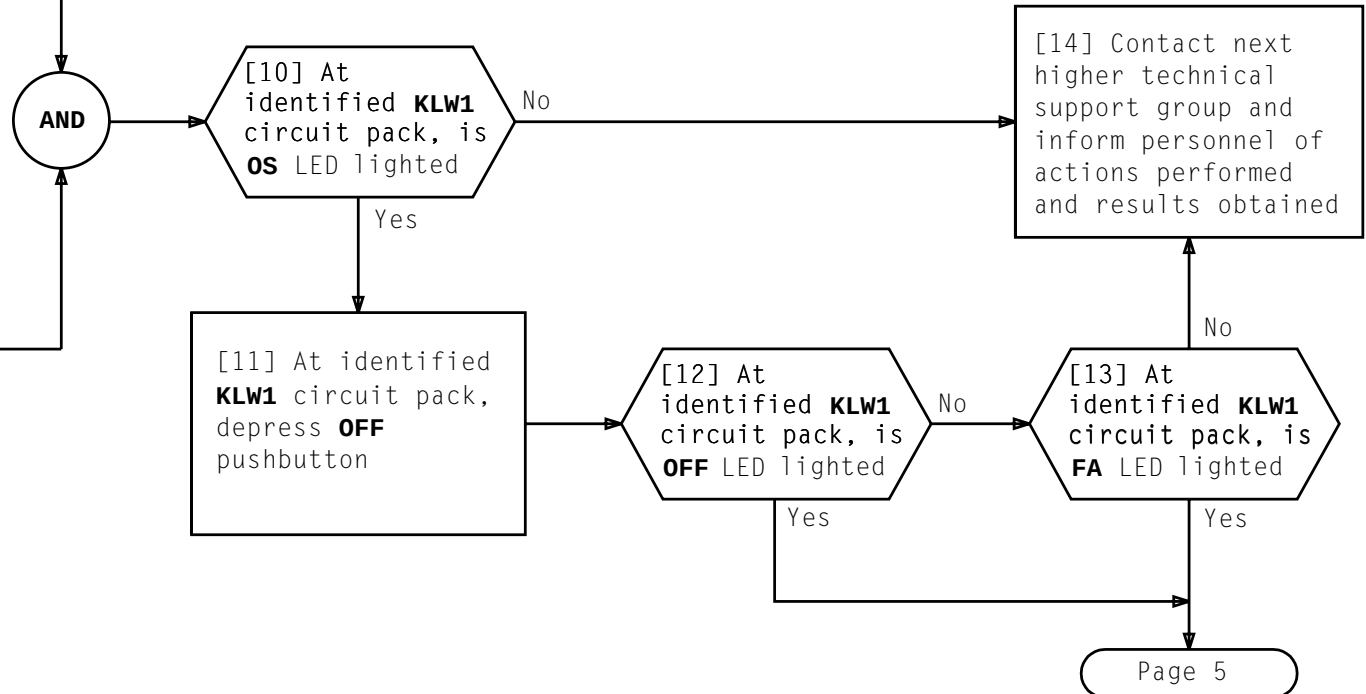


**TABLE A
CALL STORE FUSES AND ASSOCIATED CIRCUIT PACKS**

BLOWN FUSE		CIRCUIT PACK		BLOWN FUSE		CIRCUIT PACK	
IDENTIFIER	LOCATION	IDENTIFIER	LOCATION	IDENTIFIER	LOCATION	IDENTIFIER	LOCATION
CS0A	081-086A	KLW1 (CS0)	024-006	CS21A	181-091A	KLW1 (CS21)	124-046
CS1A	181-086A	KLW1 (CS1)	124-006	CS22A	081-101B	KLW1 (CS22)	024-136
CS2A	081-106B	KLW1 (CS2)	024-176	CS23A	181-101B	KLW1 (CS23)	124-136
CS3A	181-106B	KLW1 (CS3)	124-176	CS24A	081-091B	KLW1 (CS24)	024-054
CS4A	081-086B	KLW1 (CS4)	024-014	CS25A	181-091B	KLW1 (CS25)	124-054
CS5A	181-086B	KLW1 (CS5)	124-014	CS26A	081-101A	KLW1 (CS26)	024-128
CS6A	081-106A	KLW1 (CS6)	024-168	CS27A	181-101A	KLW1 (CS27)	124-128
CS7A	181-106A	KLW1 (CS7)	124-168	CS28A	081-091C	KLW1 (CS28)	024-062
CS8A	081-086C	KLW1 (CS8)	024-022	CS29A	181-091C	KLW1 (CS29)	124-062
CS9A	181-086C	KLW1 (CS9)	124-022	CS30A	081-096E	KLW1 (CS30)	024-120
CS10A	081-101E	KLW1 (CS10)	024-160	CS31A	181-096E	KLW1 (CS31)	124-120
CS11A	181-101E	KLW1 (CS11)	124-160	CS32A	081-091D	KLW1 (CS32)	024-070
CS12A	081-086D	KLW1 (CS12)	024-030	CS33A	181-091D	KLW1 (CS33)	124-070
CS13A	181-086D	KLW1 (CS13)	124-030	CS34A	081-096D	KLW1 (CS34)	024-112
CS14A	081-101D	KLW1 (CS14)	024-152	CS35A	181-096D	KLW1 (CS35)	124-112
CS15A	181-101D	KLW1 (CS15)	124-152	CS36A	081-091E	KLW1 (CS36)	024-078
CS16A	081-086E	KLW1 (CS16)	024-038	CS37A	181-091E	KLW1 (CS37)	124-078
CS17A	181-086E	KLW1 (CS17)	124-038	CS38A	081-096C	KLW1 (CS38)	024-104
CS18A	081-101C	KLW1 (CS18)	024-144	CS39A	181-096C	KLW1 (CS39)	124-104
CS19A	181-101C	KLW1 (CS19)	124-144	CS0B	081-111A	KLW1 (CS0)	024-006
CS20A	081-091A	KLW1 (CS20)	024-046	CS1B	181-111A	KLW1 (CS1)	124-006

CLEAR CALL STORE (CS) UNIT/CALL STORE BUS (CSB) BLOWN FUSE

TABLE A (Contd)							
CALL STORE FUSES AND ASSOCIATED CIRCUIT PACKS							
BLOWN FUSE		CIRCUIT PACK		BLOWN FUSE		CIRCUIT PACK	
IDENTIFIER	LOCATION	IDENTIFIER	LOCATION	IDENTIFIER	LOCATION	IDENTIFIER	LOCATION
CS2B	081-131B	KLW1 (CS2)	024-176	CS22B	081-126B	KLW1 (CS22)	024-136
CS3B	181-131B	KLW1 (CS3)	124-176	CS23B	181-126B	KLW1 (CS23)	124-136
CS4B	081-111B	KLW1 (CS4)	024-014	CS24B	081-116B	KLW1 (CS24)	024-054
CS5B	181-111B	KLW1 (CS5)	124-014	CS25B	181-116B	KLW1 (CS25)	124-054
CS6B	081-131A	KLW1 (CS6)	024-168	CS26B	081-126A	KLW1 (CS26)	024-128
CS7B	181-131A	KLW1 (CS7)	124-168	CS27B	181-126A	KLW1 (CS27)	124-128
CS8B	081-111C	KLW1 (CS8)	024-022	CS28B	081-116C	KLW1 (CS28)	024-062
CS9B	181-111C	KLW1 (CS9)	124-022	CS29B	181-116C	KLW1 (CS29)	124-062
CS10B	081-126E	KLW1 (CS10)	024-160	CS30B	081-121E	KLW1 (CS30)	024-120
CS11B	181-126E	KLW1 (CS11)	124-160	CS31B	181-121E	KLW1 (CS31)	124-120
CS12B	081-111D	KLW1 (CS12)	024-030	CS32B	081-116D	KLW1 (CS32)	024-070
CS13B	181-111D	KLW1 (CS13)	124-030	CS33B	181-116D	KLW1 (CS33)	124-070
CS14B	081-126D	KLW1 (CS14)	024-152	CS34B	081-121D	KLW1 (CS34)	024-112
CS15B	181-126D	KLW1 (CS15)	124-152	CS35B	181-121D	KLW1 (CS35)	124-112
CS16B	081-111E	KLW1 (CS16)	024-038	CS36B	081-116E	KLW1 (CS36)	024-078
CS17B	181-111E	KLW1 (CS17)	124-038	CS37B	181-116E	KLW1 (CS37)	124-078
CS18B	081-126C	KLW1 (CS18)	024-144	CS38B	081-121C	KLW1 (CS38)	024-104
CS19B	181-126C	KLW1 (CS19)	124-144	CS39B	181-121C	KLW1 (CS39)	124-104
CS20B	081-116A	KLW1 (CS20)	024-046				
CS21B	181-116A	KLW1 (CS21)	124-046				

CLEAR CALL STORE (CS) UNIT/CALL STORE BUS (CSB) BLOWN FUSE

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[15] See WARNING 1.
Unseat **KLW1** circuit
pack associated with
blown fuse

[16] See WARNING 2.
Replace blown fuse

AND

[17] Did
fuse blow
again

Yes

No

[19] See
WARNING 1 and
NOTE 1. Seat
KLW1 circuit
pack previously
unseated

[18] A possible short
exists in -48V wiring
between fuse and **KLW1**
circuit pack. Contact
next higher technical
support group and inform
personnel of actions
performed and results
obtained

[20] Did
fuse blow

No

Page 6,
Step 27

Yes

[21] Obtain known good
KLW1 circuit pack

[22] See WARNING 1.
Remove defective **KLW1**
circuit pack and
insert but do not
seat known good pack

[23] See WARNING 2.
Replace blown fuse

AND

[24] See
WARNING 1 and
NOTE 1. Seat
known good **KLW1**
circuit pack

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NOTE 1

Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNINGS

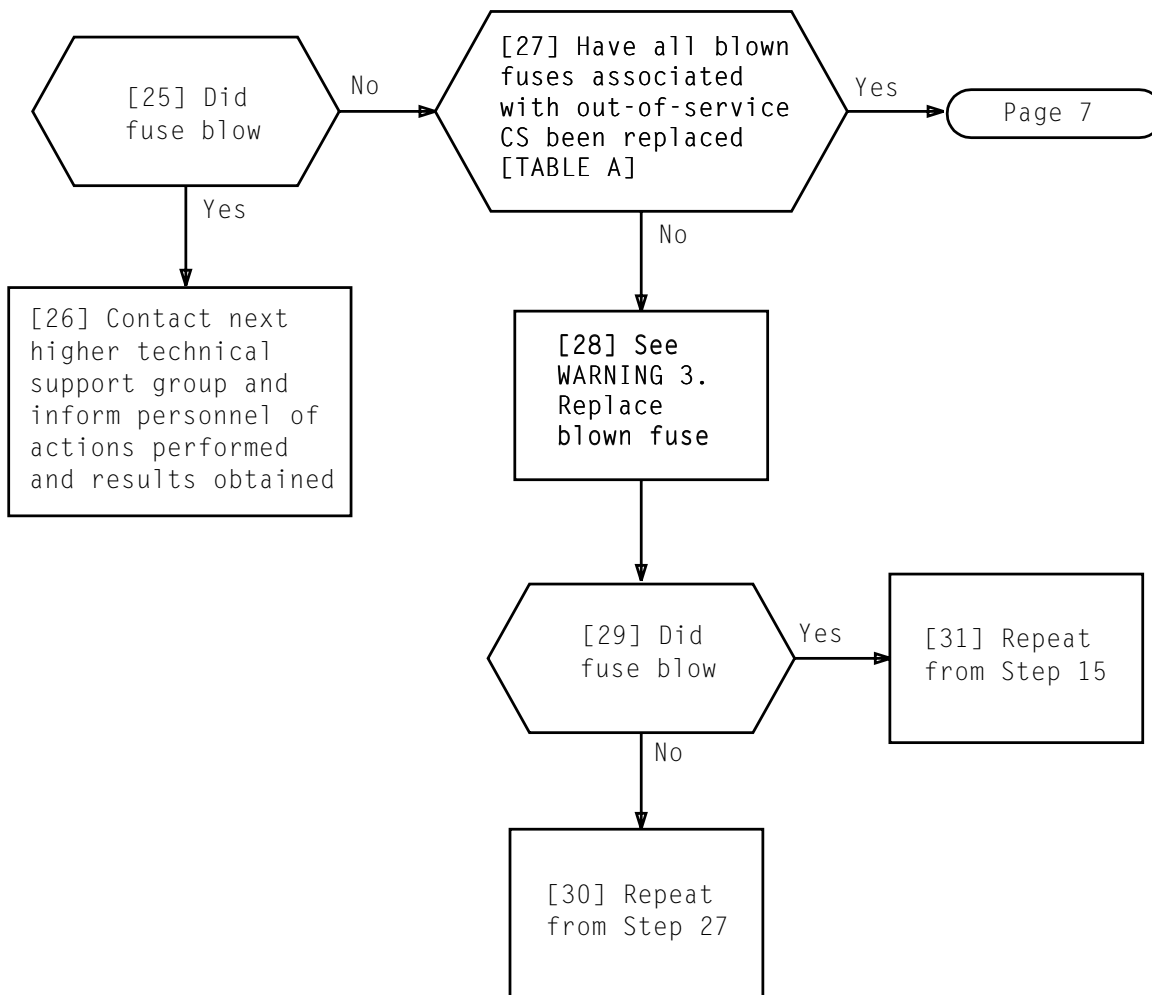
1. A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins
2. When inserting and removing fuses, care must be taken to ensure fuses are pushed in and pulled out straight. Failure to push/pull fuses straight can exert excessive pressure on fuse assembly causing fuse assembly to crack or completely break off and lodge in fuse circuit card

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CLEAR CALL STORE (CS) UNIT/CALL STORE BUS (CSB) BLOWN FUSE

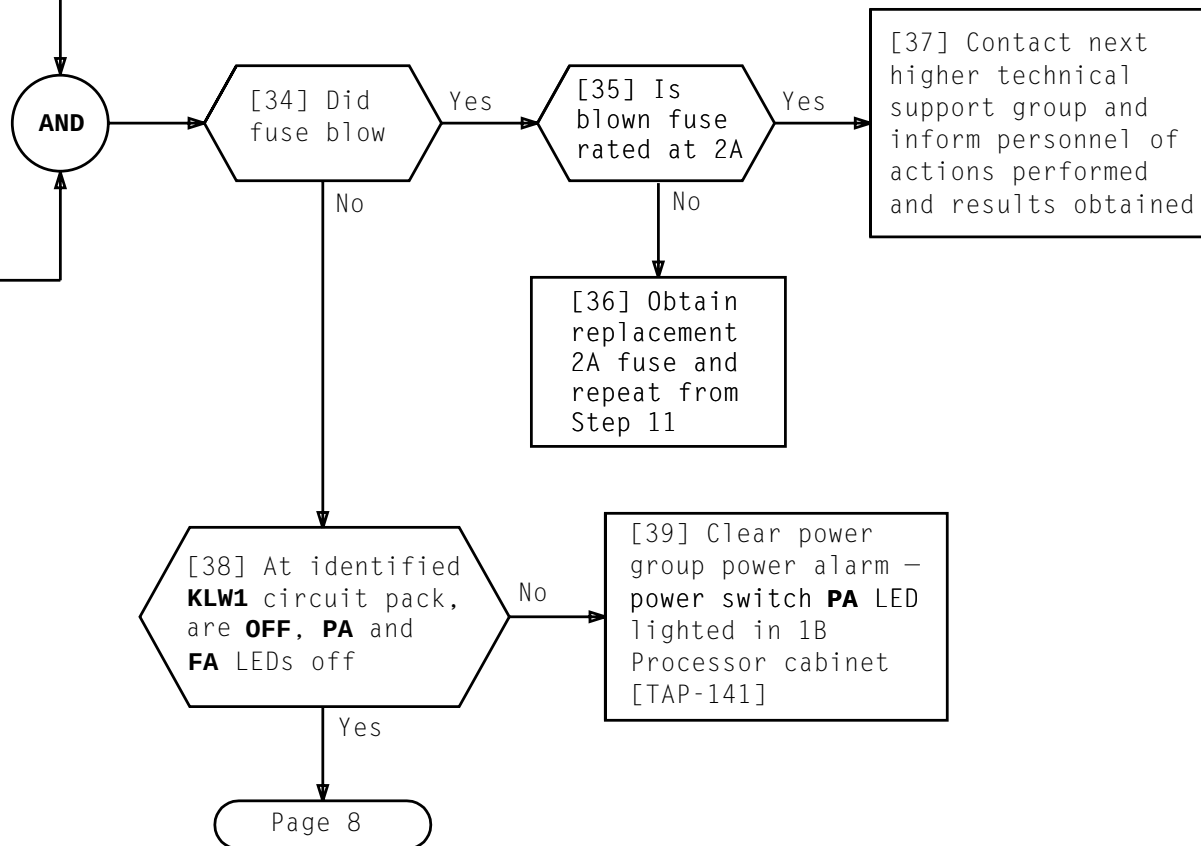


WARNING 3 <i>When inserting and removing fuses, care must be taken to ensure fuses are pushed in and pulled out straight. Failure to push/pull fuses straight can exert excessive pressure on fuse assembly causing fuse assembly to crack or completely break off and lodge in fuse circuit card</i>		
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CLEAR CALL STORE (CS) UNIT/CALL STORE BUS (CSB) BLOWN FUSE

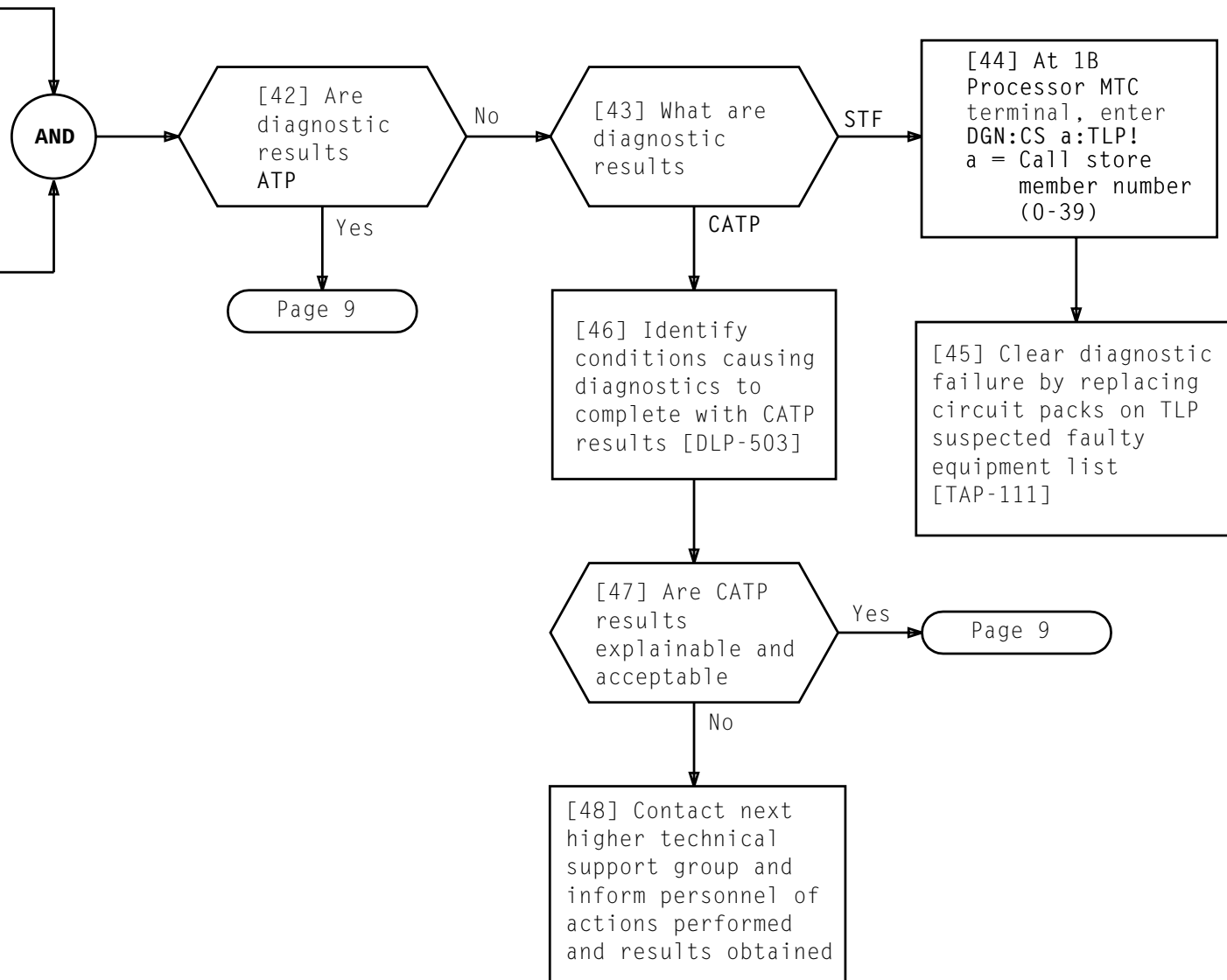
[32] At identified
KLW1 circuit pack,
depress **OFF**
pushbutton to
clear alarms

[33] At identified
KLW1 circuit pack,
depress **ON**
pushbutton



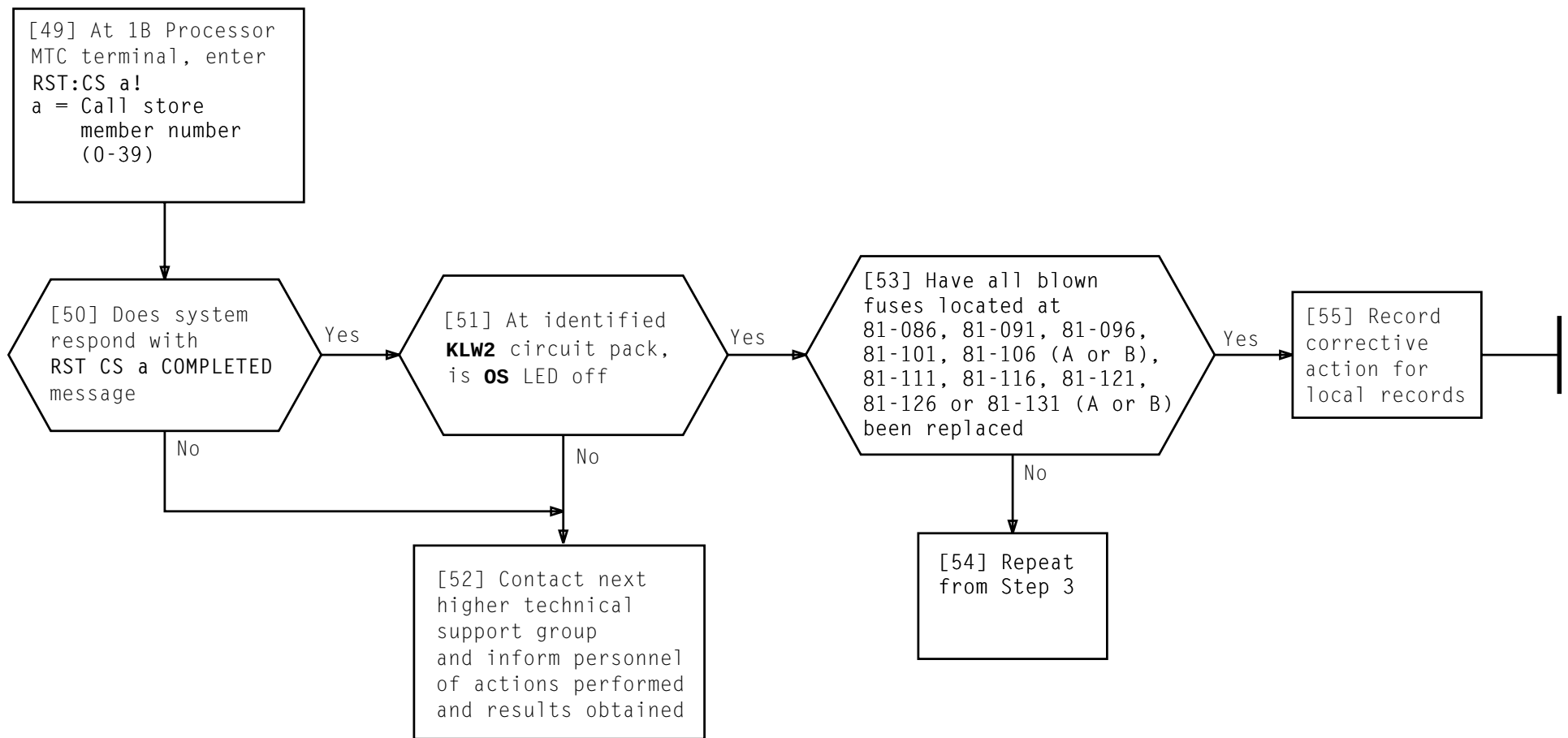
[40] At identified **KLW1** circuit pack, move **ROS/NORM** switch left to **NORM** position

[41] Allow ample time for diagnostics to complete



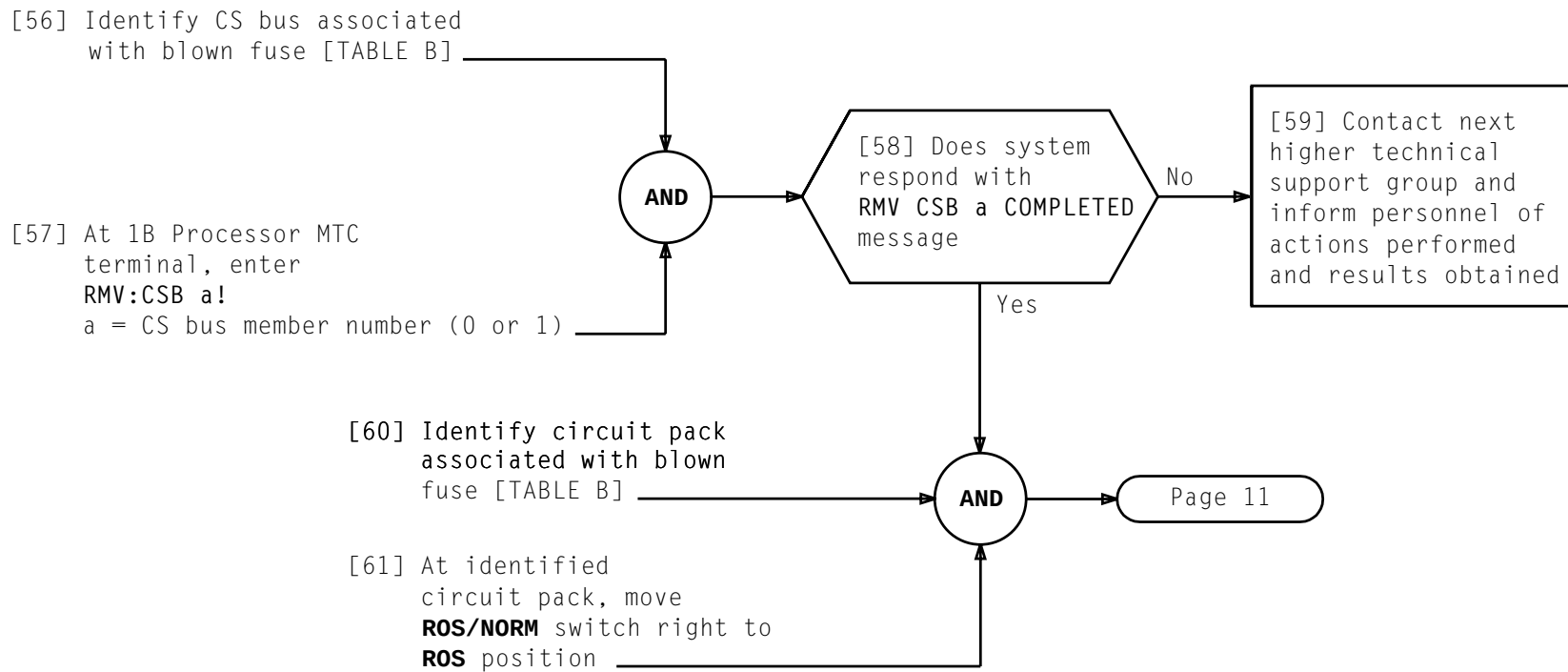
CLEAR CALL STORE (CS) UNIT/CALL STORE BUS (CSB) BLOWN FUSE

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CLEAR CALL STORE (CS) UNIT/CALL STORE BUS (CSB) BLOWN FUSE

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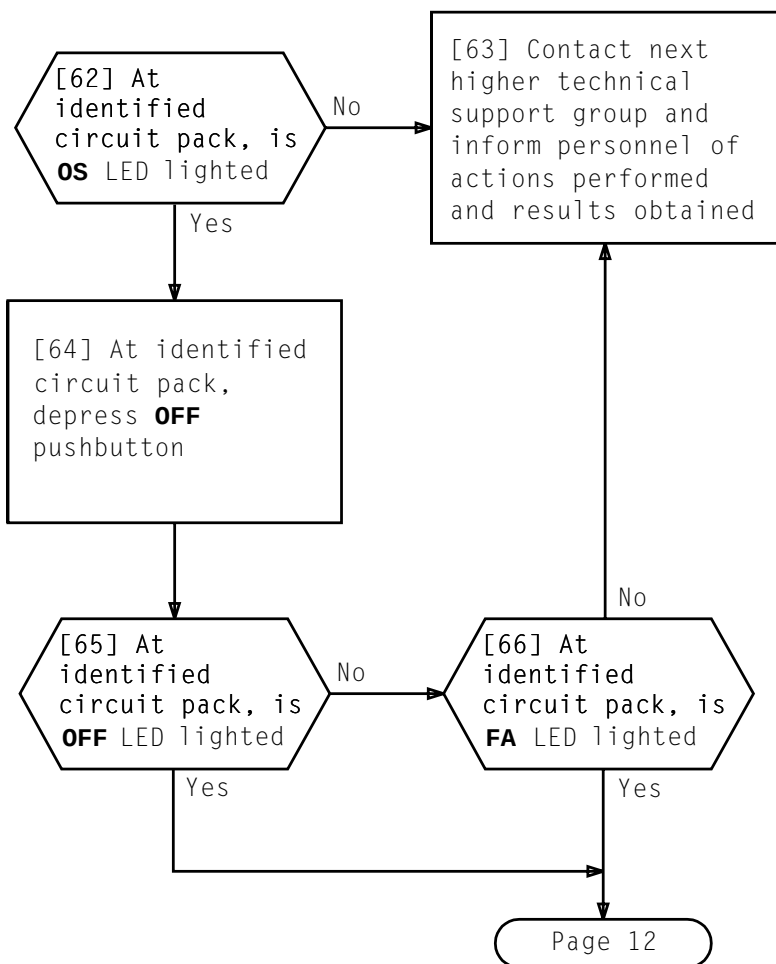
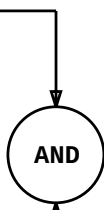


TABLE B CALL STORE BUS BUFFER FUSES AND ASSOCIATED CIRCUIT PACKS				
BLOWN FUSE		CIRCUIT PACK		
IDENTIFIER	LOCATION	IDENTIFIER	LOCATION	DESCRIPTION
B00A	081-096A	KLW26	024-086	CS Bus 0 Buffer
B00B	081-121A			
B01A	181-096A	KLW26	124-086	CS Bus 0 Buffer
B01B	181-121A			
B10A	081-096B	KLW27	024-096	CS Bus 1 Buffer
B10B	081-121B			
B11A	181-096B	KLW27	124-096	CS Bus 1 Buffer
B11B	181-121B			

[67] See WARNING 4. Unseat circuit pack associated with blown fuse [TABLE B]

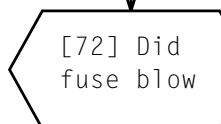
[68] See WARNING 5. Replace blown fuse



Yes

No

[71] See WARNING 4 and NOTE 2. Seat circuit pack previously unseated



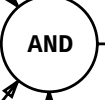
No

Yes

[73] Obtain known good circuit pack

[74] See WARNING 4. Remove defective circuit pack and insert but do not seat known good pack

[75] See WARNING 5. Replace blown fuse



[76] See WARNING 4 and NOTE 2. Seat known good circuit pack

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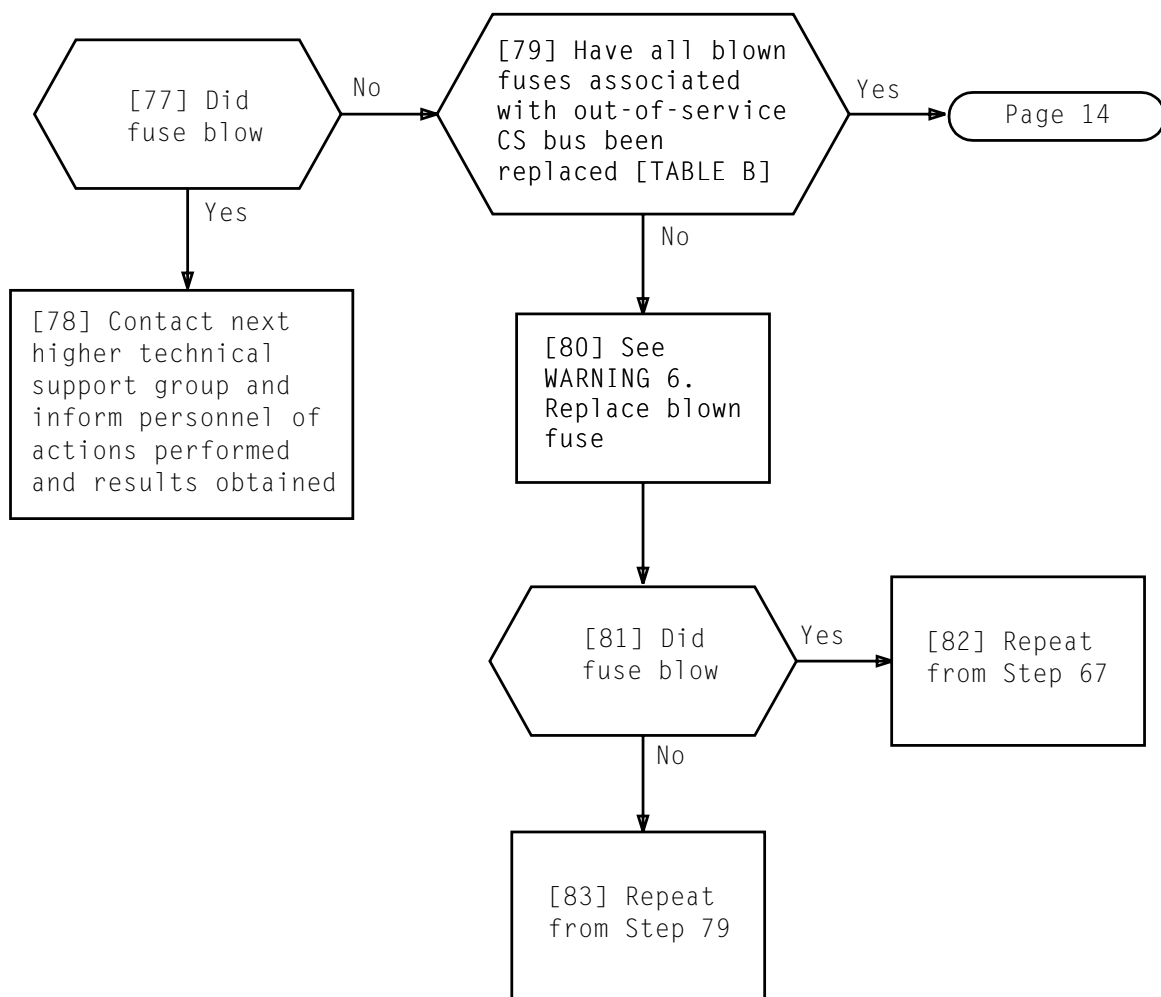
[70] A possible short exists in -48V wiring between fuse and circuit pack. Contact next higher technical support group and inform personnel of actions performed and results obtained

NOTE 2

Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNINGS

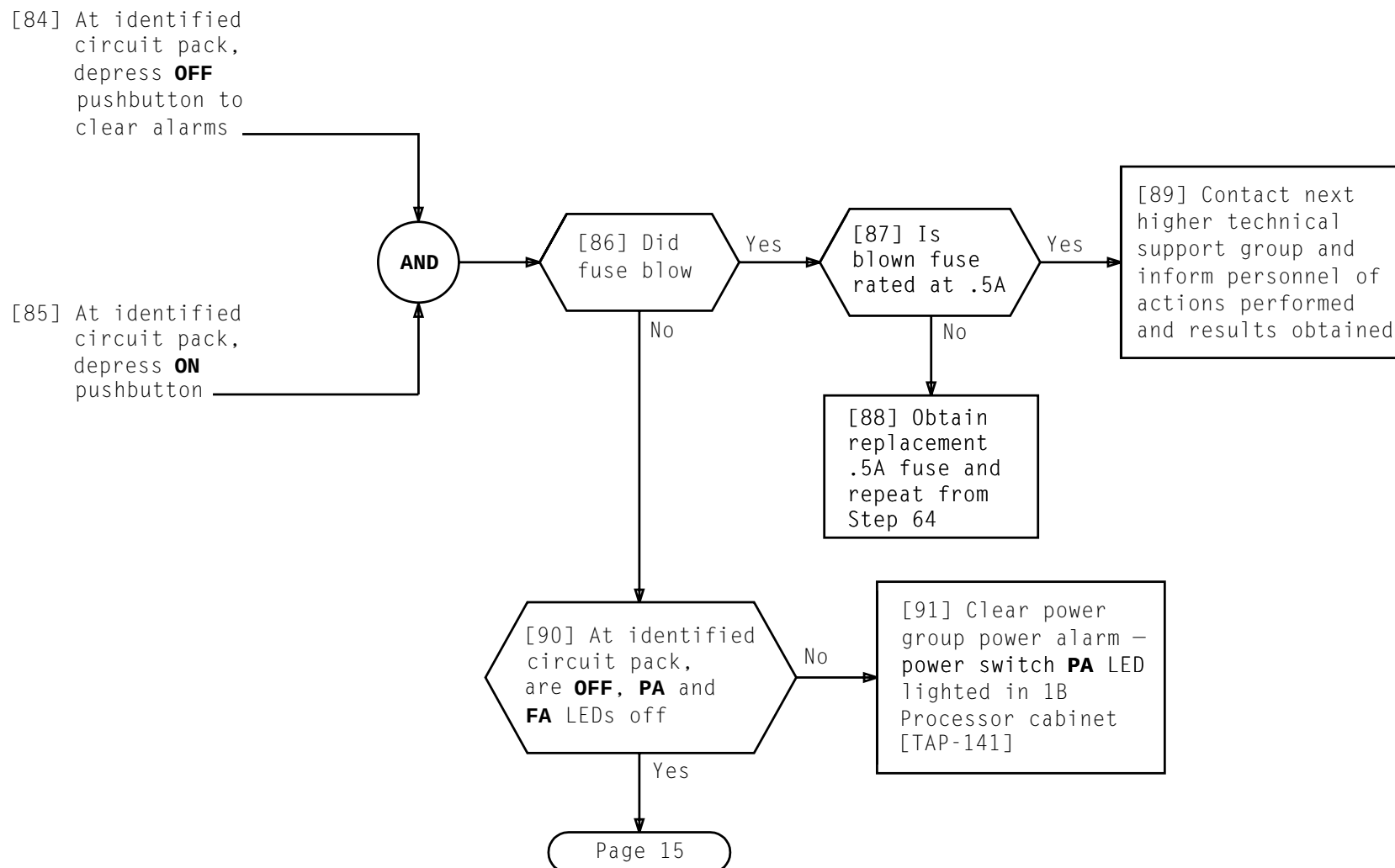
4. A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins
5. When inserting and removing fuses, care must be taken to ensure fuses are pushed in and pulled out straight. Failure to push/pull fuses straight can exert excessive pressure on fuse assembly causing fuse assembly to crack or completely break off and lodge in fuse circuit card



WARNING 6
When inserting and removing fuses, care must be taken to ensure fuses are pushed in and pulled out straight. Failure to push/pull fuses straight can exert excessive pressure on fuse assembly causing fuse assembly to crack or completely break off and lodge in fuse circuit card

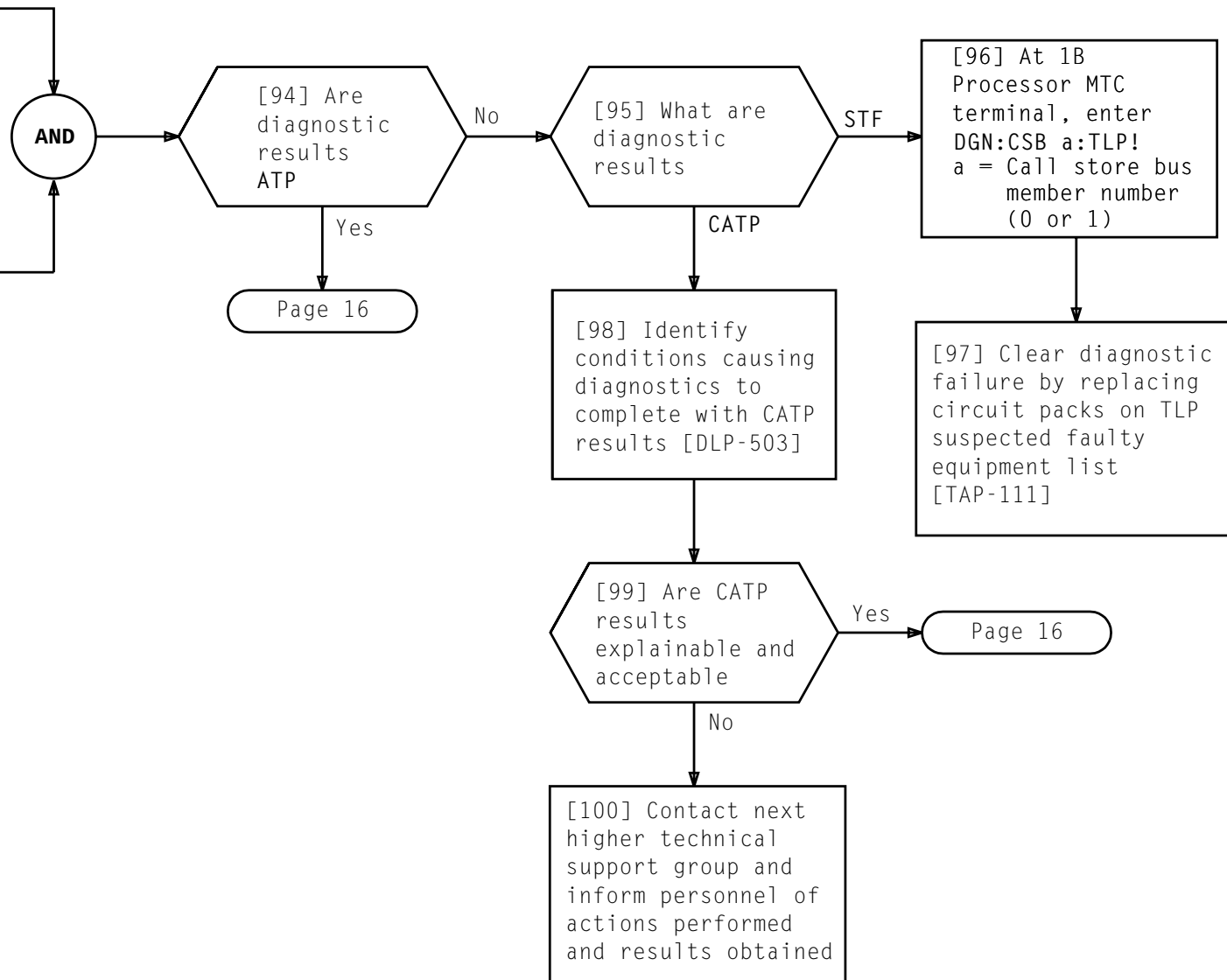
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CLEAR CALL STORE (CS) UNIT/CALL STORE BUS (CSB) BLOWN FUSE



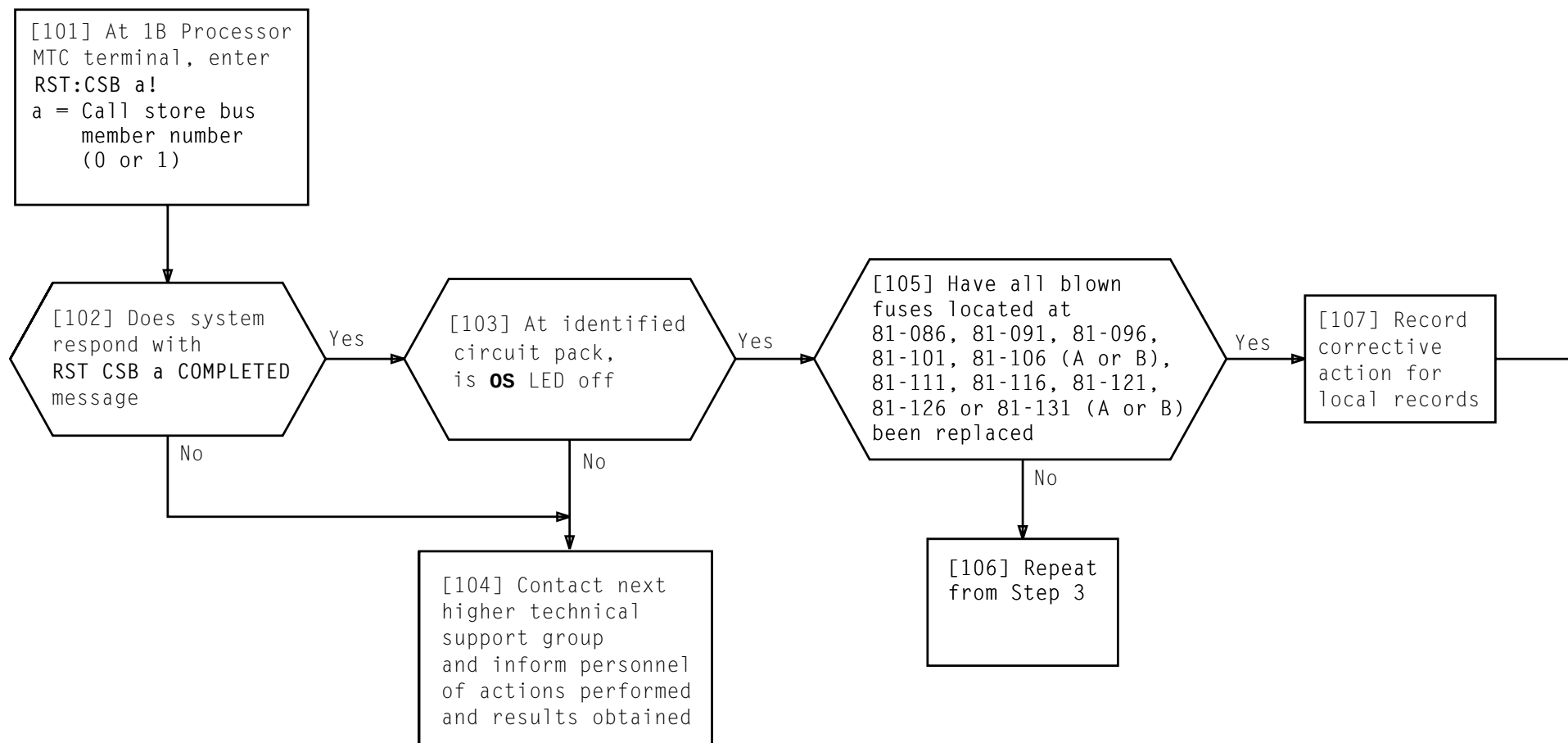
[92] At identified circuit pack, move **ROS/NORM** switch left to **NORM** position

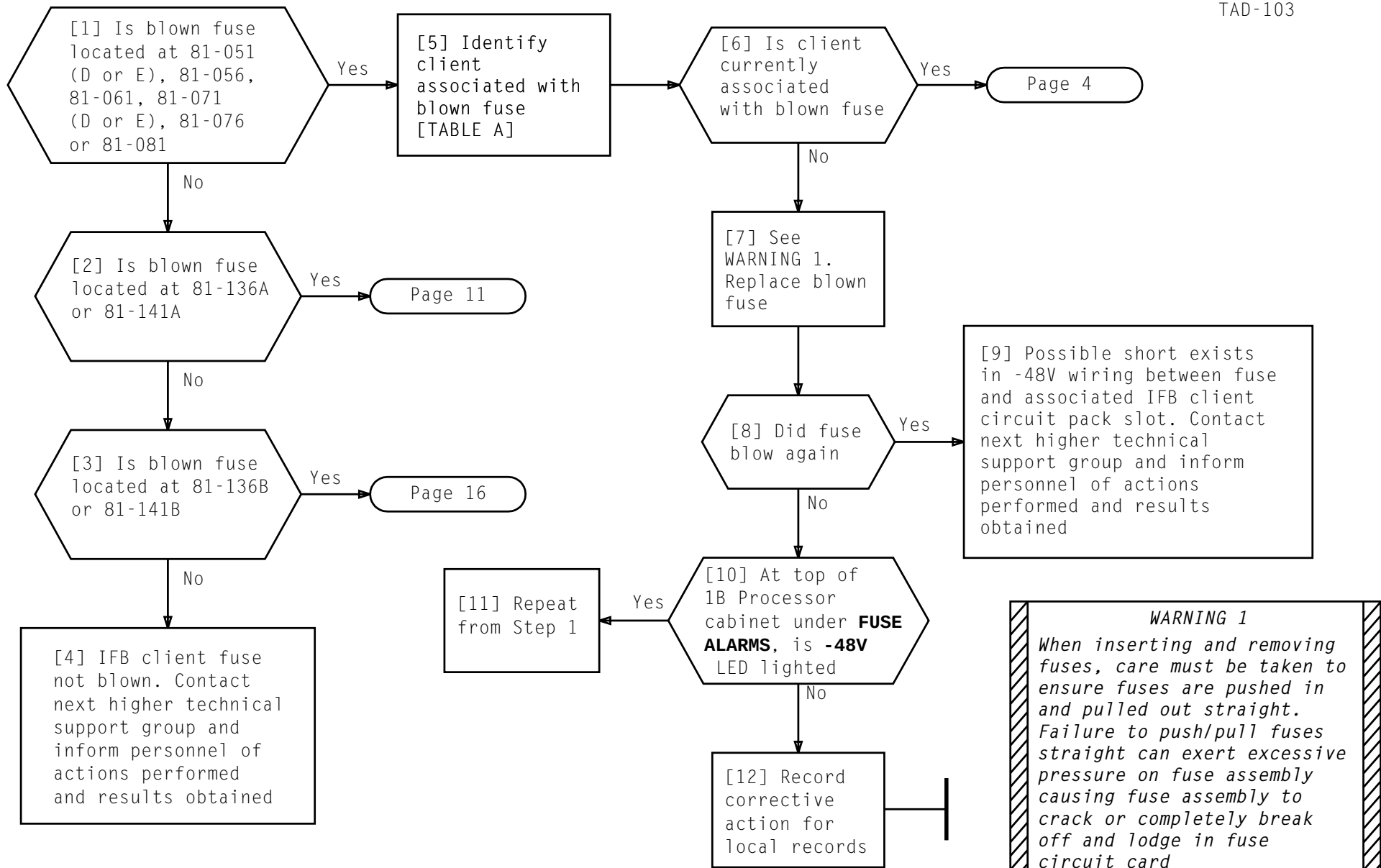
[93] Allow ample time for diagnostics to complete



CLEAR CALL STORE (CS) UNIT/CALL STORE BUS (CSB) BLOWN FUSE

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WARNING 1

When inserting and removing fuses, care must be taken to ensure fuses are pushed in and pulled out straight. Failure to push/pull fuses straight can exert excessive pressure on fuse assembly causing fuse assembly to crack or completely break off and lodge in fuse circuit card

CLEAR INTERFACE BUS (IFB) CLIENT BLOWN FUSE

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TABLE A
INTERFACE BUS (IFB) CLIENT FUSES AND ASSOCIATED CIRCUIT PACKS

BLOWN FUSE		CIRCUIT PACK		CLIENT NAME	BLOWN FUSE		CIRCUIT PACK		CLIENT NAME
IDENTIFIER	LOCATION	IDENTIFIER	LOCATION		IDENTIFIER	LOCATION	IDENTIFIER	LOCATION	
IFB0A	081-051D	KLW16/KLW116/ KLW216 (See Note 1)	058-078	MUP0	IFB13A	181-056E	See Note 2	158-128	See Note 2
					IFB14A	081-061A	See Note 2	058-136	See Note 2
IFB1A	181-051D	KLW16/KLW116/ KLW216 (See Note 1)	158-078	MUP1	IFB15A	181-061A	See Note 2	158-136	See Note 2
					IFB16A	081-061B	See Note 2	058-144	See Note 2
IFB2A	081-051E	KLW25	058-086	MUP0	IFB17A	181-061B	See Note 2	158-144	See Note 2
IFB3A	181-051E	KLW25	158-086	MUP1	IFB18A	181-061C	See Note 2	058-152	See Note 2
IFB4A	081-056A	See Note 2	058-096	See Note 2	IFB19A	181-061C	See Note 2	158-152	See Note 2
IFB5A	181-056A	See Note 2	158-096	See Note 2	IFB20A	181-061D	See Note 2	058-160	See Note 2
IFB6A	081-056B	See Note 2	058-104	See Note 2	IFB21A	181-061D	See Note 2	158-160	See Note 2
IFB7A	181-056B	See Note 2	158-104	See Note 2	IFB22A	081-061E	KLW15	058-168	SSD0
IFB8A	081-056C	See Note 2	058-112	See Note 2	IFB23A	181-061E	KLW15	158-168	SSD1
IFB9A	181-056C	See Note 2	158-112	See Note 2	IFB0B	081-071D	KLW16/KLW116/ KLW216 (See Note 1)	058-078	MUP0
IFB10A	081-056D	KLW18	058-120	AUI0					
IFB11A	181-056D	KLW18	158-120	AUI1	IFB1B	181-071D	KLW16/KLW116/ KLW216 (See Note 1)	158-078	MUP1
IFB12A	081-056E	See Note 2	058-128	See Note 2					

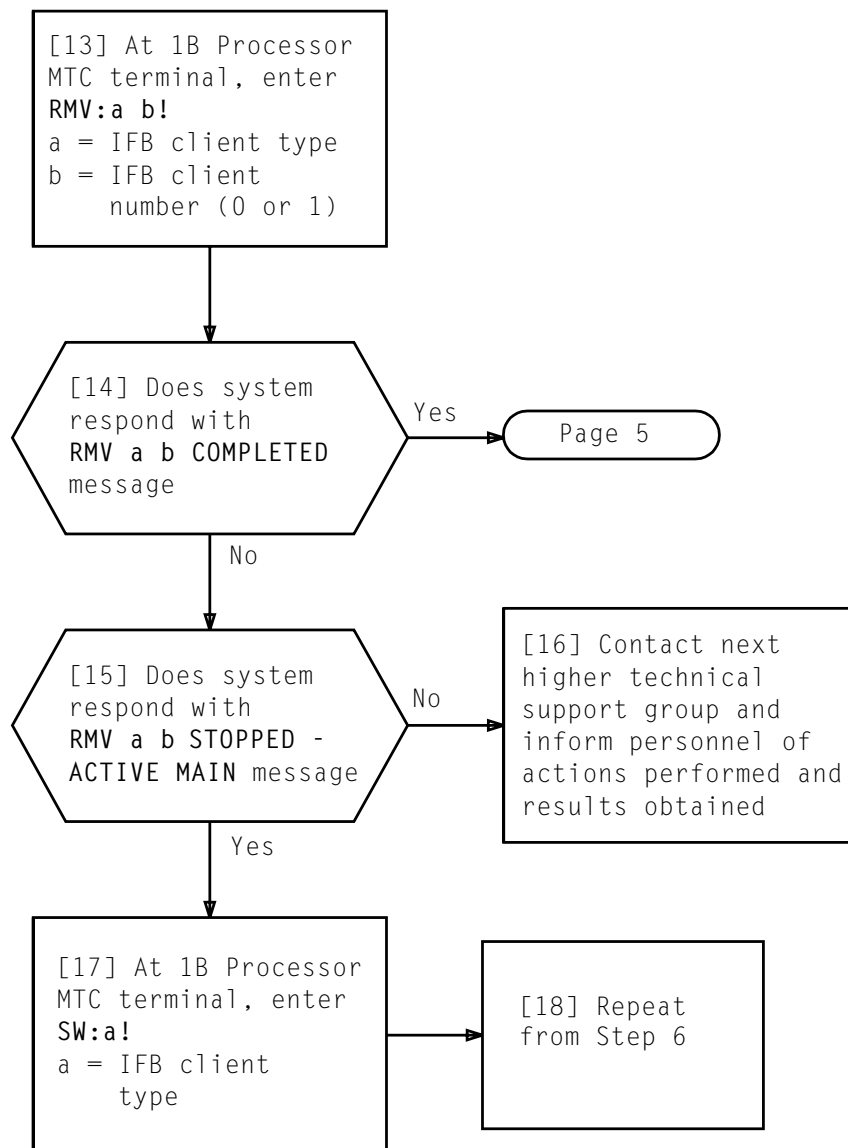
NOTE 1: **KLW16/KLW116/KLW216** circuit packs associated with **IFB0A**, **IFB1A**, **IFB0B** and **IFB1B** fuse positions actually receives power from **KLW25** circuit packs fused by **IFB2A**, **IFB3A**, **IFB2B** and **IFB3B** fuse positions. However, fuse positions **IFB0A**, **IFB1A**, **IFB0B** and **IFB1B** are still used to provide power from the backplane to the **KLW16** circuit pack slots even though this power source is not used to power the **KLW16** circuit packs

NOTE 2: No client/client hardware is currently associated with identified fuse. IFB client fuse is wired and reserved for future applications

TABLE A (Contd)
INTERFACE BUS (IFB) CLIENT FUSES AND ASSOCIATED CIRCUIT PACKS

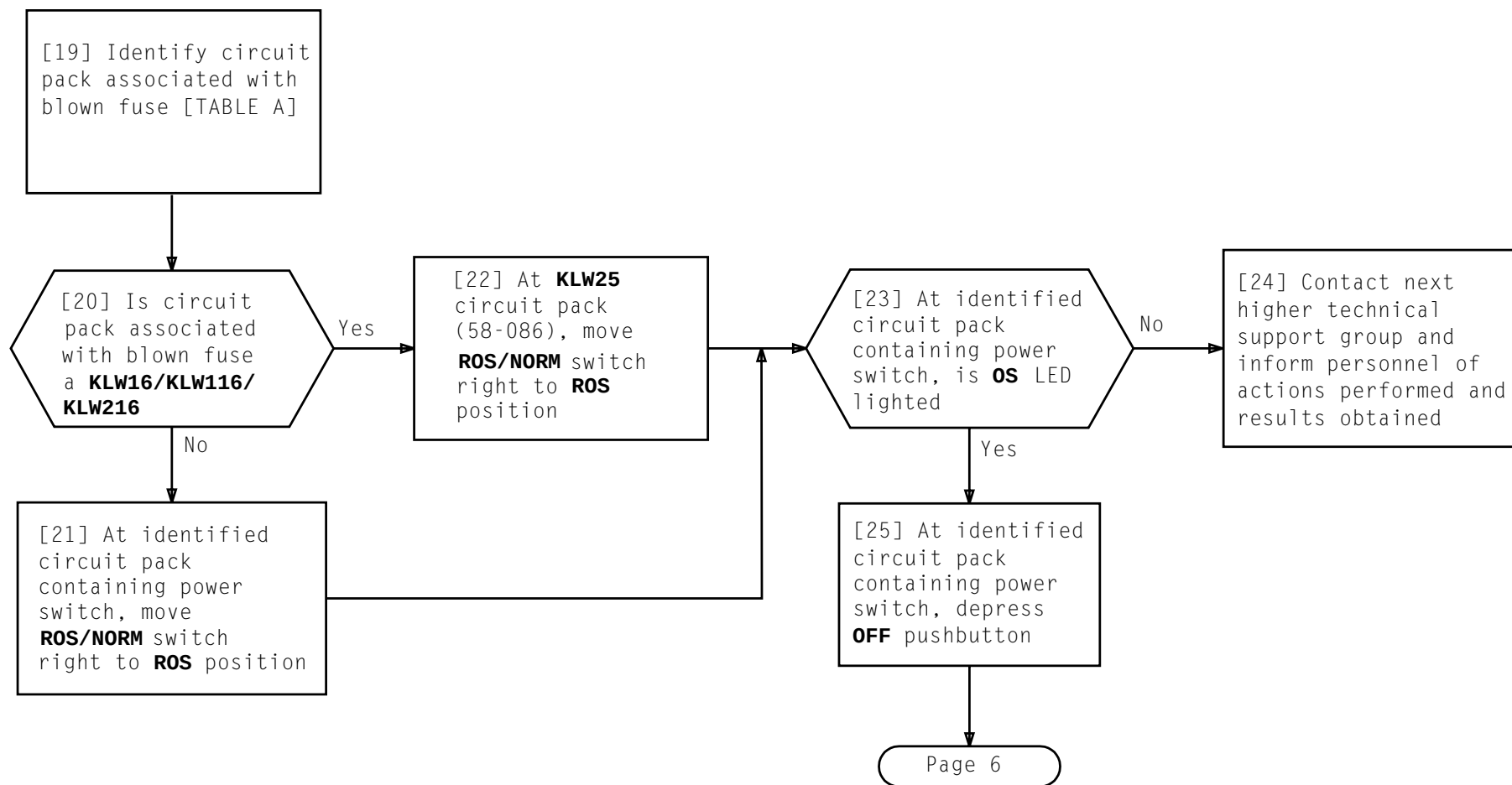
BLOWN FUSE		CIRCUIT PACK		CLIENT NAME	BLOWN FUSE		CIRCUIT PACK		CLIENT NAME
IDENTIFIER	LOCATION	IDENTIFIER	LOCATION		IDENTIFIER	LOCATION	IDENTIFIER	LOCATION	
IFB2B	081-071E	KLW25	058-086	MUP0	IFB13B	181-076E	See Note 3	158-128	See Note 3
IFB3B	181-071E	KLW25	158-086	MUP1	IFB14B	081-081A	See Note 3	058-136	See Note 3
IFB4B	081-076A	See Note 3	058-096	See Note 3	IFB15B	181-081A	See Note 3	158-136	See Note 3
IFB5B	181-076A	See Note 3	158-096	See Note 3	IFB16B	181-081B	See Note 3	058-144	See Note 3
IFB6B	181-076B	See Note 3	058-104	See Note 3	IFB17B	081-081B	See Note 3	158-144	See Note 3
IFB7B	181-076B	See Note 3	158-104	See Note 3	IFB18B	081-081C	See Note 3	058-152	See Note 3
IFB8B	181-076C	See Note 3	058-112	See Note 3	IFB19B	181-081C	See Note 3	158-152	See Note 3
IFB9B	181-076C	See Note 3	158-112	See Note 3	IFB20B	081-081D	See Note 3	058-160	See Note 3
IFB10B	081-076D	KLW18	058-120	AUI0	IFB21B	181-081D	See Note 3	158-160	See Note 3
IFB11B	181-076D	KLW18	158-120	AUI1	IFB22B	081-081E	KLW15	058-168	SSD0
IFB12B	081-076E	See Note 3	058-128	See Note 3	IFB23B	181-081E	KLW15	158-168	SSD1

NOTE 3: No client/client hardware is currently associated with identified fuse. IFB client fuse is wired and reserved for future applications



CLEAR INTERFACE BUS (IFB) CLIENT BLOWN FUSE

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[26] See WARNING 2. Unseat circuit packs associated with blown fuse [TABLE A]

[27] See WARNING 3. Replace blown fuse

AND

[28] Did fuse blow again

Yes

No

[29] See WARNING 2 and NOTE 1. Seat circuit pack associated with blown fuse [TABLE A]

[30] A possible short exists in -48V wiring between fuse and associated circuit pack. Contact next higher technical support group and inform personnel of actions performed and results obtained

[31] Did fuse blow

No

Yes

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NOTE 1

Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

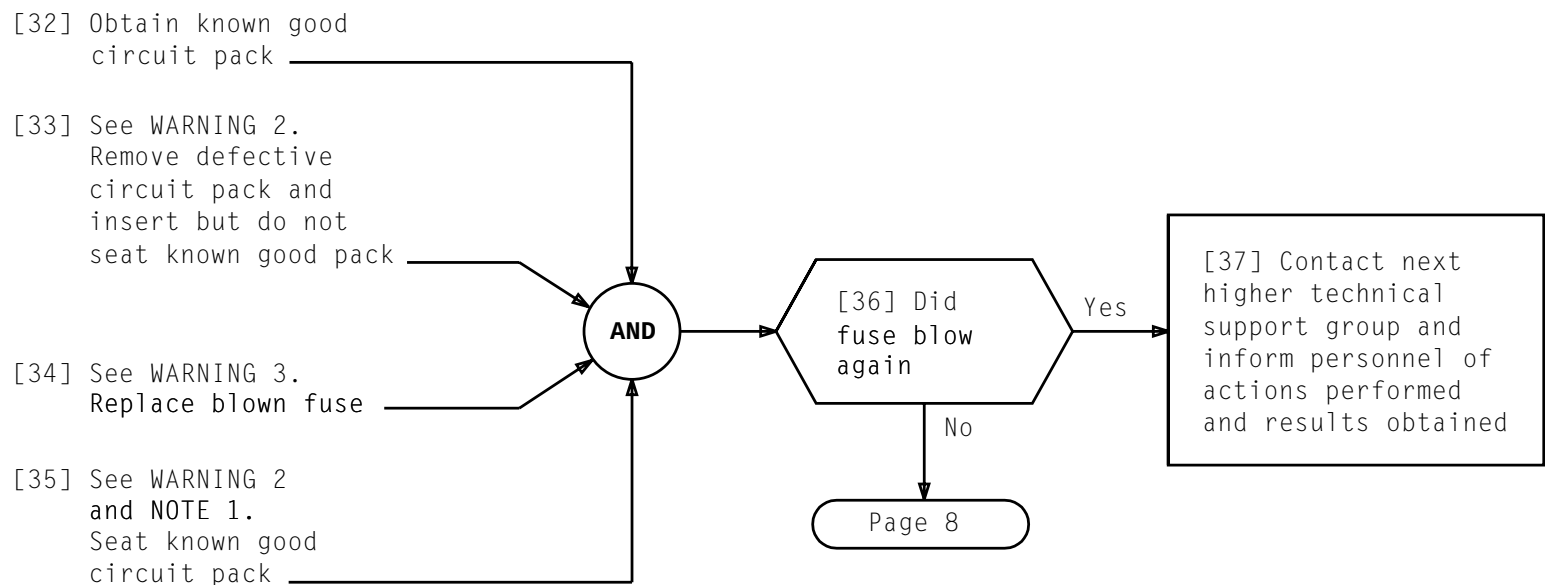
WARNINGS

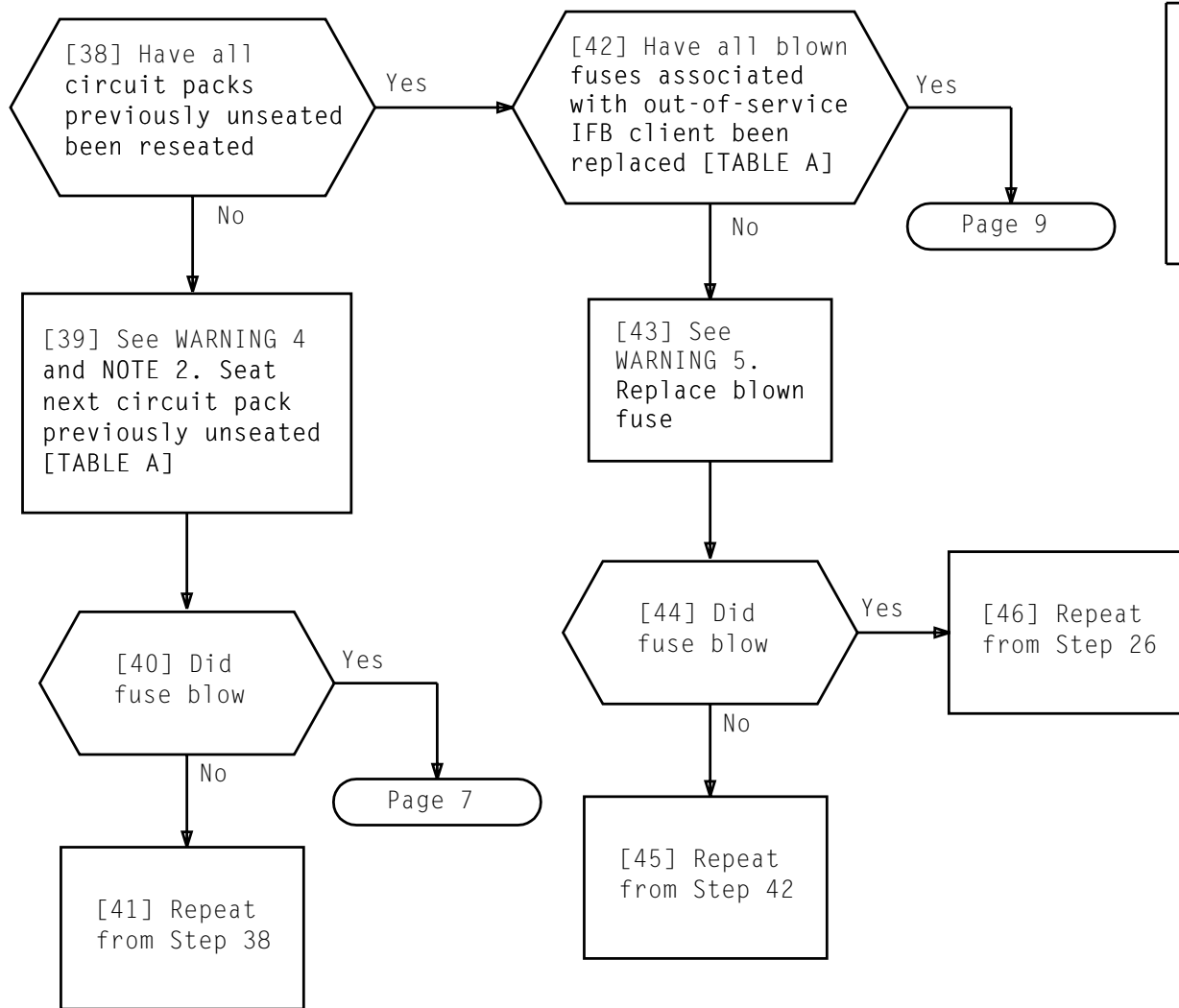
2. A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins
3. When inserting and removing fuses, care must be taken to ensure fuses are pushed in and pulled out straight. Failure to push/pull fuses straight can exert excessive pressure on fuse assembly causing fuse assembly to crack or completely break off and lodge in fuse circuit card

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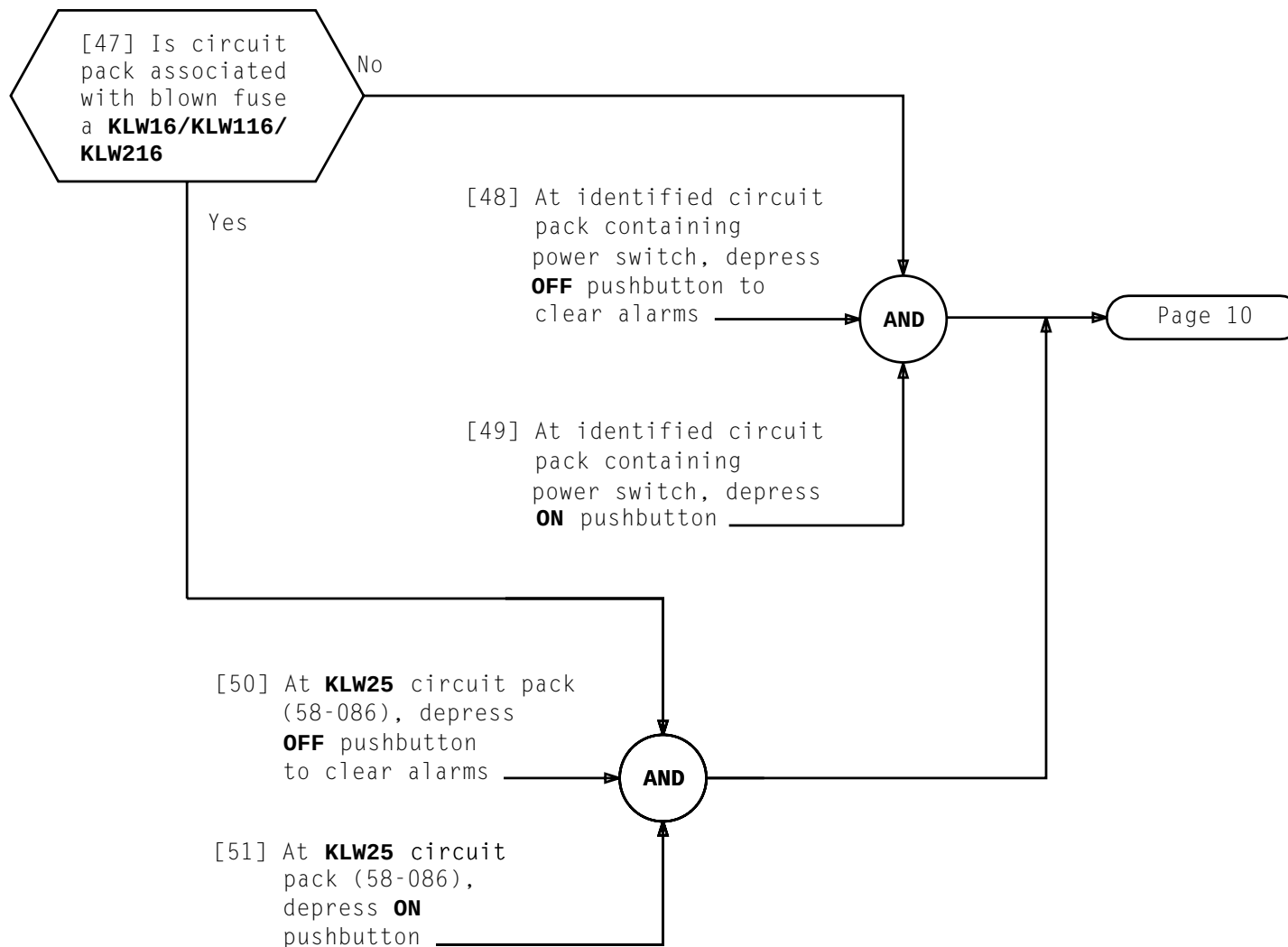


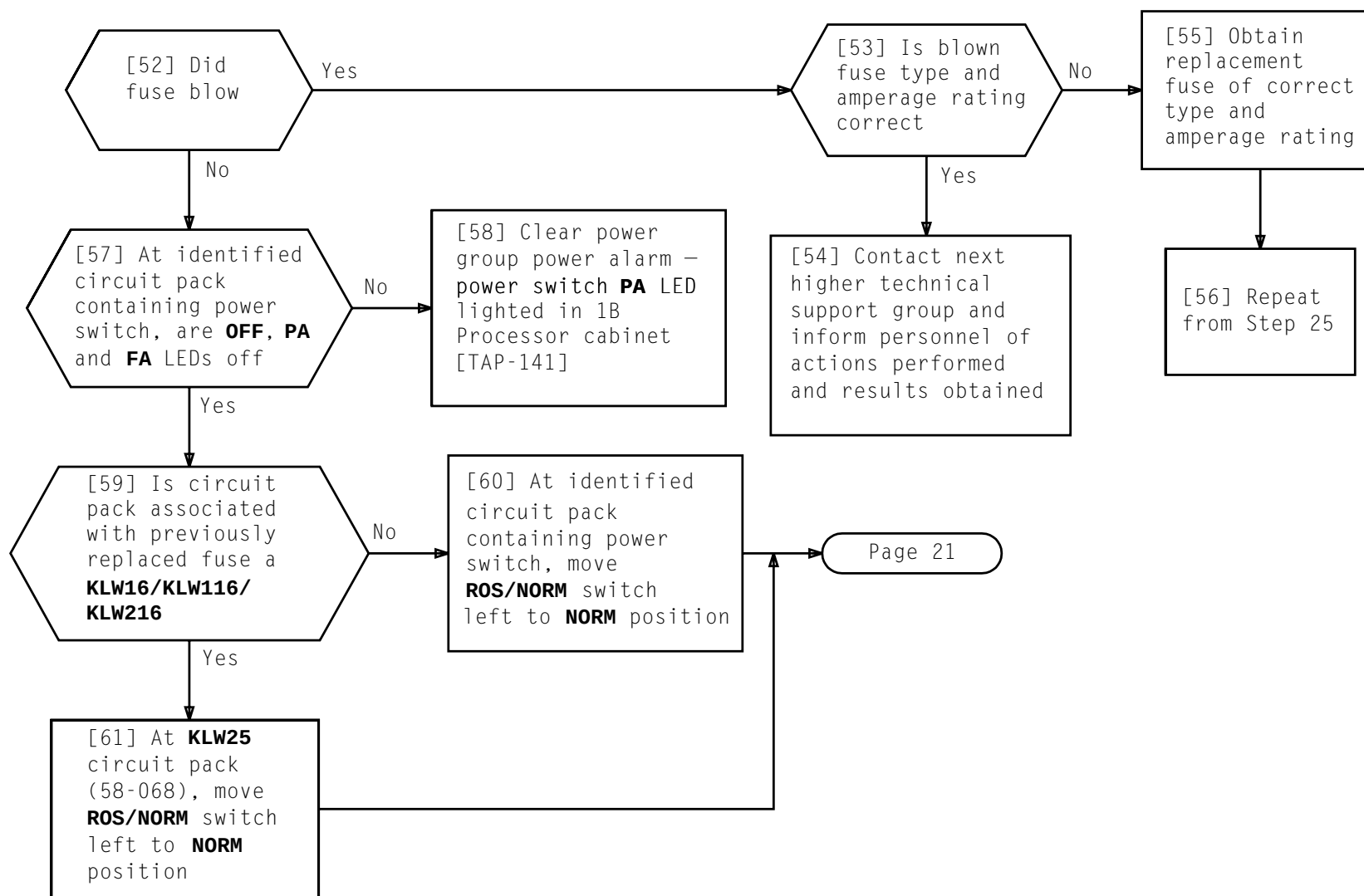
NOTE 2

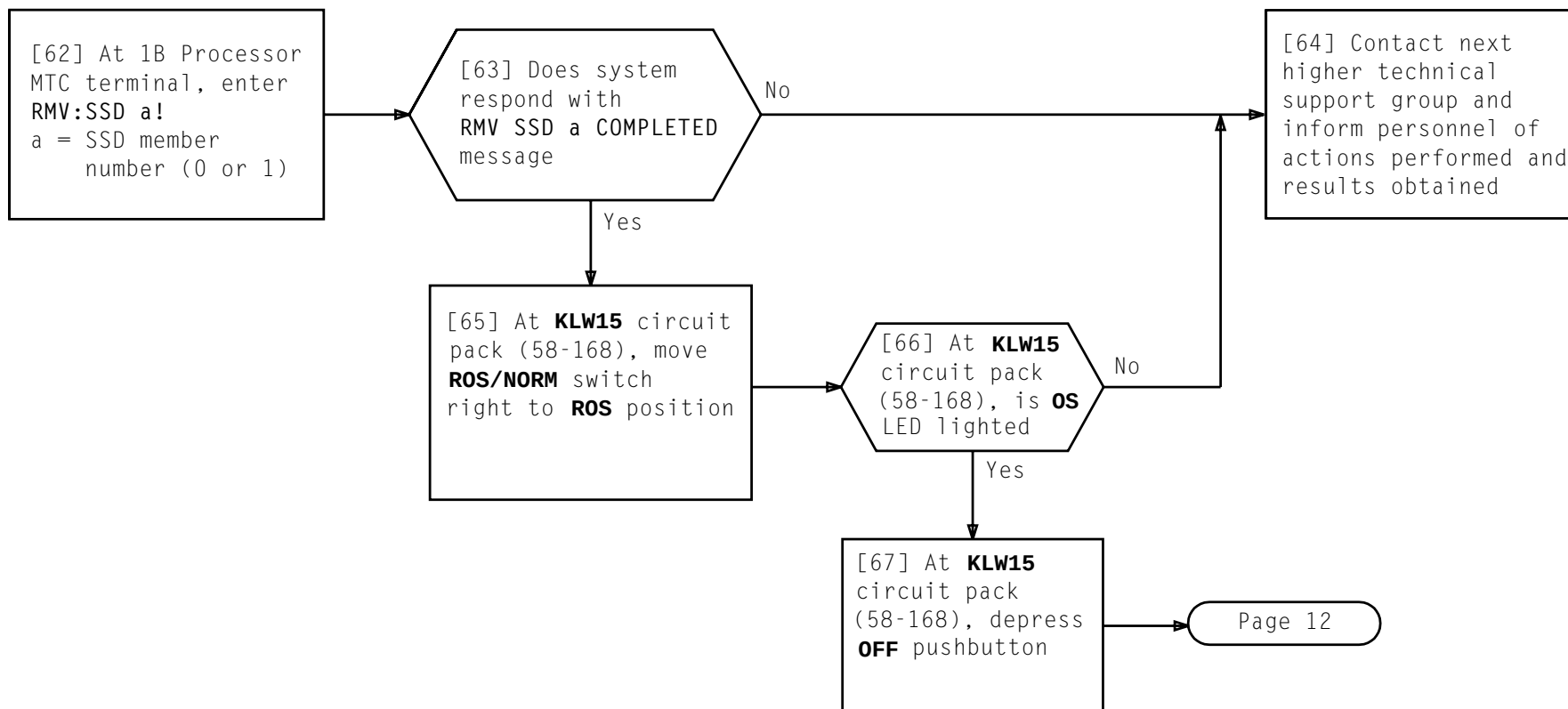
Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNINGS

4. A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins
5. When inserting and removing fuses, care must be taken to ensure fuses are pushed in and pulled out straight. Failure to push/pull fuses straight can exert excessive pressure on fuse assembly causing fuse assembly to crack or completely break off and lodge in fuse circuit card

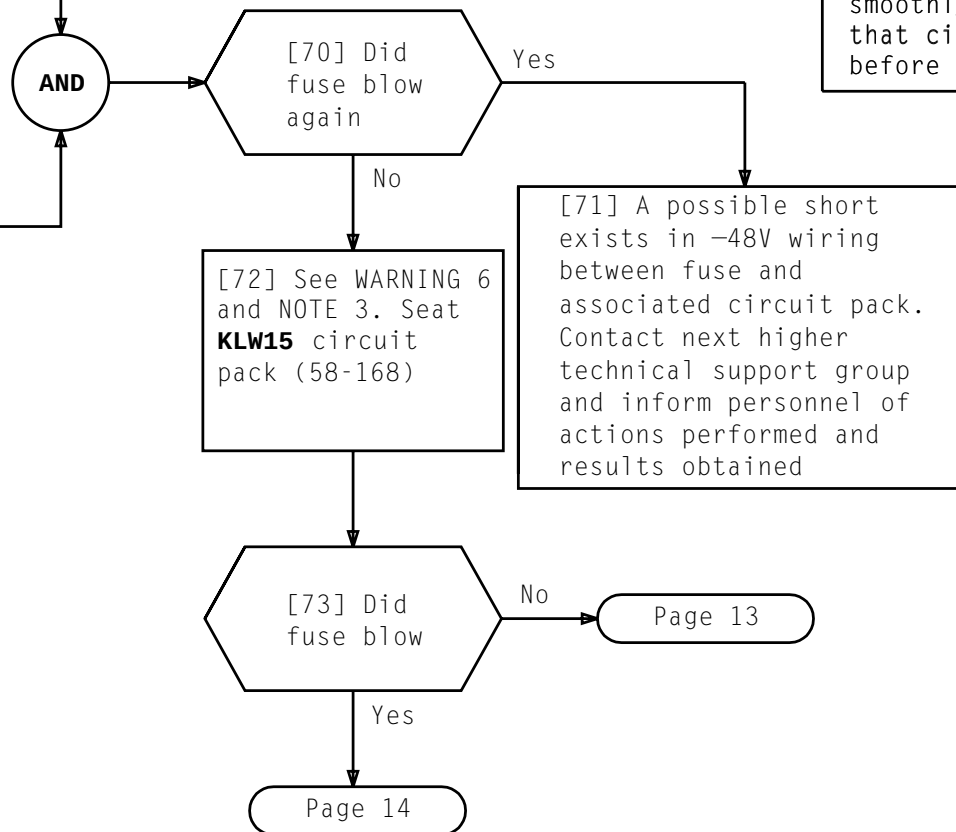






[68] See WARNING 6. Unseat circuit packs associated with blown fuse
[TABLE A]

[69] See WARNING 7.
Replace blown fuse



NOTE 1

Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNINGS

6. A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins
7. When inserting and removing fuses, care must be taken to ensure fuses are pushed in and pulled out straight. Failure to push/pull fuses straight can exert excessive pressure on fuse assembly causing fuse assembly to crack or completely break off and lodge in fuse circuit card

[74] Obtain known good
KLW15 circuit pack

[75] See WARNING 8.
Remove defective **KLW15**
circuit pack and insert
but do not seat known
good pack

[76] See WARNING 9.
Replace blown fuse

[77] See WARNING 8 and
NOTE 4. Seat known
good **KLW15** circuit
pack

AND

[78] Did
fuse blow
again

No

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Yes

[79] Contact next
higher technical
support group and
inform personnel of
actions performed
and results obtained

NOTE 4

Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

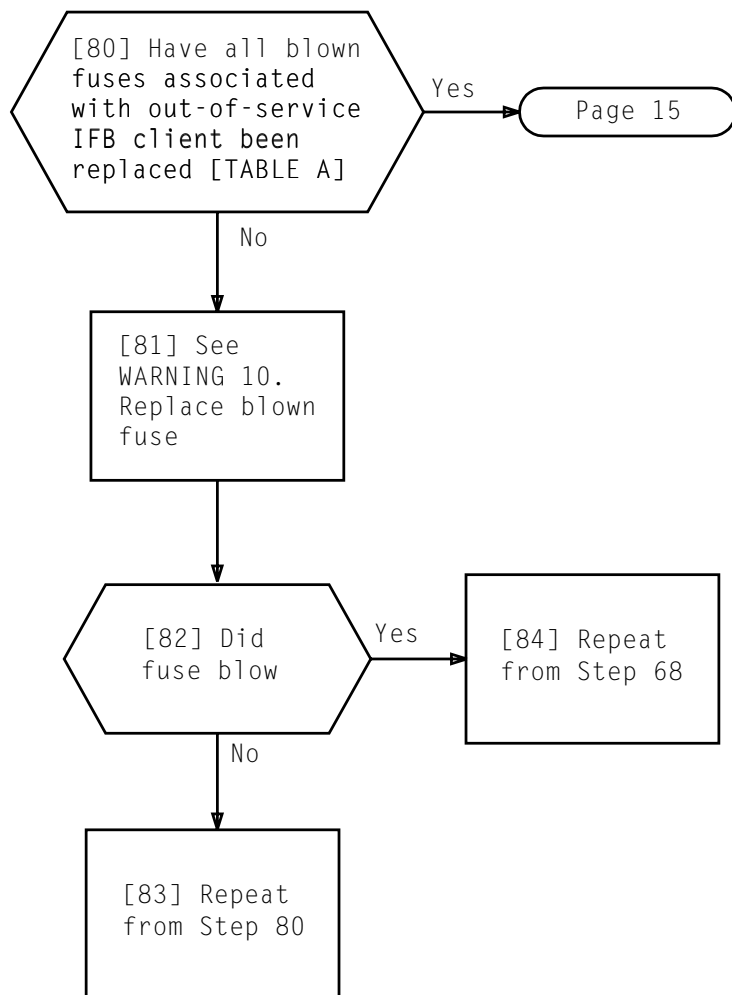
WARNINGS

8. A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins
9. When inserting and removing fuses, care must be taken to ensure fuses are pushed in and pulled out straight. Failure to push/pull fuses straight can exert excessive pressure on fuse assembly causing fuse assembly to crack or completely break off and lodge in fuse circuit card

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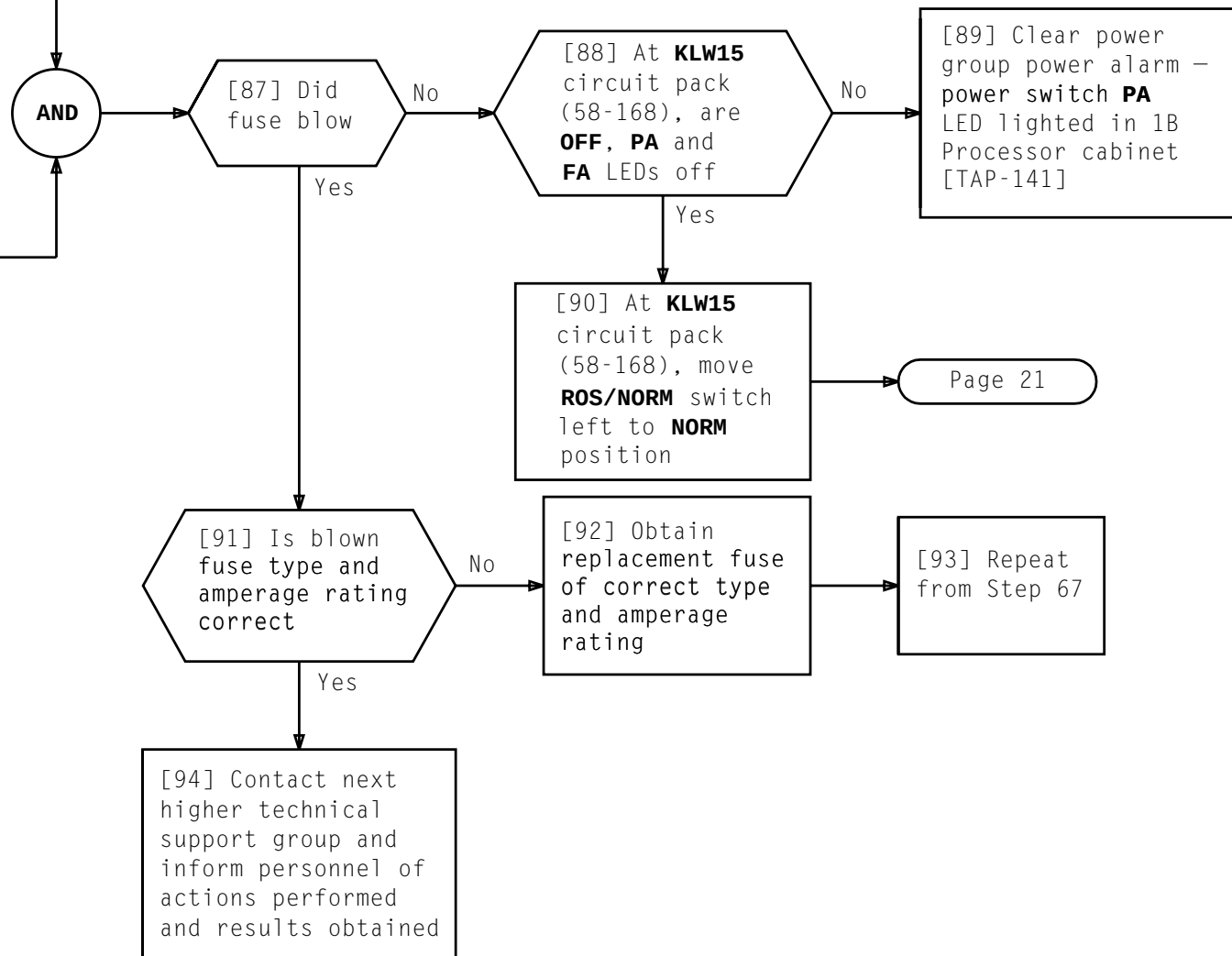
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WARNING 10 <i>When inserting and removing fuses, care must be taken to ensure fuses are pushed in and pulled out straight. Failure to push/pull fuses straight can exert excessive pressure on fuse assembly causing fuse assembly to crack or completely break off and lodge in fuse circuit card</i>		
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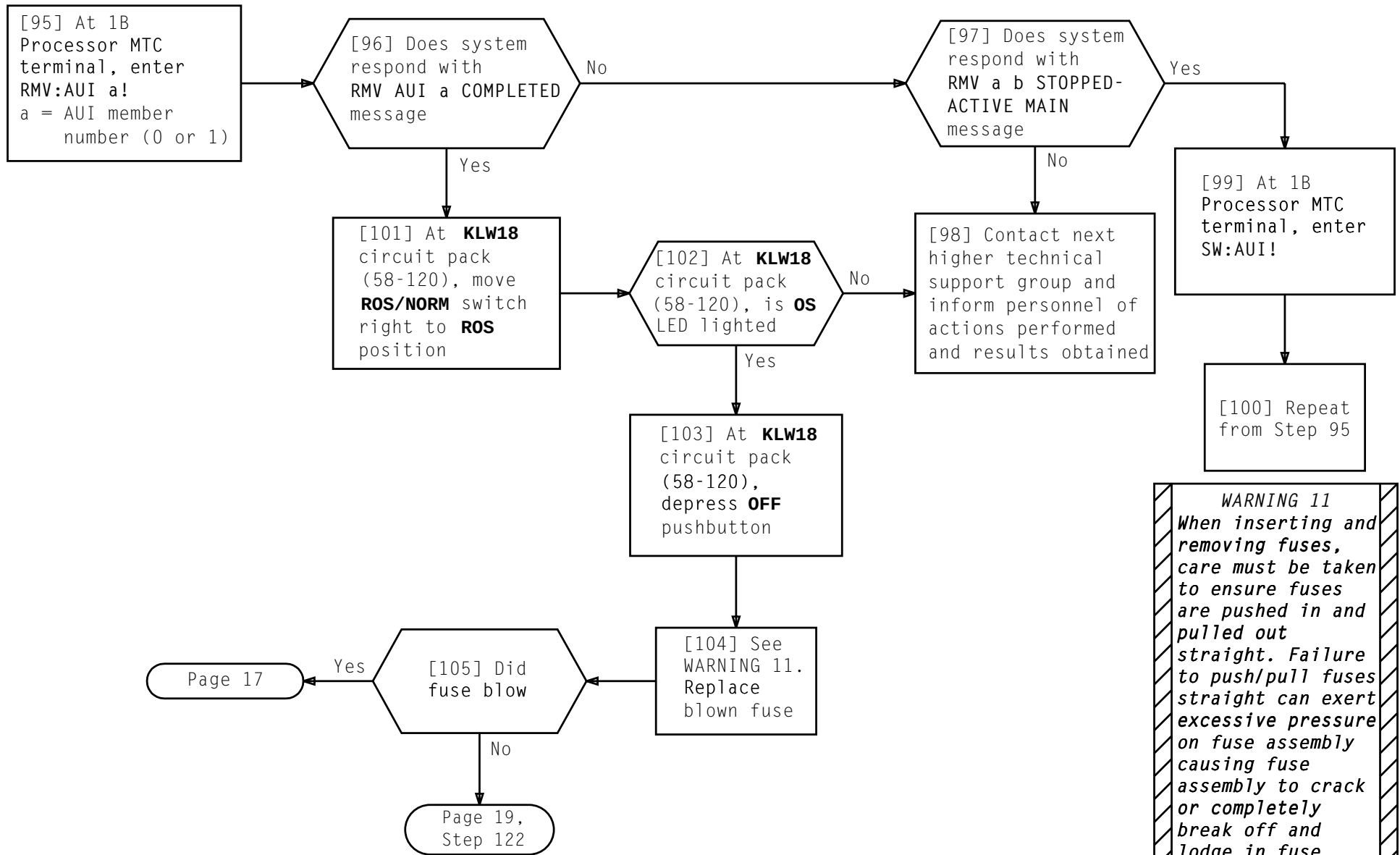
[85] At **KLW15** circuit pack (58-168), depress **OFF** pushbutton to clear alarms

[86] At **KLW15** circuit pack (58-168), depress **ON** pushbutton



CLEAR INTERFACE BUS (IFB) CLIENT BLOWN FUSE

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WARNING 11
When inserting and removing fuses, care must be taken to ensure fuses are pushed in and pulled out straight. Failure to push/pull fuses straight can exert excessive pressure on fuse assembly causing fuse assembly to crack or completely break off and lodge in fuse circuit card

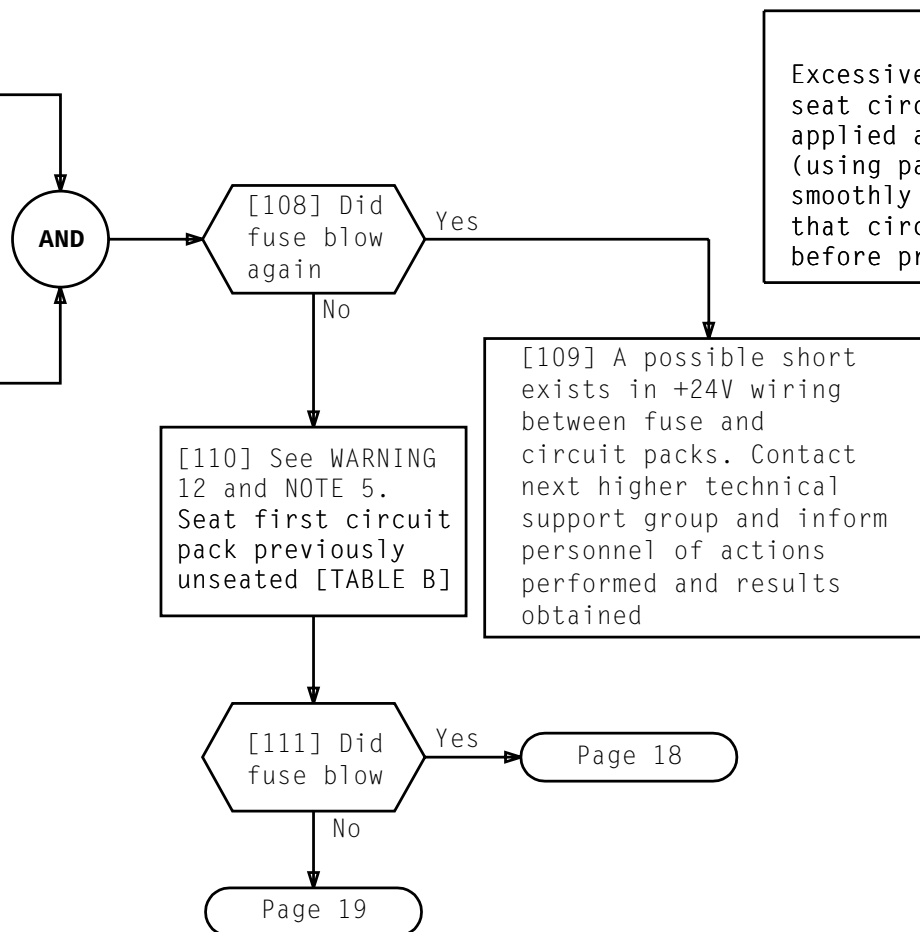
CLEAR INTERFACE BUS (IFB) CLIENT BLOWN FUSE

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[106] See WARNING 12. Unseat
all AUI circuit packs
[TABLE B]

[107] See WARNING 13.
Replace blown fuse

TABLE B AUXILIARY UNIT INTERFACE (AUI) CIRCUIT PACKS	
CIRCUIT PACK IDENTIFIER	CIRCUIT PACK LOCATION
KLW18	58-120
UN338	70-096
	70-112
	70-128
	70-144
	70-160
	70-176

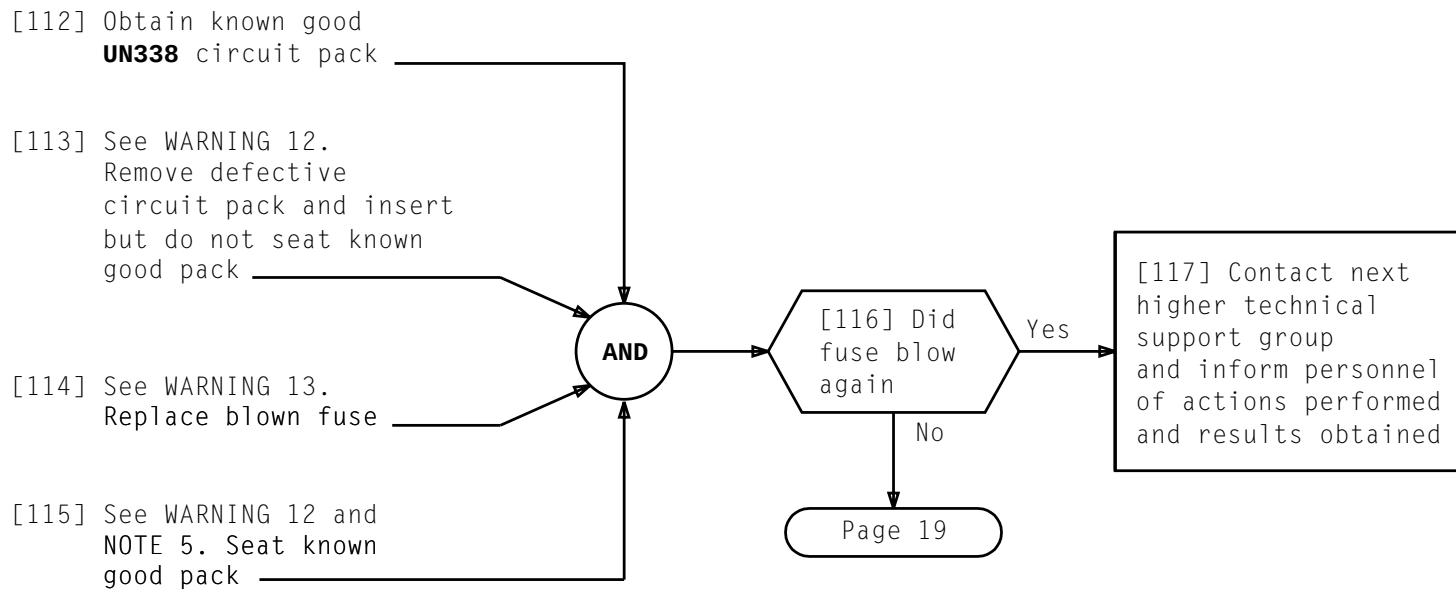


NOTE 5

Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

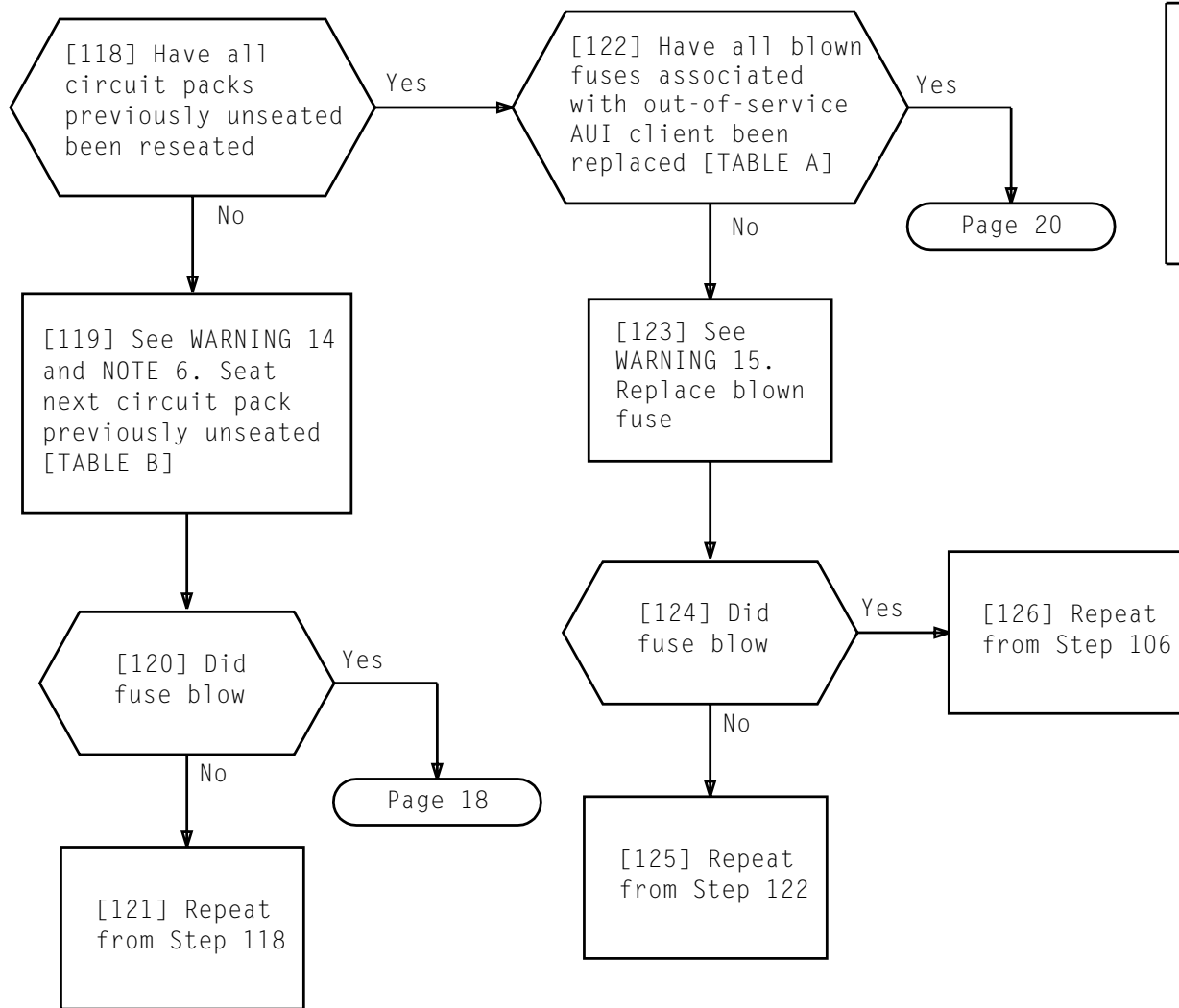
WARNINGS

12. A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins
13. When inserting and removing fuses, care must be taken to ensure fuses are pushed in and pulled out straight. Failure to push/pull fuses straight can exert excessive pressure on fuse assembly causing fuse assembly to crack or completely break off and lodge in fuse circuit card



CLEAR INTERFACE BUS (IFB) CLIENT BLOWN FUSE

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NOTE 6

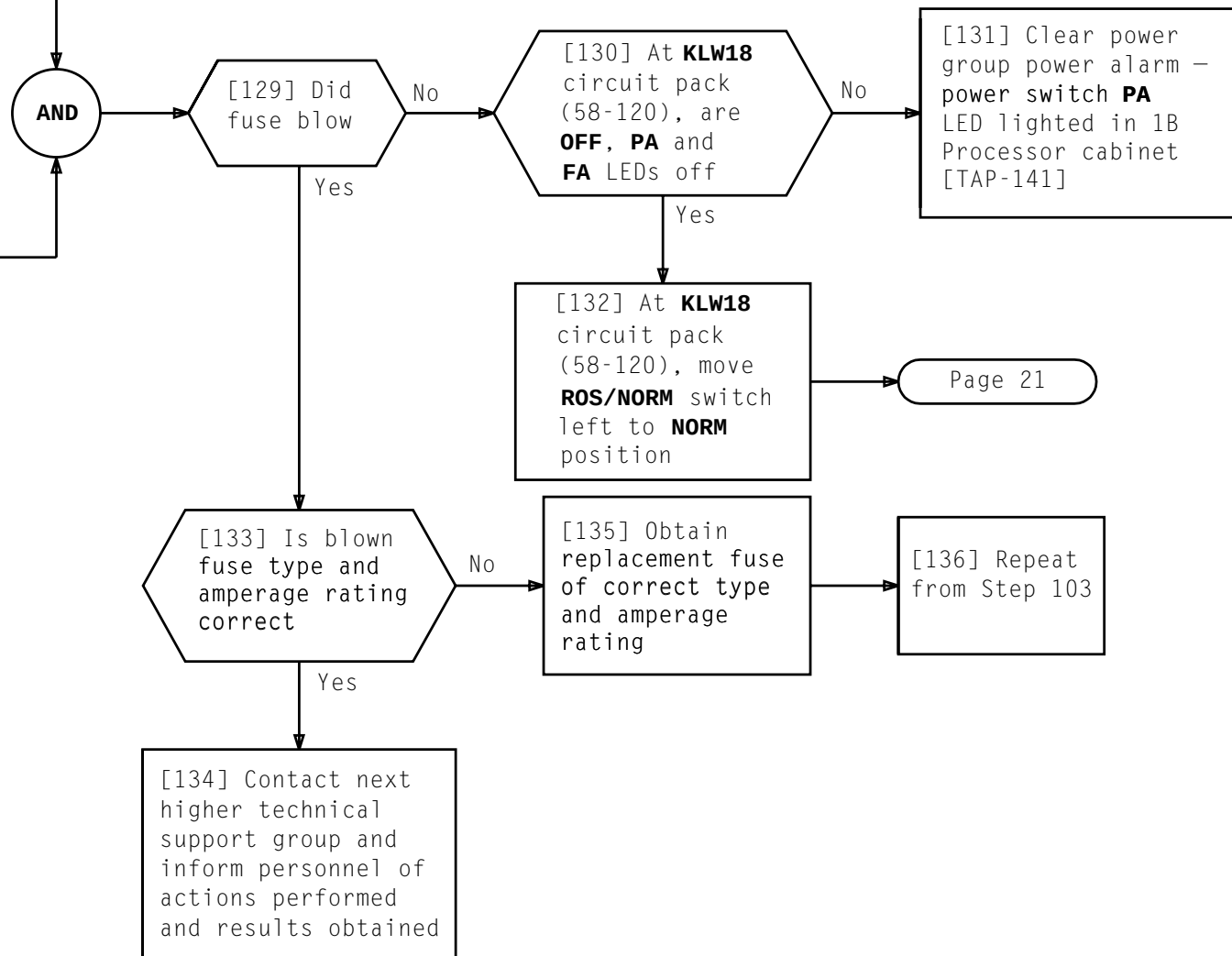
Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNINGS

14. A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins
15. When inserting and removing fuses, care must be taken to ensure fuses are pushed in and pulled out straight. Failure to push/pull fuses straight can exert excessive pressure on fuse assembly causing fuse assembly to crack or completely break off and lodge in fuse circuit card

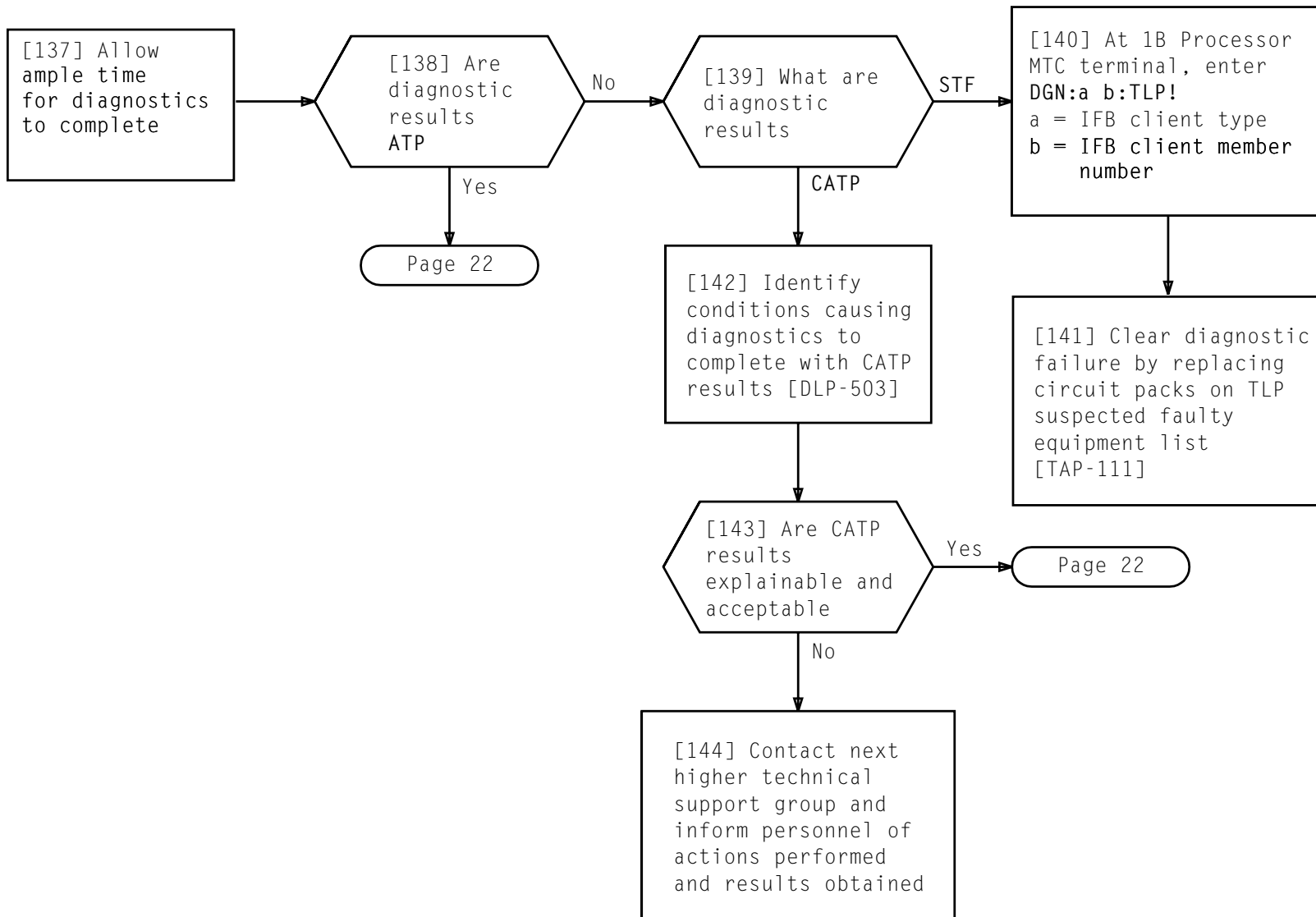
[127] At **KLW18** circuit pack (58-120), depress **OFF** pushbutton to clear alarms

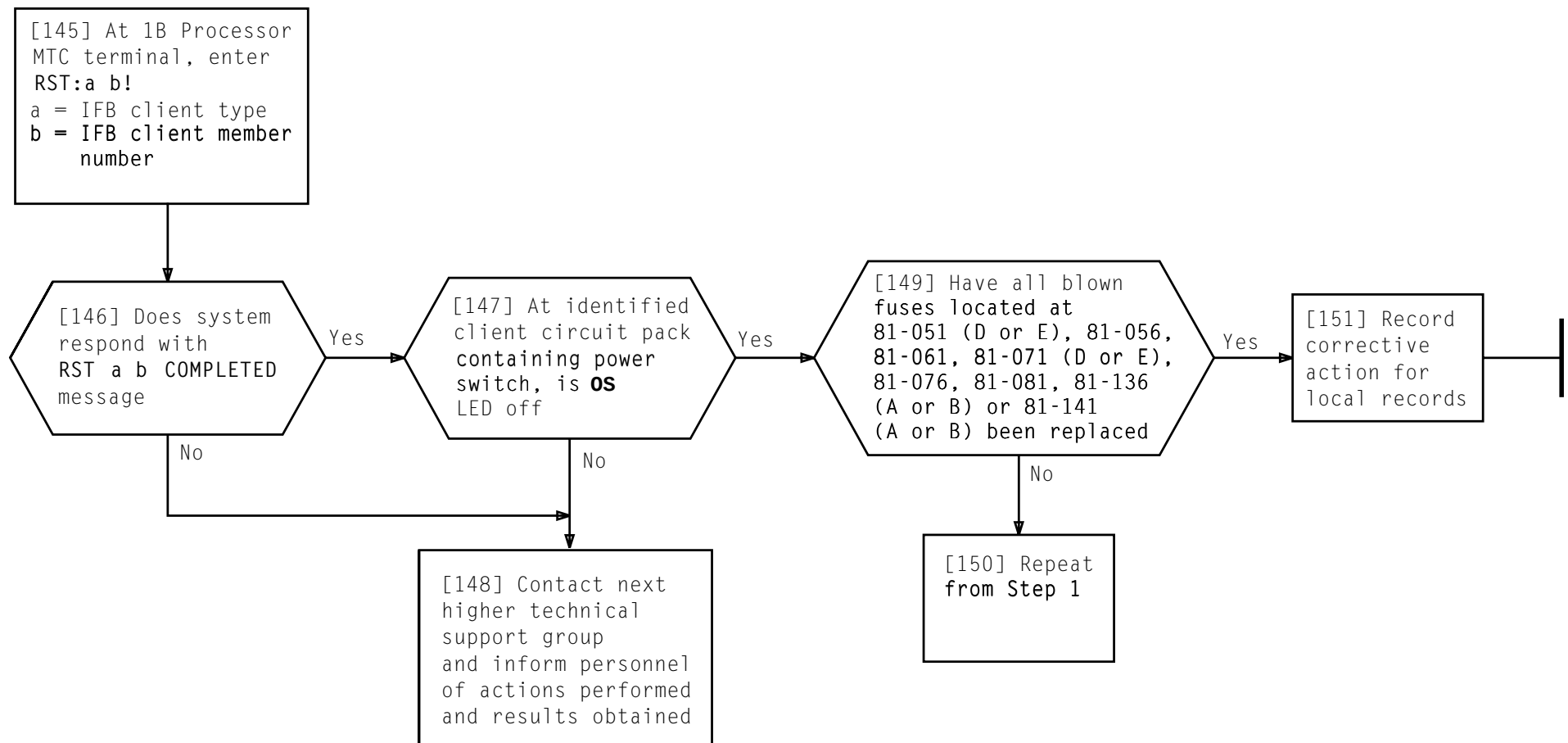
[128] At **KLW18** circuit pack (58-120), depress **ON** pushbutton

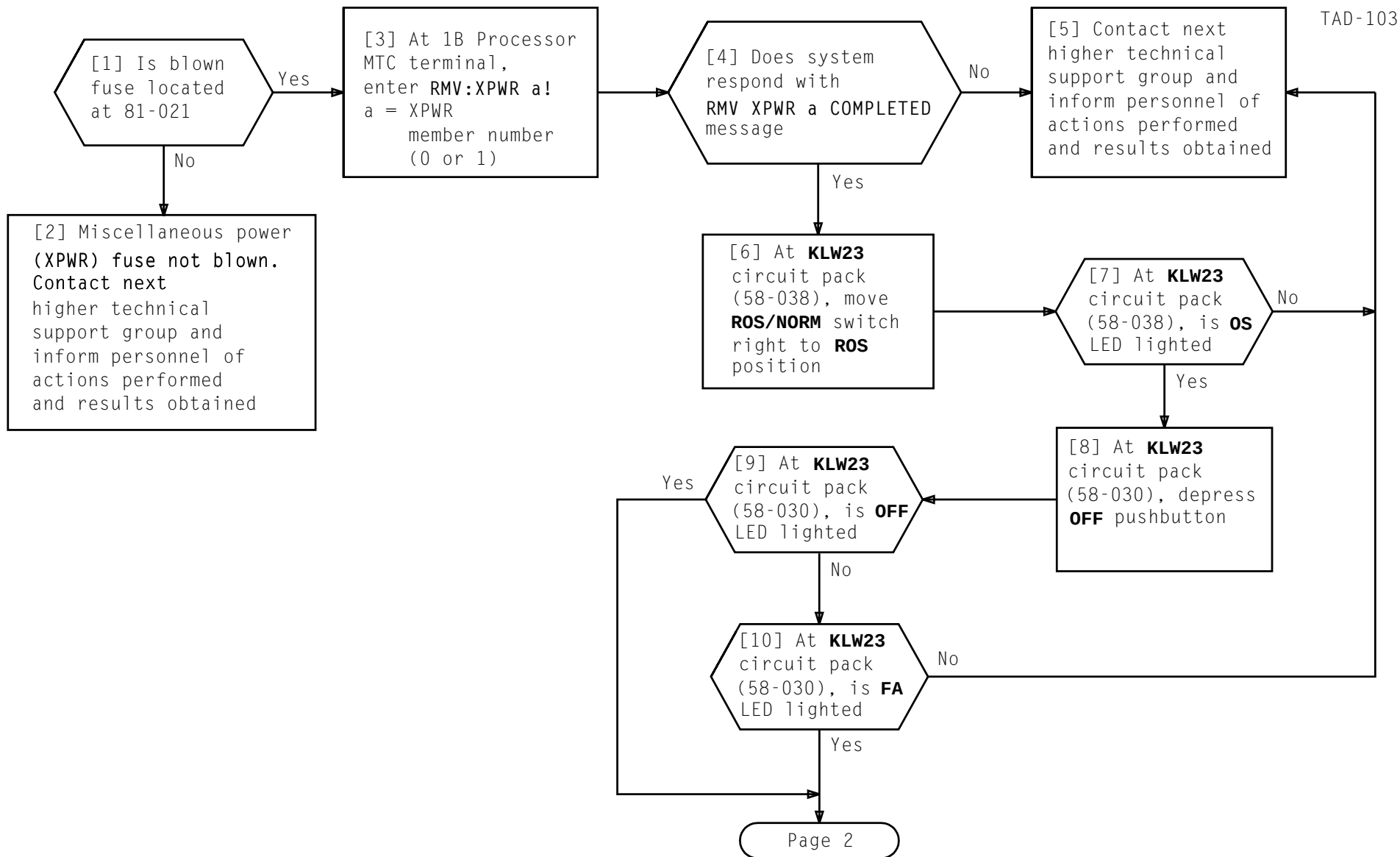


CLEAR INTERFACE BUS (IFB) CLIENT BLOWN FUSE

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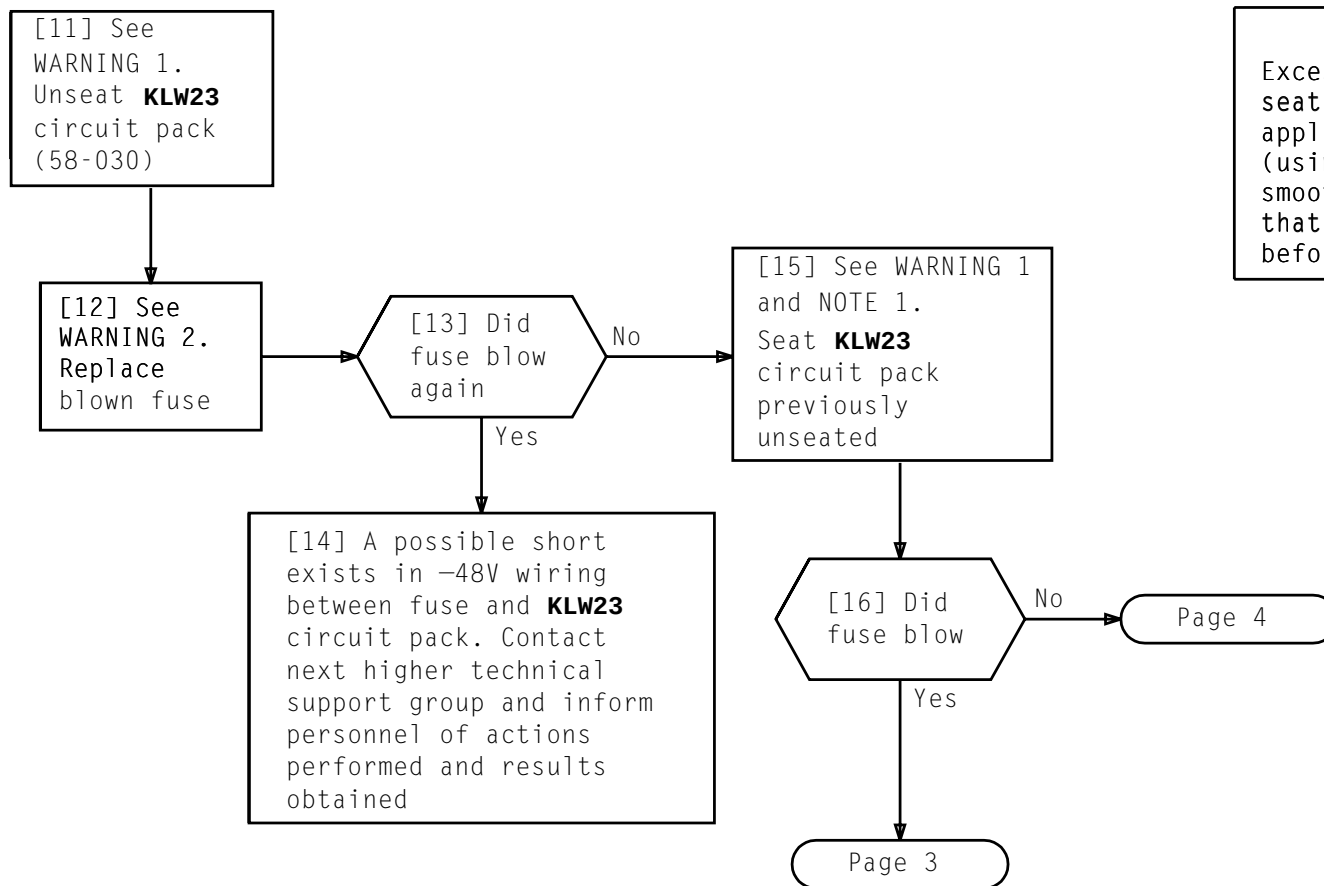






CLEAR MISCELLANEOUS POWER (XPWR) UNIT BLOWN FUSE

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NOTE 1

Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNINGS

1. A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins
2. When inserting and removing fuses, care must be taken to ensure fuses are pushed in and pulled out straight. Failure to push/pull fuses straight can exert excessive pressure on fuse assembly causing fuse assembly to crack or completely break off and lodge in fuse circuit card

[17] Obtain known good **KLW23** circuit pack

[18] See WARNING 3. Remove defective **KLW23** circuit pack and insert but do not seat known good pack

[19] See WARNING 4.
Replace blown fuse

[20] See WARNING 3 and
NOTE 2. Seat known good **KLW23** circuit pack

AND

[21] Did fuse blow again

No

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[22] Contact next higher technical support group and inform personnel of actions performed and results obtained

NOTE 2

Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

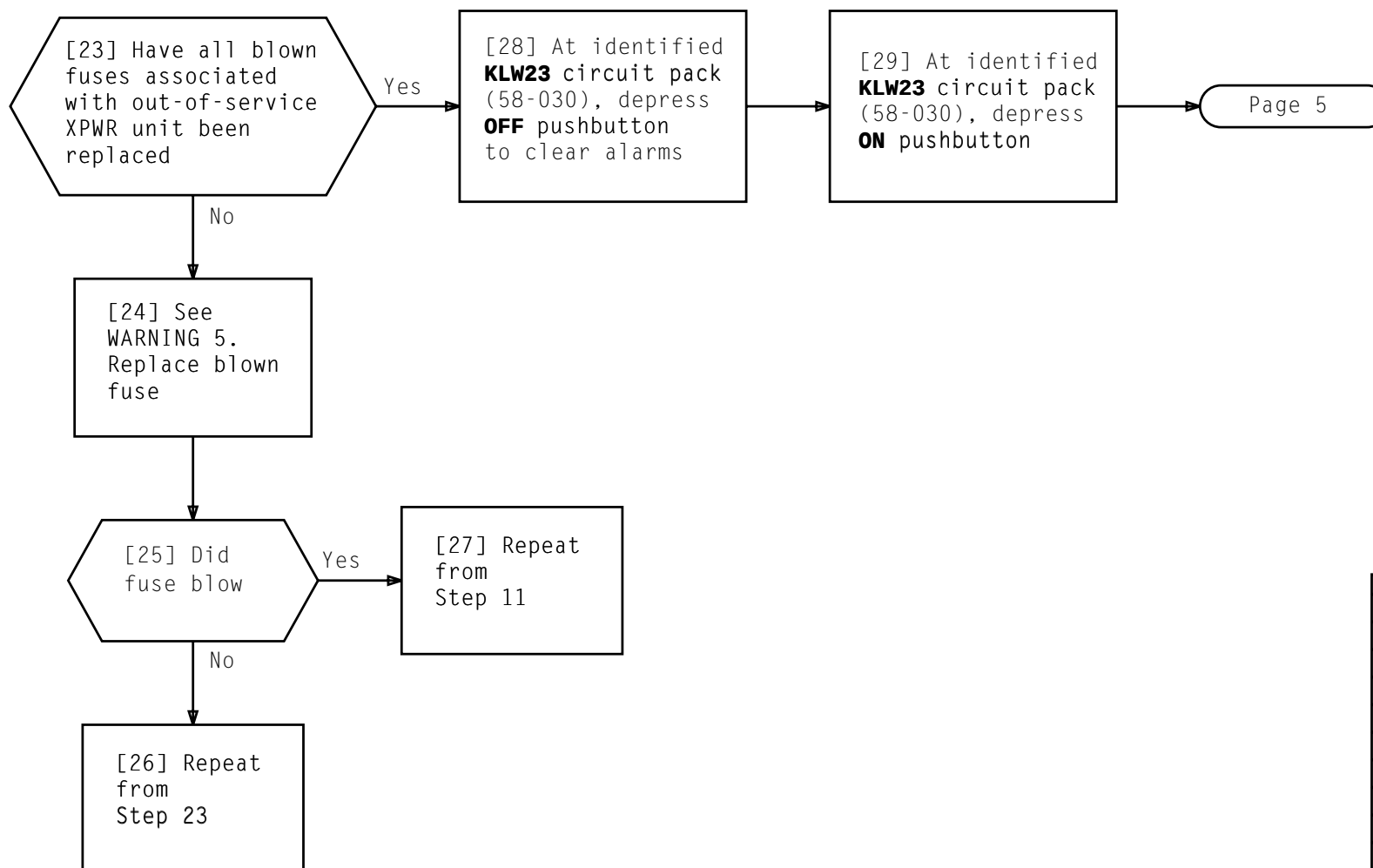
WARNINGS

3. A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins
4. When inserting and removing fuses, care must be taken to ensure fuses are pushed in and pulled out straight. Failure to push/pull fuses straight can exert excessive pressure on fuse assembly causing fuse assembly to crack or completely break off and lodge in fuse circuit card

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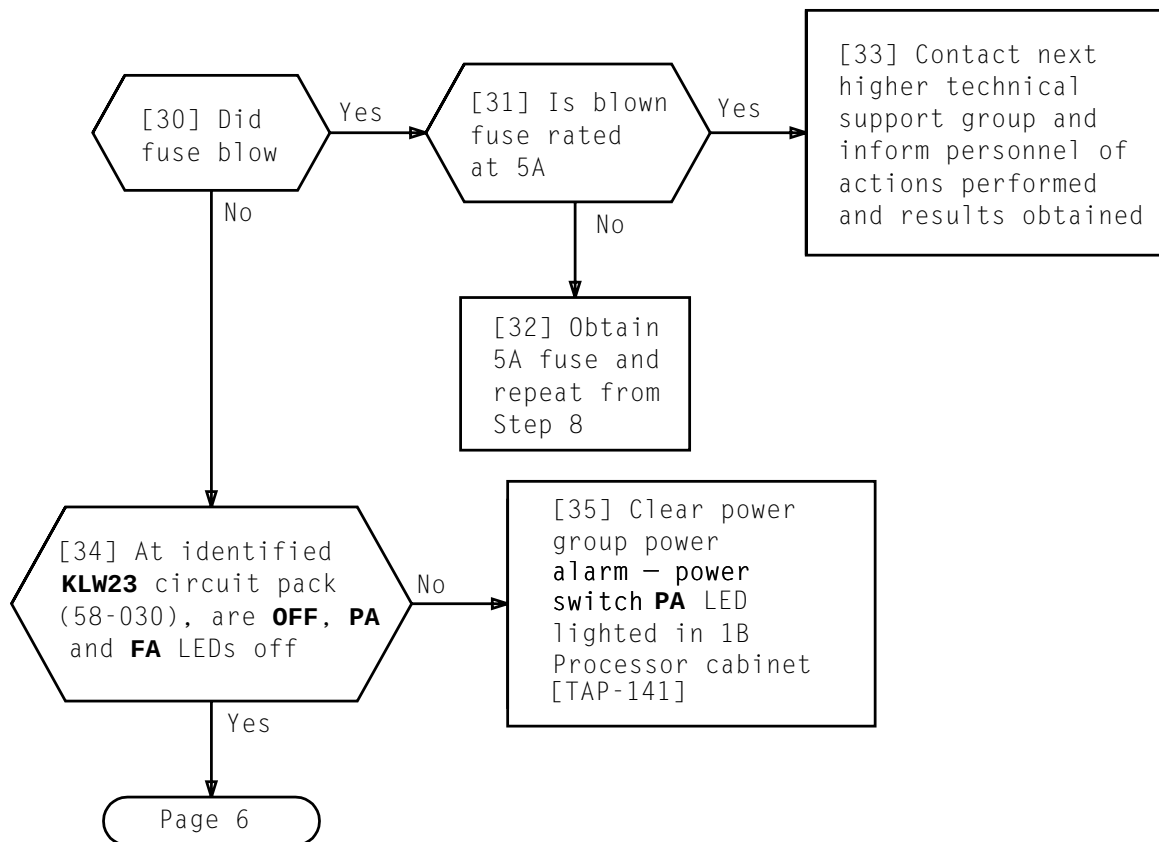
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WARNING 5
When inserting and removing fuses, care must be taken to ensure fuses are pushed in and pulled out straight. Failure to push/pull fuses straight can exert excessive pressure on fuse assembly causing fuse assembly to crack or completely break off and lodge in fuse circuit card

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CLEAR MISCELLANEOUS POWER (XPWR) UNIT BLOWN FUSE

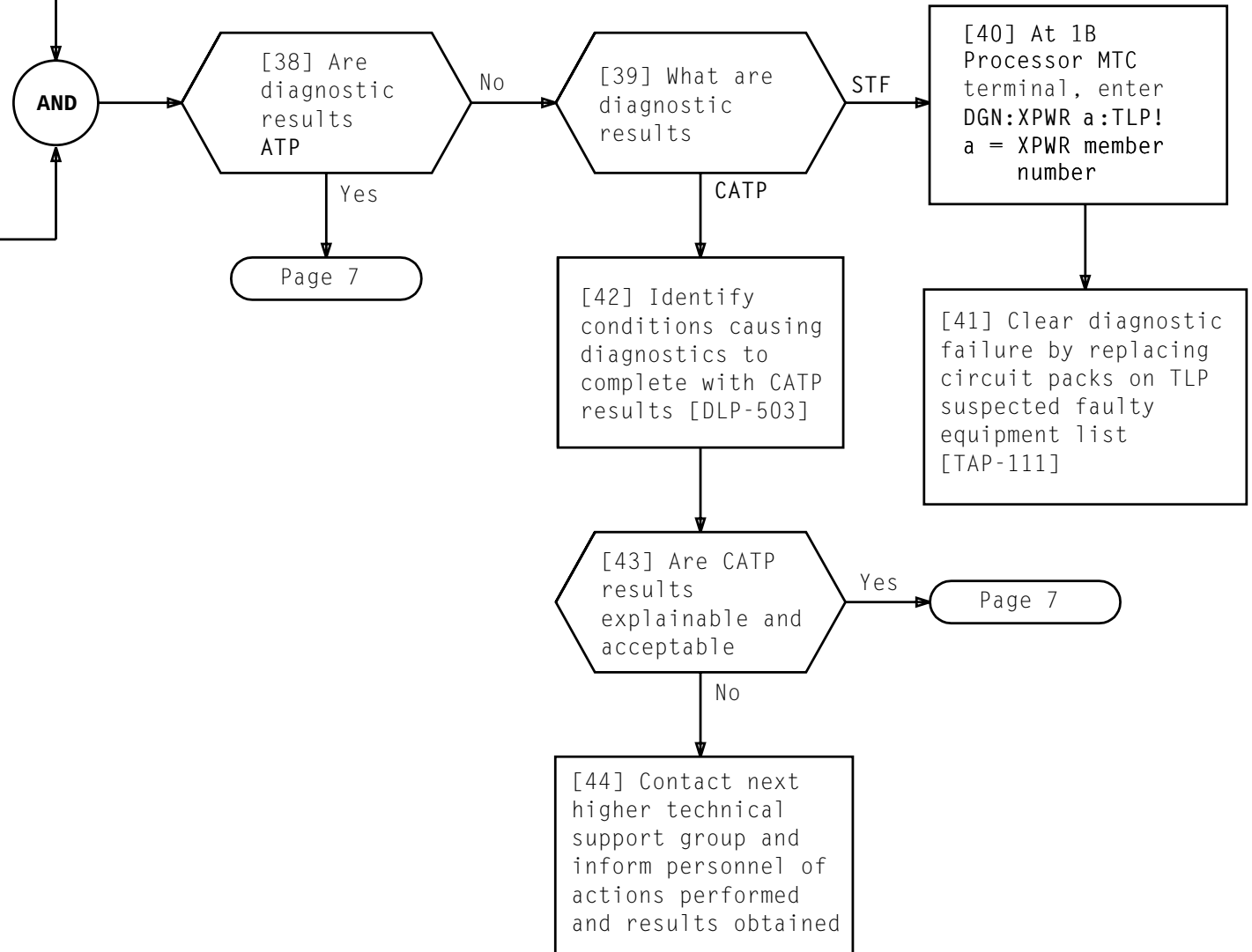


CLEAR MISCELLANEOUS POWER (XPWR) UNIT BLOWN FUSE

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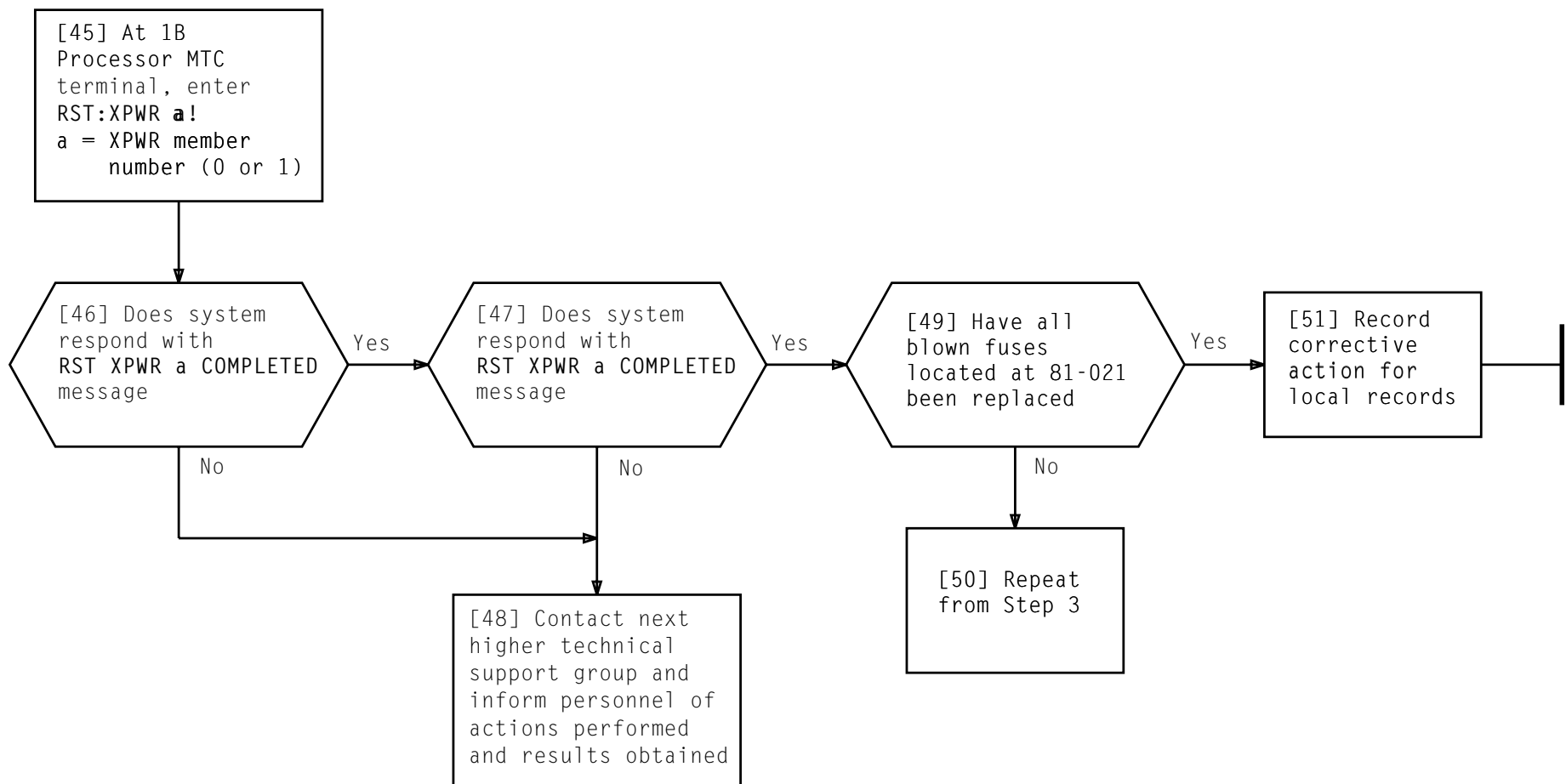
[36] At **KLW23** circuit pack (58-030),
move **ROS/NORM** switch left
to **NORM** position

[37] Allow ample time
for diagnostics to
complete



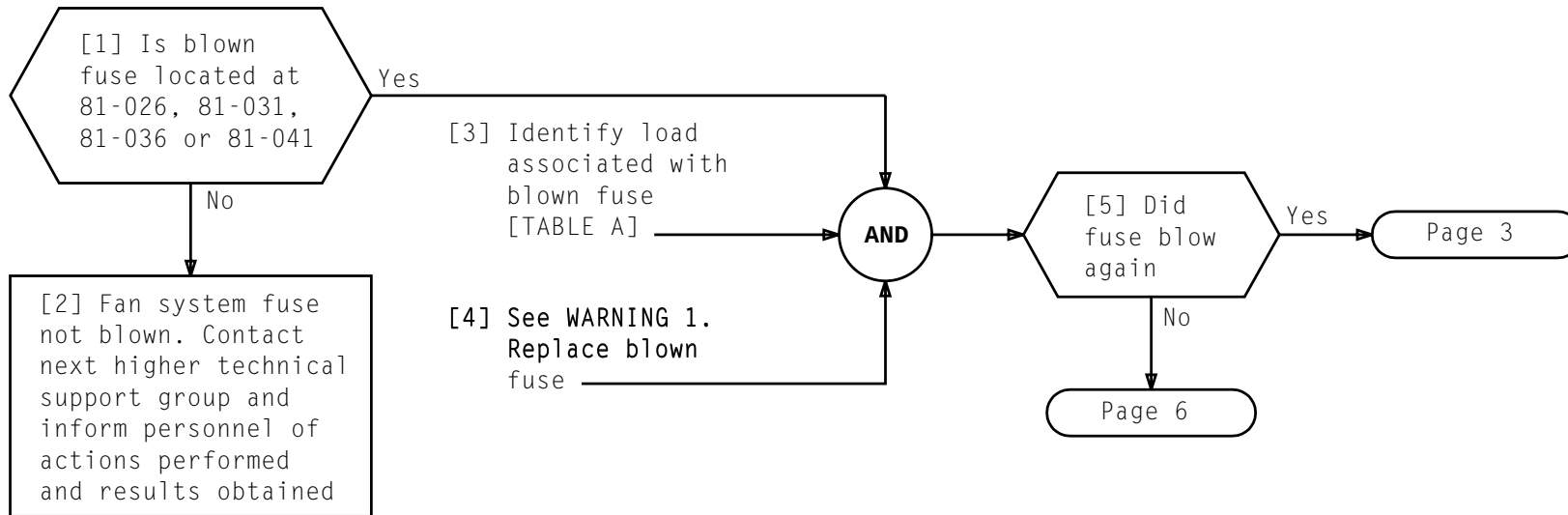
CLEAR MISCELLANEOUS POWER (XPWR) UNIT BLOWN FUSE

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CLEAR MISCELLANEOUS POWER (XPWR) UNIT BLOWN FUSE

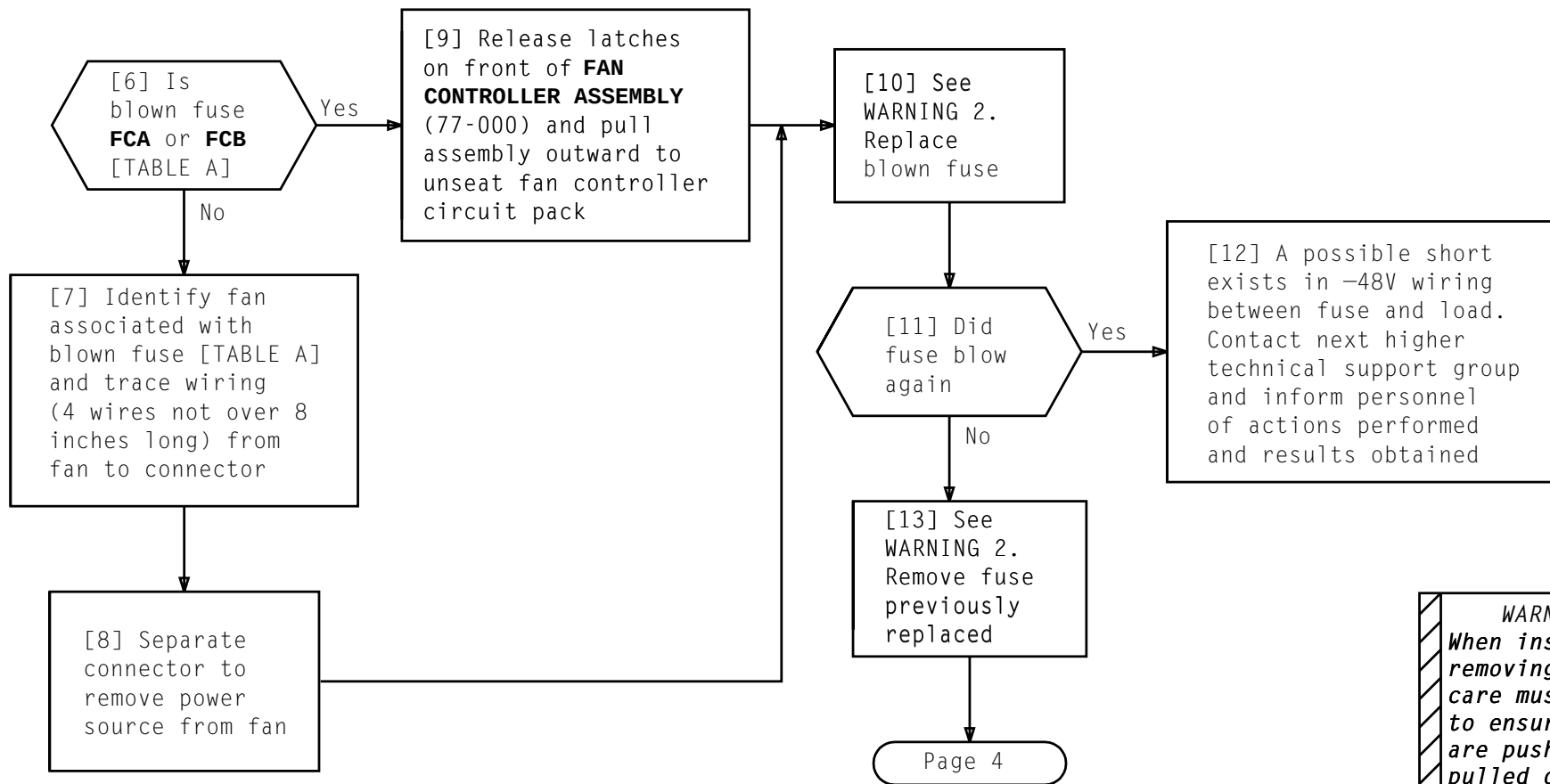
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CLEAR FAN SYSTEM BLOWN FUSE

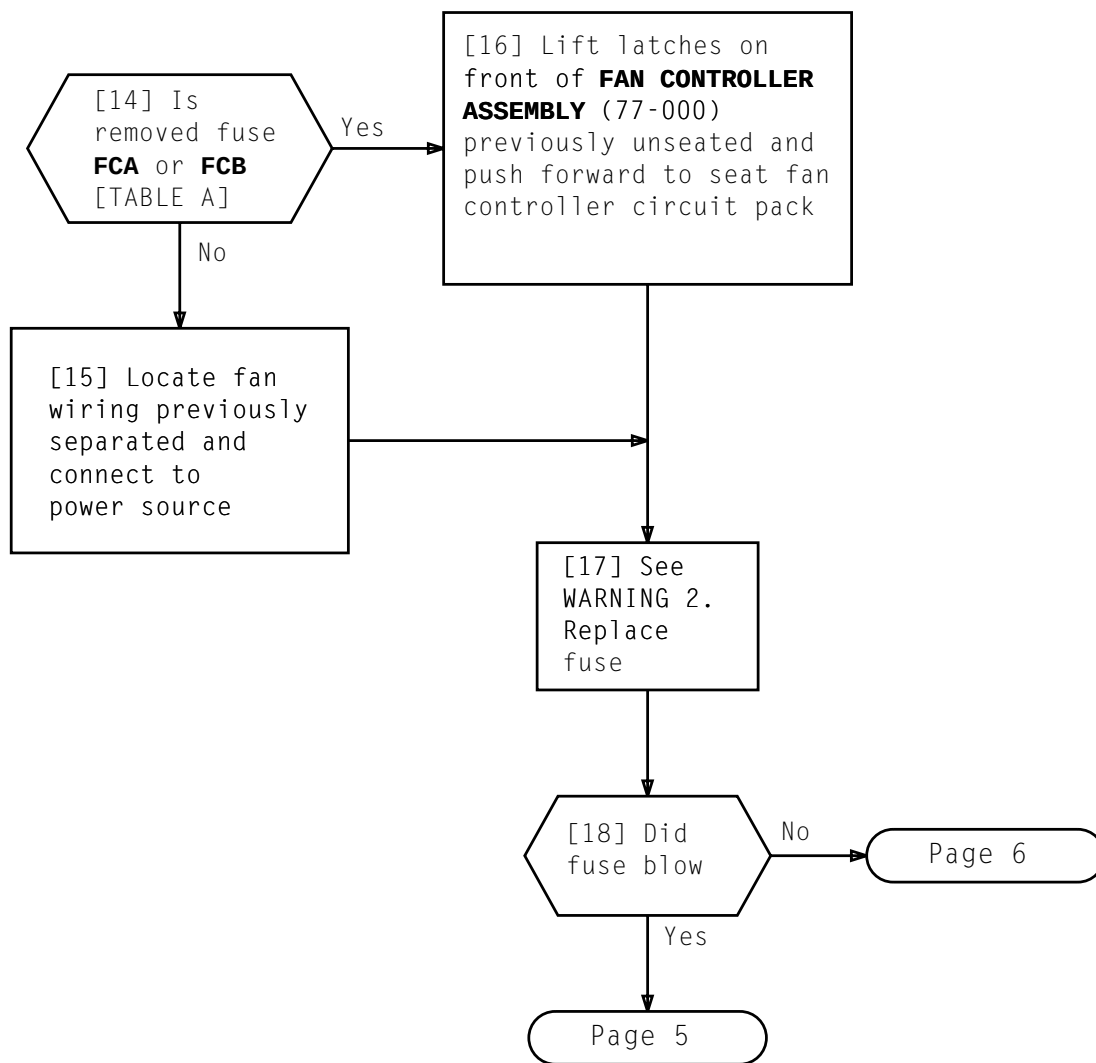
WARNING 1 <i>When inserting and removing fuses, care must be taken to ensure fuses are pushed in and pulled out straight. Failure to push/pull fuses straight can exert excessive pressure on fuse assembly causing fuse assembly to crack or completely break off and lodge in fuse circuit card</i>	
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TABLE A FAN SYSTEM FUSES AND ASSOCIATED LOADS				
BLOWN FUSE		LOAD		
IDENTIFIER	LOCATION	IDENTIFIER	FAN NUMBER (NOTE 1)	LOCATION (NOTE 2)
F1A	81-026A	FAN1	1	11-031F
F2A	81-026B	FAN2	2	11-093F
F3A	81-026C	FAN3	3	11-155F
FCA	81-026D	FAN CONTROLLER	—	77-000
F4A	81-031A	FAN4	4	11-155R
F5A	81-031B	FAN5	5	11-093R
F6A	81-031C	FAN6	6	11-031R
F1B	81-036A	FAN1	1	11-031F
F2B	81-036B	FAN2	2	11-093F
F3B	81-036C	FAN3	3	11-155F
FCB	81-036D	FAN CONTROLLER	—	77-000
F4B	81-041A	FAN4	4	11-155R
F5B	81-041B	FAN5	5	11-093R
F6B	81-041C	FAN6	6	11-031R
NOTES: 1. Front fans are marked 1, 2 and 3, left to right across front of fan unit. Rear fans are marked 4, 5 and 6 left to right across rear of fan unit. 2. F indicates front and R indicates rear				



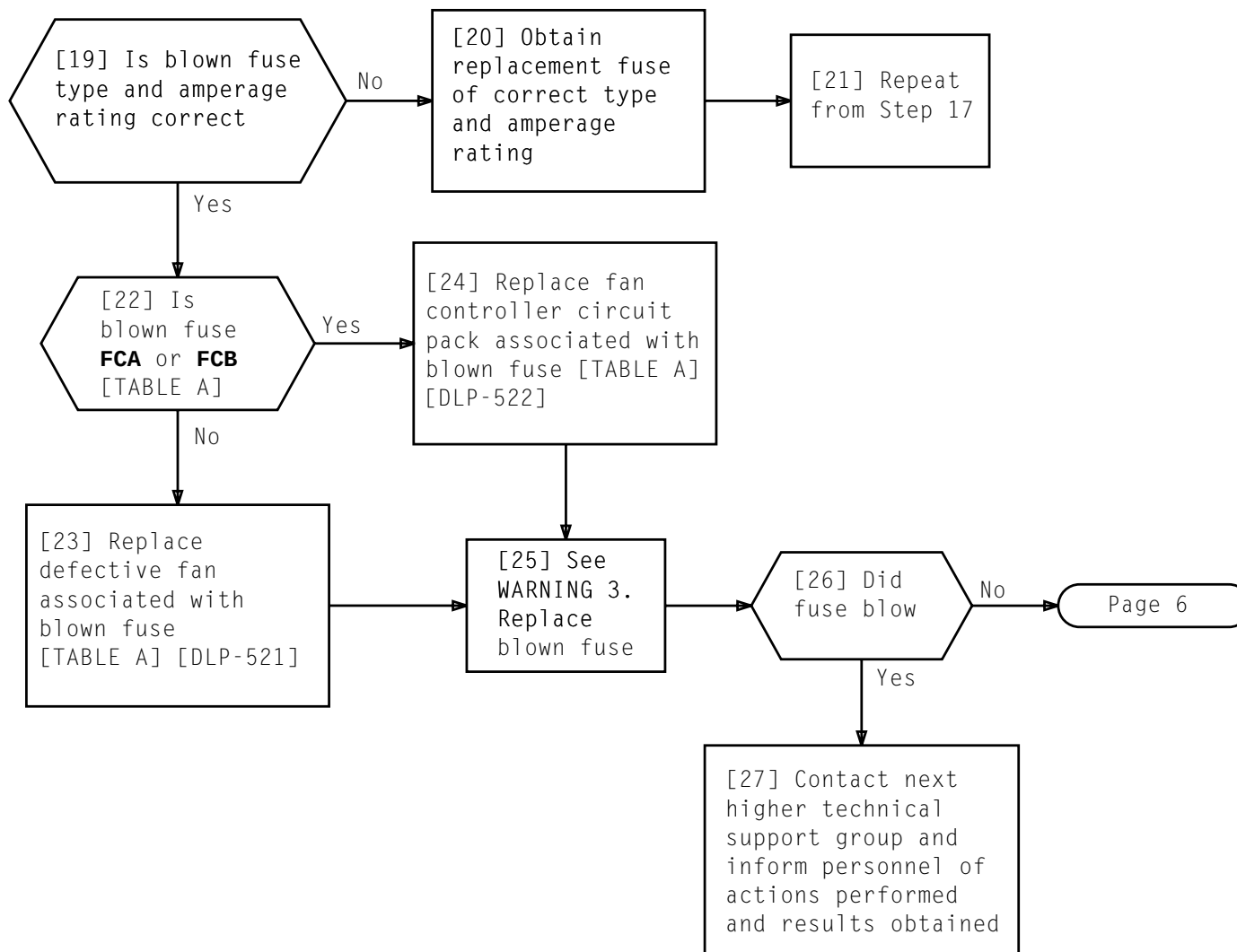
CLEAR FAN SYSTEM BLOWN FUSE

WARNING 2 <i>When inserting and removing fuses, care must be taken to ensure fuses are pushed in and pulled out straight. Failure to push/pull fuses straight can exert excessive pressure on fuse assembly causing fuse assembly to crack or completely break off and lodge in fuse circuit card</i>	
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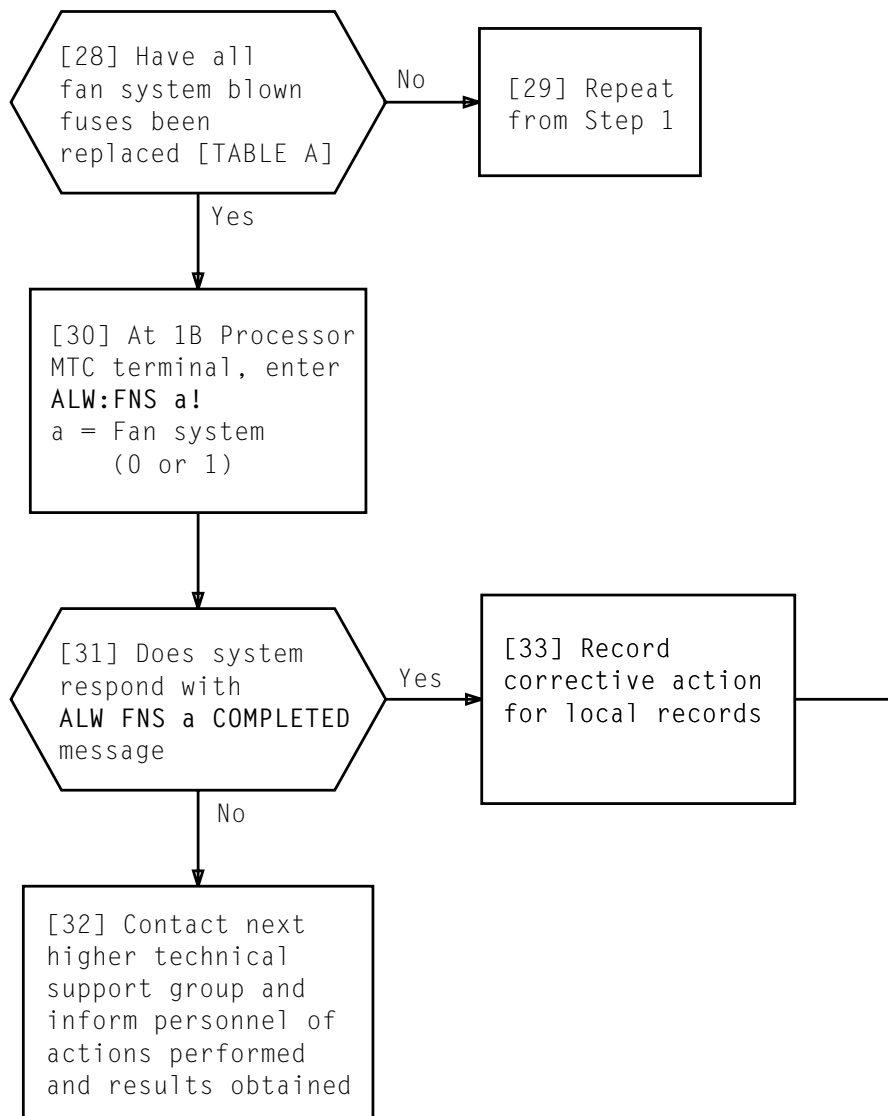


CLEAR FAN SYSTEM BLOWN FUSE

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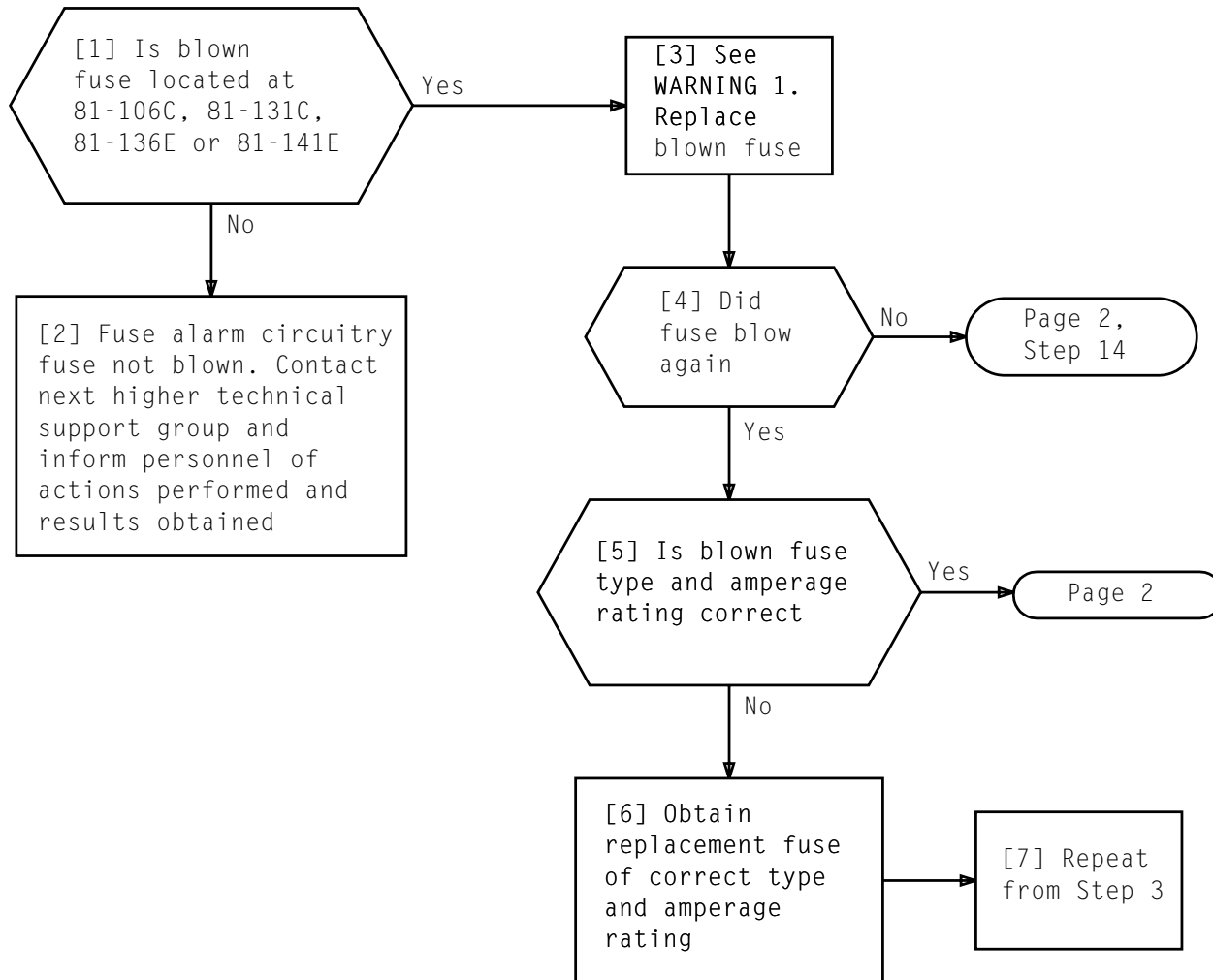


WARNING 3 <i>When inserting and removing fuses, care must be taken to ensure fuses are pushed in and pulled out straight. Failure to push/pull fuses straight can exert excessive pressure on fuse assembly causing fuse assembly to crack or completely break off and lodge in fuse circuit card</i>	
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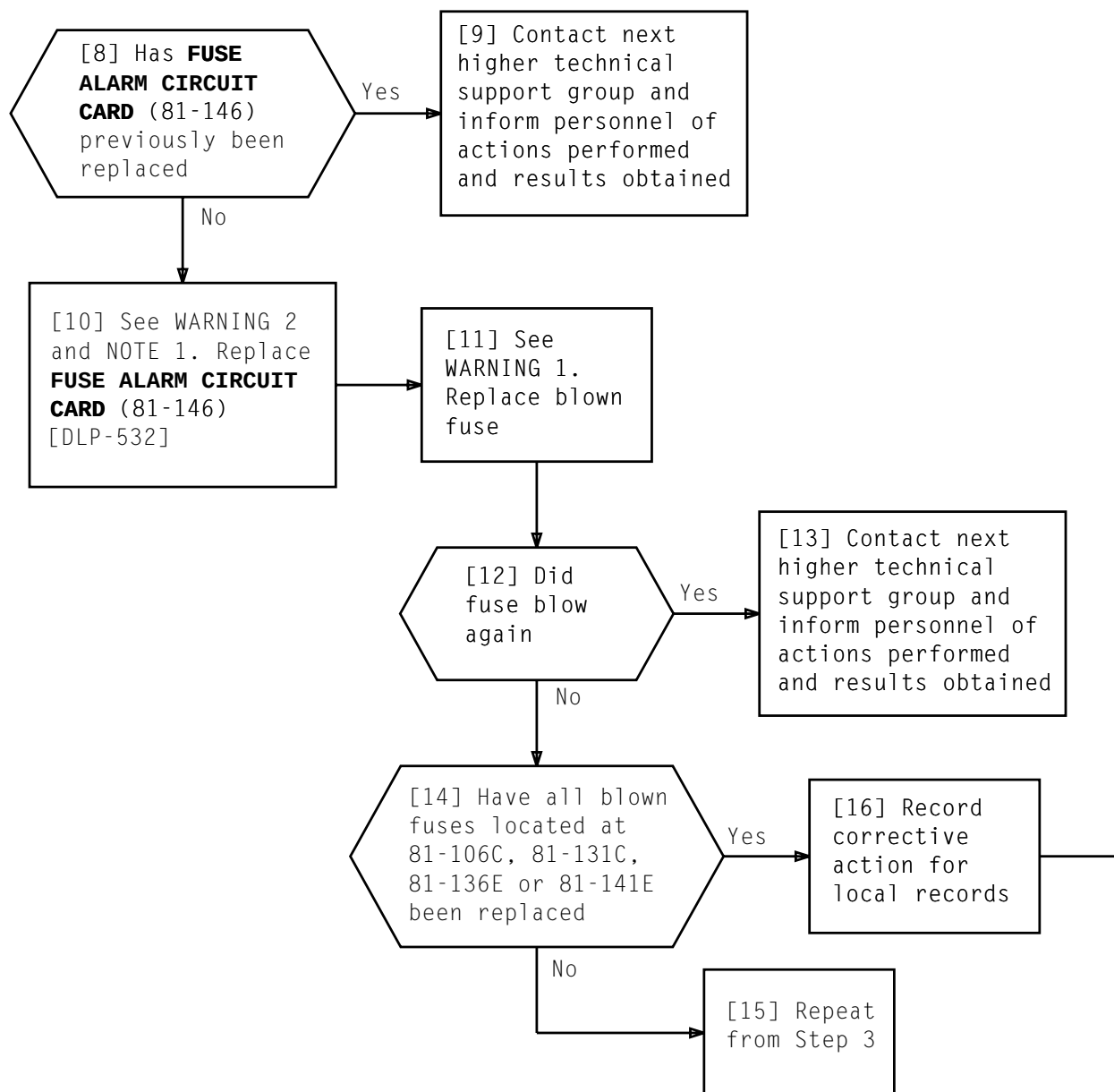


CLEAR FAN SYSTEM BLOWN FUSE

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WARNING 1
When inserting and removing fuses, care must be taken to ensure fuses are pushed in and pulled out straight. Failure to push/pull fuses straight can exert excessive pressure on fuse assembly causing fuse assembly to crack or completely break off and lodge in fuse circuit card



NOTE 1

Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 2

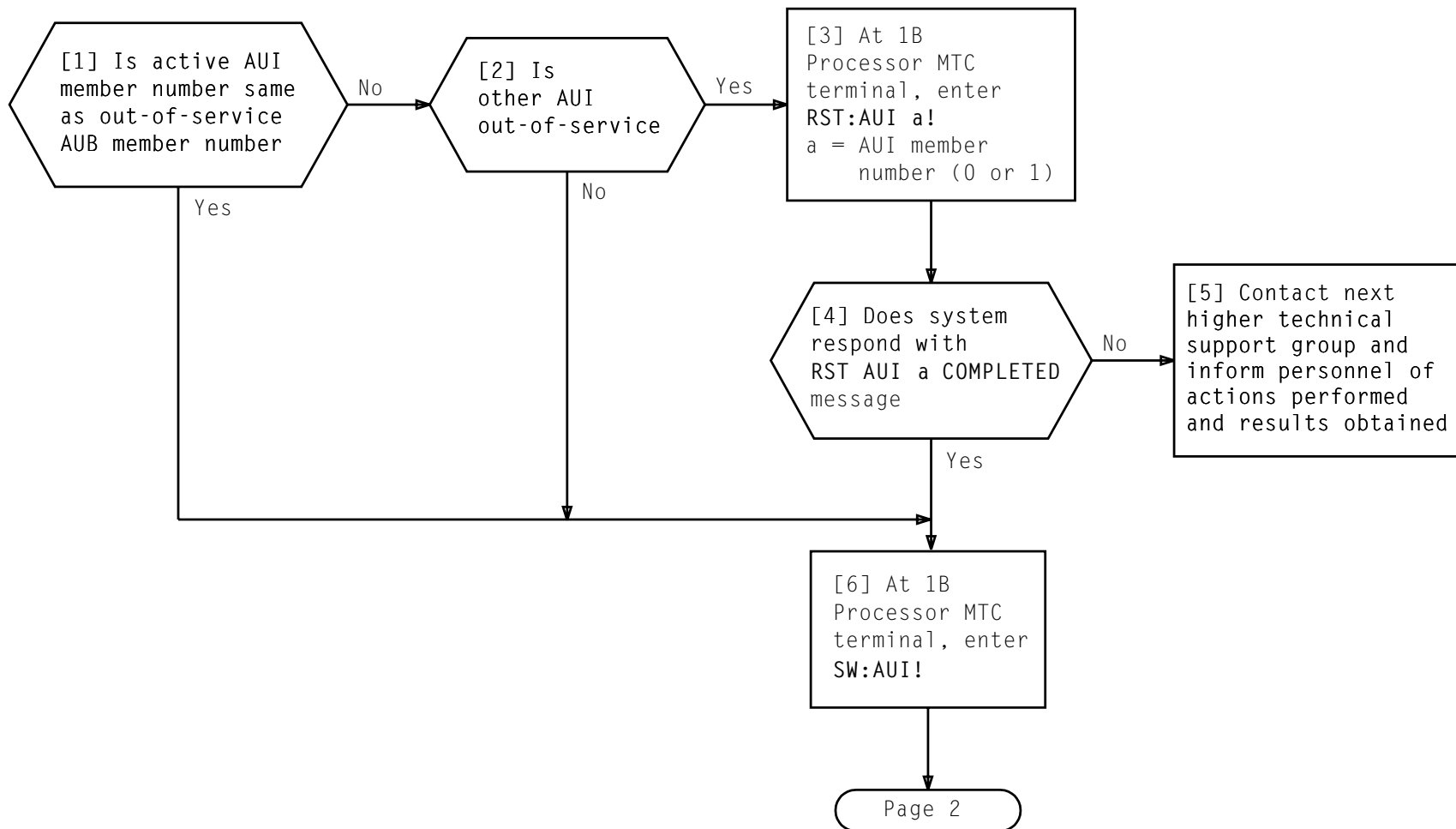
A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

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CLEAR FUSE ALARM CIRCUITRY BLOWN FUSE



[7] At 1B Processor MTC terminal,
enter **DGN:AUB a!**
a = AUB failing
diagnostics (0 or 1)

System responds
with printout of
failing AUB diagnostic
raw data

[8] Using printout of failing diagnostic
raw data [FIG. 1], identify all
failing phases

[9] Translate each failing phase to
affected auxiliary unit bus [TABLE A]

[10] Identify auxiliary unit associated
with first failing phase [TABLE A]

[11] Convert mismatch data for first
failing test to binary and identify
failing bits (bits set to one)
[FIG. 2]

[12] Identify circuit pack letter codes
associated with failing test and
associated failing bits
(bits set to one) [TABLE B]

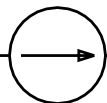


TABLE A PHASES ASSOCIATED WITH AUXILIARY UNITS AND AUXILIARY UNIT BUSES		
PHASE NUMBER	AUXILIARY UNIT	AUXILIARY UNIT BUS
11	API 0	0
17	DUS 0	0
31	API 1	1
37	DUS 1	1

CLEAR AUXILIARY UNIT BUS (AUB) DIAGNOSTIC FAILURE BY ANALYZING RAW DATA

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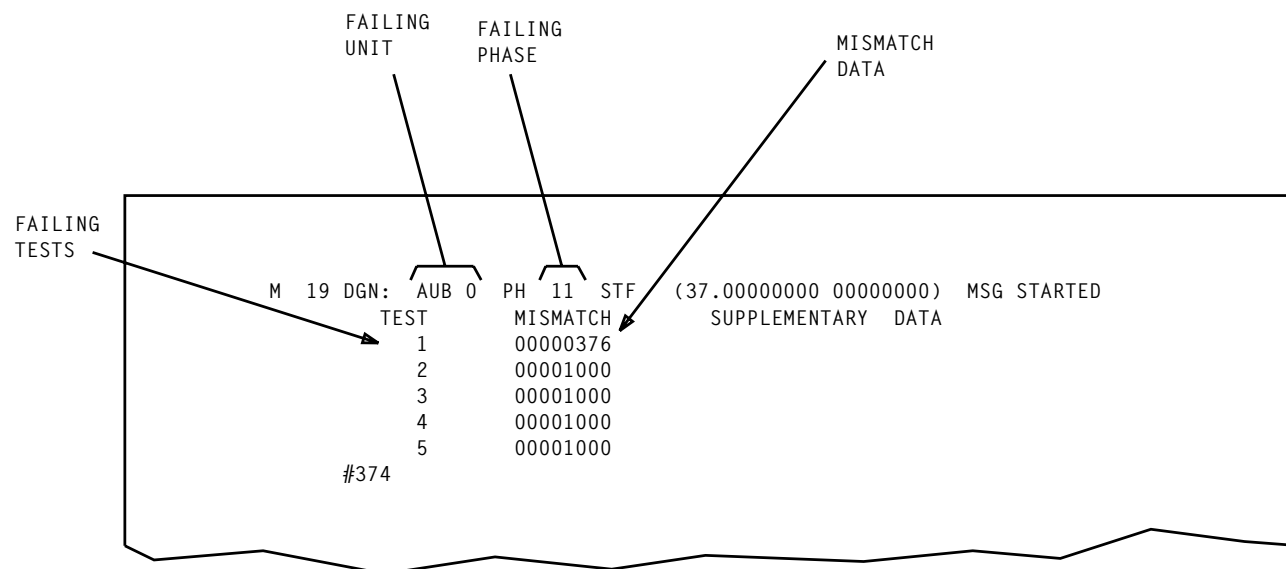


FIG. 1- Sample Printout of Failing Diagnostic Raw Data

CLEAR AUXILIARY UNIT BUS (AUB) DIAGNOSTIC FAILURE BY ANALYZING RAW DATA

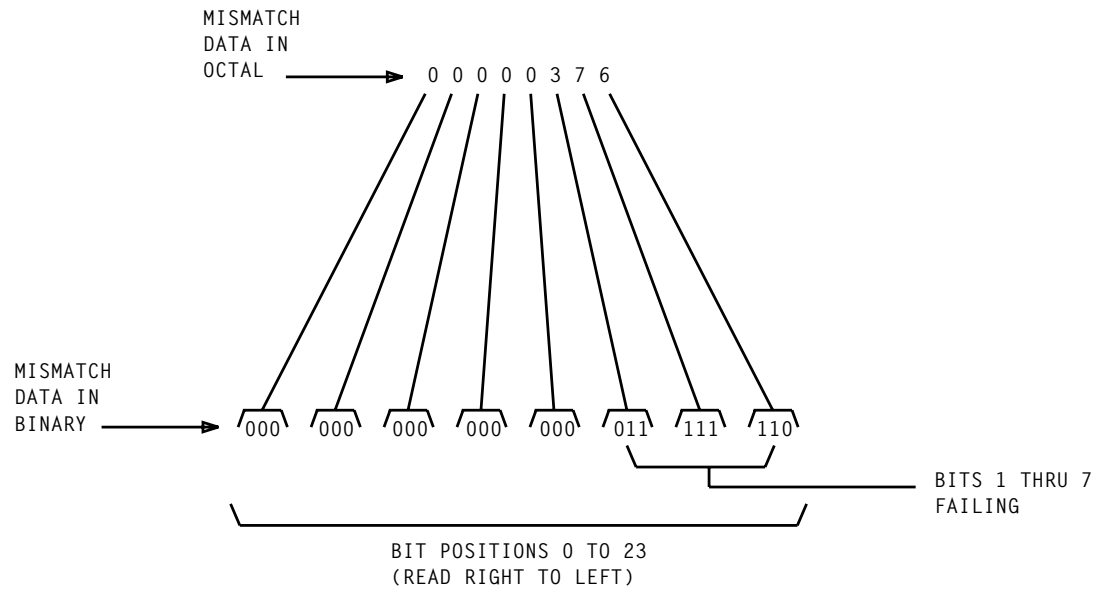


FIG. 2 - Example of Mismatch Data Octal To Binary Conversion

TABLE B CIRCUIT PACK LETTER CODES ASSOCIATED WITH DIAGNOSTIC TEST AND FAILING BITS																			
TEST NUMBER	CIRCUIT PACK LETTER CODES ASSOCIATED WITH FAILING BITS					BUS GROUP	TEST NUMBER	CIRCUIT PACK LETTER CODES ASSOCIATED WITH FAILING BITS					BUS GROUP	TEST NUMBER	CIRCUIT PACK LETTER CODES ASSOCIATED WITH FAILING BITS				BUS GROUP
	21	20	19	18	6			21	20	19	18	6			7	17	22	23	
000	C	ABC	A	A	—	ADDRESS	029	ABC	B	A	A	—	ADDRESS	057	—	B	DEFG	G	WRITE
001	↓	↓	↓	↓	↓	↓	030	↓	↓	↓	↓	↓	↓	064	↓	↓	↓	↓	↓
002	↓	↓	↓	↓	↓	↓	031	↓	↓	↓	↓	↓	↓	065	↓	↓	↓	↓	↓
003	↓	↓	↓	↓	↓	↓	032	↓	↓	↓	↓	↓	↓	072	↓	↓	↓	↓	↓
004	↓	↓	↓	↓	↓	↓	033	↓	↓	↓	↓	↓	↓	073	↓	↓	↓	↓	↓
005	↓	↓	↓	↓	↓	↓	034	↓	↓	↓	↓	↓	↓	080	↓	↓	↓	↓	↓
006	↓	↓	↓	↓	↓	↓	035	↓	↓	↓	↓	↓	↓	081	↓	↓	↓	↓	↓
007	C	↓	↓	↓	↓	↓	036	ABC	B	↓	↓	↓	↓	082	↓	↓	↓	↓	↓
008	B	↓	↓	↓	↓	↓	037	BC	A	↓	↓	↓	↓	083	↓	↓	↓	↓	↓
009	↓	↓	↓	↓	↓	↓	038	↓	↓	↓	↓	↓	↓	084	↓	↓	↓	↓	↓
010	↓	↓	↓	↓	↓	↓	039	BC	↓	↓	↓	↓	↓	091	↓	↓	↓	↓	↓
011	↓	↓	↓	↓	↓	↓	040	ABC	A	↓	↓	↓	↓	092	↓	↓	↓	↓	↓
012	↓	↓	↓	↓	↓	↓	041	AC	BC	↓	↓	↓	↓	099	↓	↓	↓	↓	↓
013	↓	↓	↓	↓	↓	↓	042	↓	↓	↓	↓	↓	↓	100	↓	↓	↓	↓	↓
014	↓	↓	↓	↓	↓	↓	043	↓	↓	↓	↓	↓	↓	107	↓	↓	↓	↓	↓
015	B	ABC	↓	↓	↓	↓	044	↓	↓	↓	↓	↓	↓	108	↓	↓	↓	↓	↓
016	A	BC	↓	↓	↓	↓	045	↓	↓	↓	↓	↓	↓	109	↓	↓	↓	↓	↓
017	ABC	ABC	↓	↓	↓	↓	046	↓	↓	↓	↓	↓	↓	110	↓	↓	↓	↓	↓
018	↓	↓	↓	↓	↓	↓	047	↓	↓	↓	↓	↓	↓	111	↓	↓	↓	↓	↓
019	↓	↓	↓	↓	↓	↓	048	AC	↓	↓	↓	↓	↓	118	↓	↓	↓	↓	↓
020	↓	ABC	↓	↓	↓	↓	049	AB	↓	↓	↓	↓	↓	119	↓	↓	↓	↓	↓
021	↓	C	↓	↓	↓	↓	050	↓	↓	↓	↓	↓	↓	126	↓	↓	↓	↓	↓
022	↓	↓	↓	↓	↓	↓	051	↓	↓	↓	↓	↓	↓	127	↓	↓	↓	↓	↓
023	↓	↓	↓	↓	↓	↓	052	↓	↓	↓	↓	↓	↓	134	↓	↓	↓	↓	↓
024	↓	↓	↓	↓	↓	↓	053	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
025	↓	↓	↓	↓	↓	↓	054	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
026	↓	↓	↓	↓	↓	↓	055	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
027	↓	↓	↓	↓	↓	↓	056	AB	BC	A	A	A	ADDRESS	↓	↓	↓	↓	↓	↓
028	ABC	C	A	A	—	ADDRESS								↓	↓	↓	↓	↓	↓

**CLEAR AUXILIARY UNIT BUS (AUB) DIAGNOSTIC FAILURE BY ANALYZING
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TABLE B (Contd)														
CIRCUIT PACK LETTER CODES ASSOCIATED WITH DIAGNOSTIC TEST AND FAILING BITS														
TEST NUMBER	CIRCUIT PACK LETTER CODES ASSOCIATED WITH FAILING BITS				BUS GROUP	ODD TEST NUMBER	CIRCUIT PACK LETTER CODES ASSOCIATED WITH FAILING BITS			BUS GROUP	EVEN TEST NUMBER	CIRCUIT PACK LETTER CODES ASSOCIATED WITH FAILING BITS		BUS GROUP
	7	17	22	23			23-16	15-8	7-0			21	20	
135	—	B	DEFG	D	WRITE	189	J	K	L	REPLY	190	H	H	REPLY
136	↓	↓	↓	D	↓	191	↓	↓	↓	↓	192	↓	↓	↓
137	↓	↓	DEFG	DEFG	↓	193	↓	↓	↓	↓	194	↓	↓	↓
138	↓	↓	G	↓	↓	195	↓	↓	↓	↓	196	↓	↓	↓
↓	↓	↓	↓	↓	↓	197	↓	↓	↓	↓	198	↓	↓	↓
145	↓	↓	G	↓	↓	199	↓	↓	↓	↓	200	↓	↓	↓
146	↓	↓	F	↓	↓	201	↓	↓	↓	↓	202	↓	↓	↓
↓	↓	↓	↓	↓	↓	203	↓	↓	↓	↓	204	↓	↓	↓
153	↓	↓	F	↓	↓	205	↓	↓	↓	↓	206	↓	↓	↓
154	↓	↓	E	↓	↓	207	↓	↓	↓	↓	208	↓	↓	↓
↓	↓	↓	↓	↓	↓	209	↓	↓	↓	↓	210	↓	↓	↓
161	↓	↓	E	↓	↓	211	↓	↓	↓	↓	212	↓	↓	↓
162	↓	↓	D	↓	↓	213	↓	↓	↓	↓	214	↓	↓	↓
163	↓	↓	D	↓	↓	215	↓	↓	↓	↓	216	↓	↓	↓
164	↓	↓	DEFG	DEFG	↓	217	↓	↓	↓	↓	218	↓	↓	↓
165	↓	↓	↓	G	↓	219	↓	↓	↓	↓	220	↓	↓	↓
↓	↓	↓	↓	↓	↓	221	↓	↓	↓	↓	222	↓	↓	↓
172	↓	↓	↓	G	↓	223	↓	↓	↓	↓	224	↓	↓	↓
173	↓	↓	↓	F	↓	225	↓	↓	↓	↓	226	↓	↓	↓
↓	↓	↓	↓	↓	↓	227	↓	↓	↓	↓	228	↓	↓	↓
180	↓	↓	↓	F	↓	229	↓	↓	↓	↓	230	↓	↓	↓
181	↓	↓	↓	E	↓	231	↓	↓	↓	↓	232	↓	↓	↓
↓	↓	↓	↓	↓	↓	233	↓	↓	↓	↓	234	↓	↓	↓
188	D	B	DEFG	E	WRITE	235	↓	↓	↓	↓	236	↓	↓	↓
						237	↓	↓	↓	↓	238	↓	↓	↓
						239	↓	↓	↓	↓	240	↓	↓	↓
						241	↓	↓	↓	↓	242	↓	↓	↓
						243	↓	↓	↓	↓	244	↓	↓	↓
						245	J	K	L	REPLY	246	H	H	REPLY

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TABLE B (Contd)
CIRCUIT PACK LETTER CODES ASSOCIATED WITH DIAGNOSTIC TEST AND FAILING BITS

TEST NUMBER	CIRCUIT PACK LETTER CODES ASSOCIATED WITH FAILING BITS	BUS GROUP	ODD TEST NUMBER	CIRCUIT PACK LETTER CODES ASSOCIATED WITH FAILING BITS			BUS GROUP	EVEN TEST NUMBER	CIRCUIT PACK LETTER CODES ASSOCIATED WITH FAILING BITS	BUS GROUP	TEST NUMBER	CIRCUIT PACK LETTER CODES ASSOCIATED WITH FAILING BITS	BUS GROUP
	0			21-16	15-8	7-0			24-22			0	
247	H	CONTROL	261	V	U	T	STORE ADDRESS	262	VW	STORE ADDRESS	313	X/Y (NOTE)	CONTROL
248	H		263	V	U	T		264	V		314	↓	
249	M		265	V	U	T		266	V		315	↓	
250	M		267	V	U	T		268	V		316	↓	
251	NPQR		269	V	U	T		270	V		317	X/Y (NOTE)	
252	↓		271	V	U	T		272	V		318	D	
253	↓		273	V	U	T		274	V		319	D	
254	↓		275	V	U	T		276	V		320	D	
255	↓		277	V	U	T		278	V				
256	↓		279	V	U	T		280	V				
257	↓	CONTROL	281	V	U	T	STORE ADDRESS	282	V	STORE ADDRESS			CONTROL
258	NPQR		283	V	U	T		284	V				
259	S		285	V	U	T		286	V				
260	NPQR		287	V	U	T		288	V				
			289	V	U	T		290	V				
			291	V	U	T		292	V				
			293	V	U	T		294	V				
			295	V	U	T		296	V				
			297	V	U	T		298	V				
			299	V	U	T		300	V				
			301	V	U	T		302	V				
			303	V	U	T		304	V				
			305	V	U	T		306	V				
			307	V	U	T		308	V				
			309	↓	↓	↓		310	↓				
			311	V	U	T	STORE ADDRESS	312	VW	STORE ADDRESS			

NOTE: Use Circuit Pack Letter Code X for Bus 0
Use Circuit Pack Letter Code Y for Bus 1

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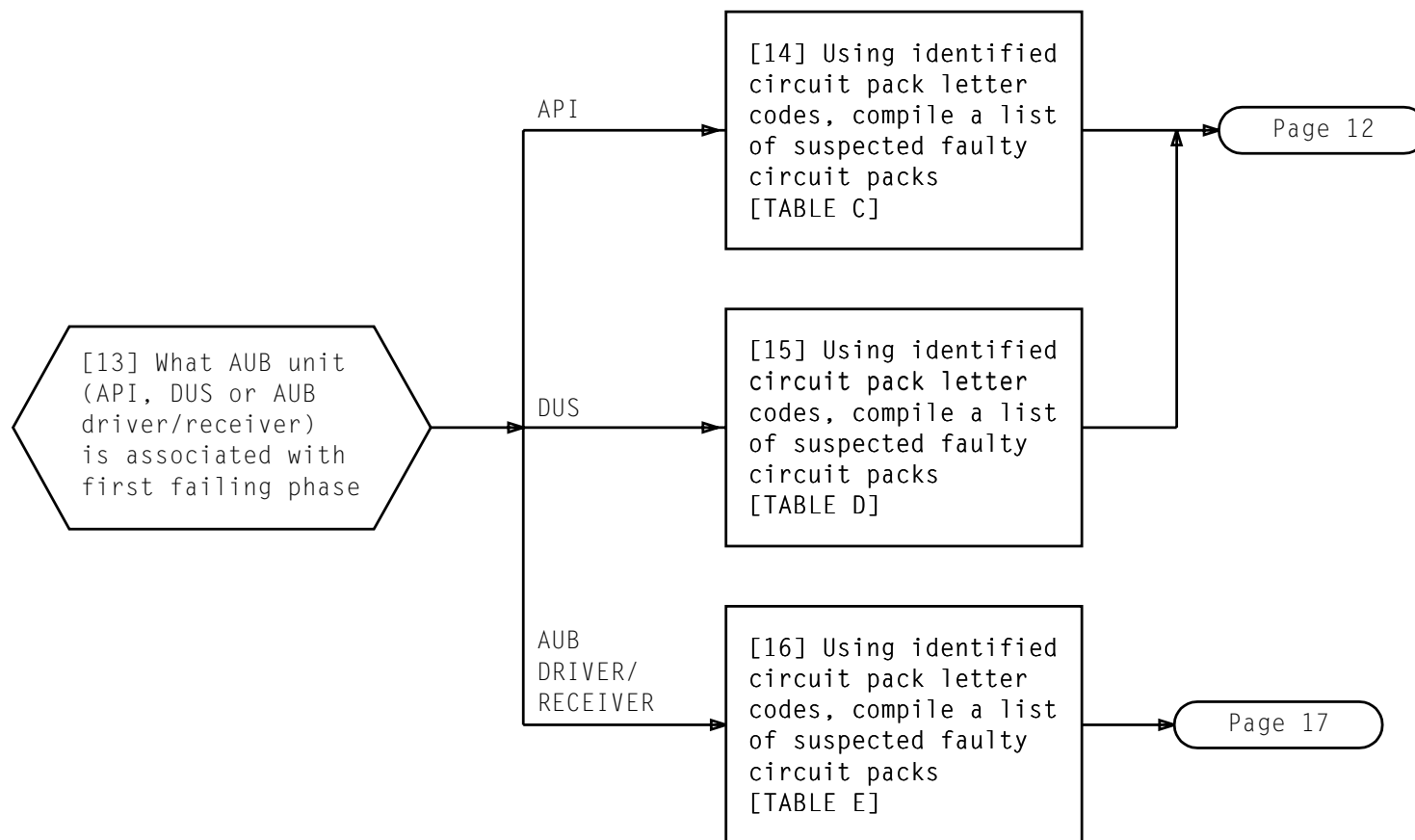


TABLE C ATTACHED PROCESSOR INTERFACE (API) SUSPECTED CIRCUIT PACK LOCATIONS					
CIRCUIT PACK LETTER CODE	API SUSPECTED CIRCUIT PACK LOCATION	BUS	CIRCUIT PACK LETTER CODE	API SUSPECTED CIRCUIT PACK LOCATION	BUS
A	*76-253	—	N	*76-253	—
B	*76-253	—	P	*76-253	—
C	*76-253	—	Q	*76-253	—
D	*76-253	—	R	*76-253	—
E	*76-253	—	S	*76-253	—
F	*76-253	—	T	*76-265	—
G	*76-253	—	U	*76-265	—
H	*76-265	—	V	*76-265	—
J	*76-265	—	W	*76-265	—
K	*76-265	—	X	*76-253	0
L	*76-265	—	Y	*76-253	1
M	*76-253	—			
* = AUB Being Diagnosed (0 or 1)					

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TABLE D DATA UNIT SELECTOR (DUS) SUSPECTED CIRCUIT PACK LOCATIONS					
CIRCUIT PACK LETTER CODE	DUS SUSPECTED CIRCUIT PACK LOCATION	BUS	CIRCUIT PACK LETTER CODE	DUS SUSPECTED CIRCUIT PACK LOCATION	BUS
A	*80-63	—	N	—	—
B	*80-64	—	P	*80-38	—
C	*80-65	—	Q	—	—
D	*80-66	—	R	*80-38	—
E	*80-67	—	S	*80-42	—
F	*80-68	—	T	*80-41	—
G	*80-69	—	U	*80-40	—
H	*80-42	—	V	*80-39	—
J	*80-43	—	W	*80-42	—
K	*80-44	—	X	*80-47	0
L	*80-45	—	Y	*80-46	1
M	*80-39	—			
* = AUB Being Diagnosed (0 or 1)					

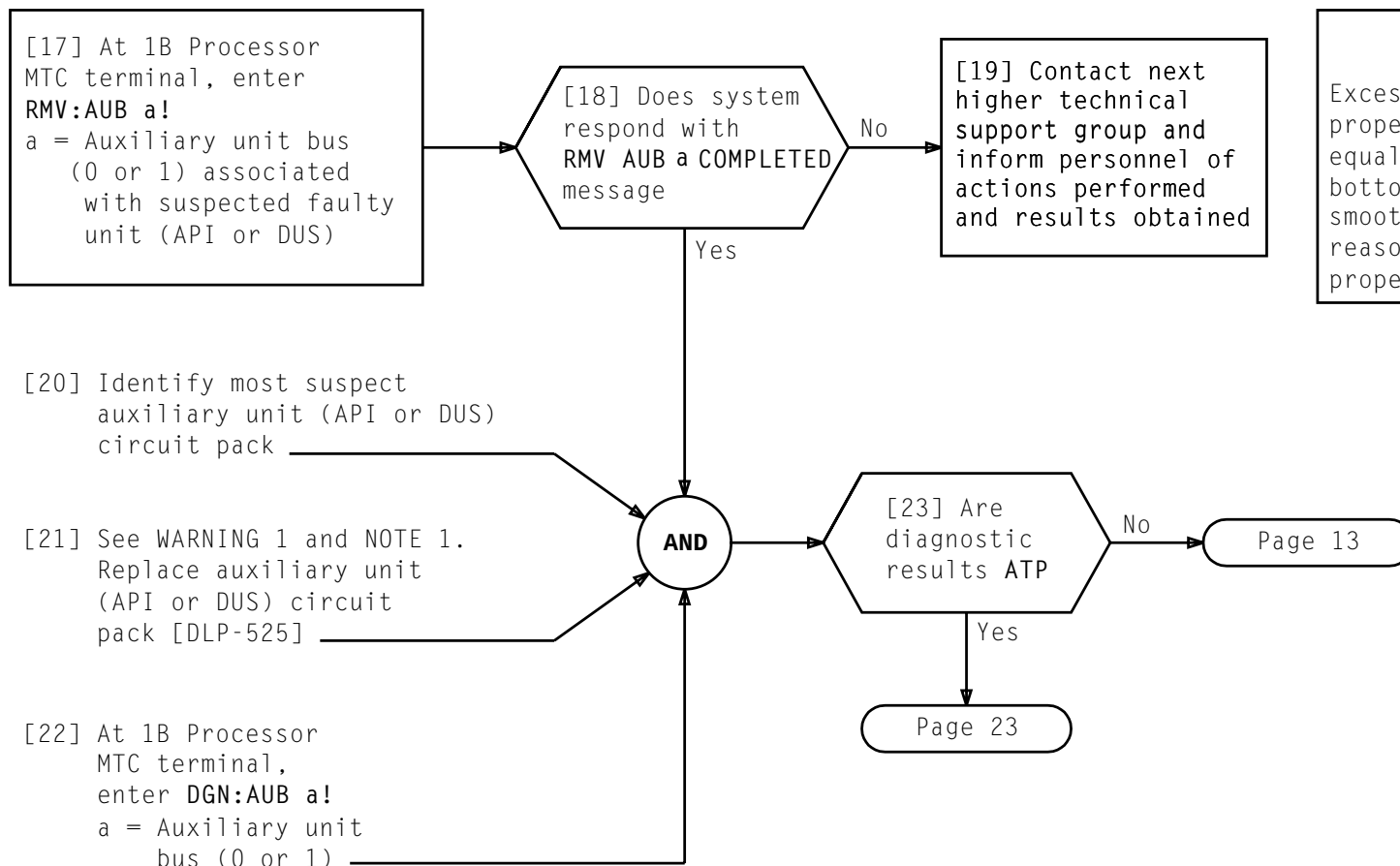
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TABLE E AUXILIARY UNIT BUS (AUB) DRIVER/RECEIVER SUSPECTED CIRCUIT PACK LOCATIONS					
CIRCUIT PACK LETTER CODE	AUB DRIVER/ RECEIVER SUSPECTED CIRCUIT PACK LOCATION	BUS	CIRCUIT PACK LETTER CODE	AUB DRIVER/ RECEIVER SUSPECTED CIRCUIT PACK LOCATION	BUS
A	*70-096 *70-144	0 1	L	*70-128 *70-176	0 1
B	*70-096 *70-144	0 1	M	*70-096 *70-144	0 1
C	*70-128 *70-176	0 1	N P	*70-128 *70-176	— —
D	*70-112 *70-160	0 1	Q R	*70-128 *70-176	— —
E	*70-112 *70-160	0 1	S T	*70-112 *70-160	— 0
F	*70-128 *70-176	0 1	U	*70-096 *70-144	0 1
G	*70-128 *70-176	0 1	V	*70-096 *70-144	0 1
H	*70-112 *70-160	0 1	W	*70-112 *70-116	0 1
J	*70-112 *70-160	0 1	X	*70-062 *70-062	0 1
K	*70-128 *70-176	0 1		*70-062 *70-062	0 1
* = AUB Being Diagnosed (0 or 1)					

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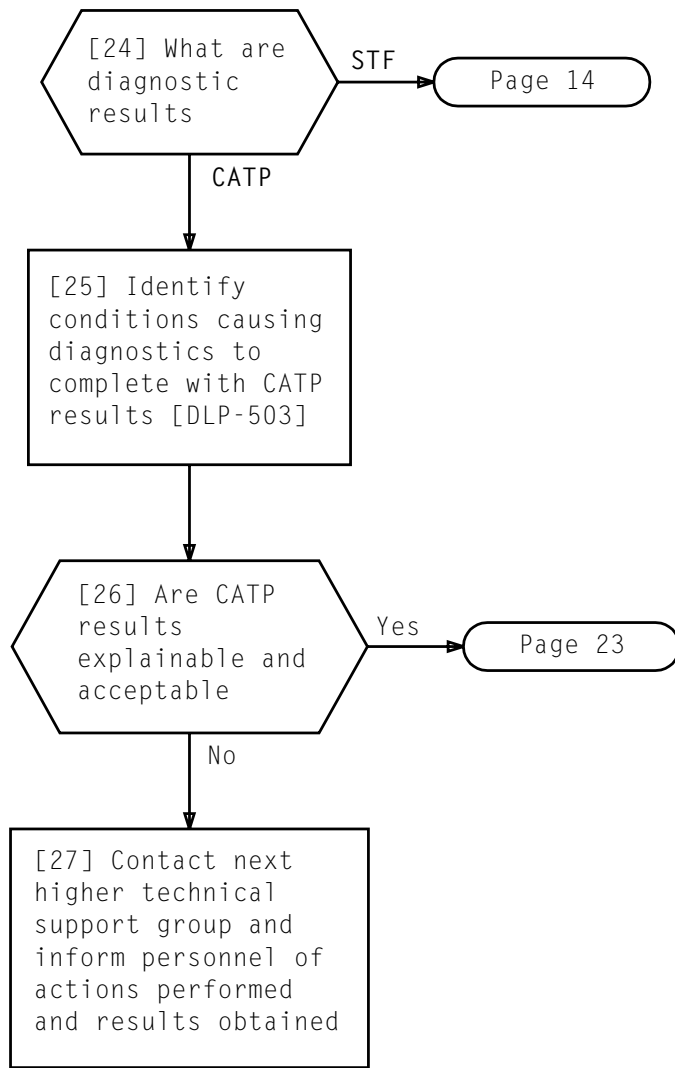


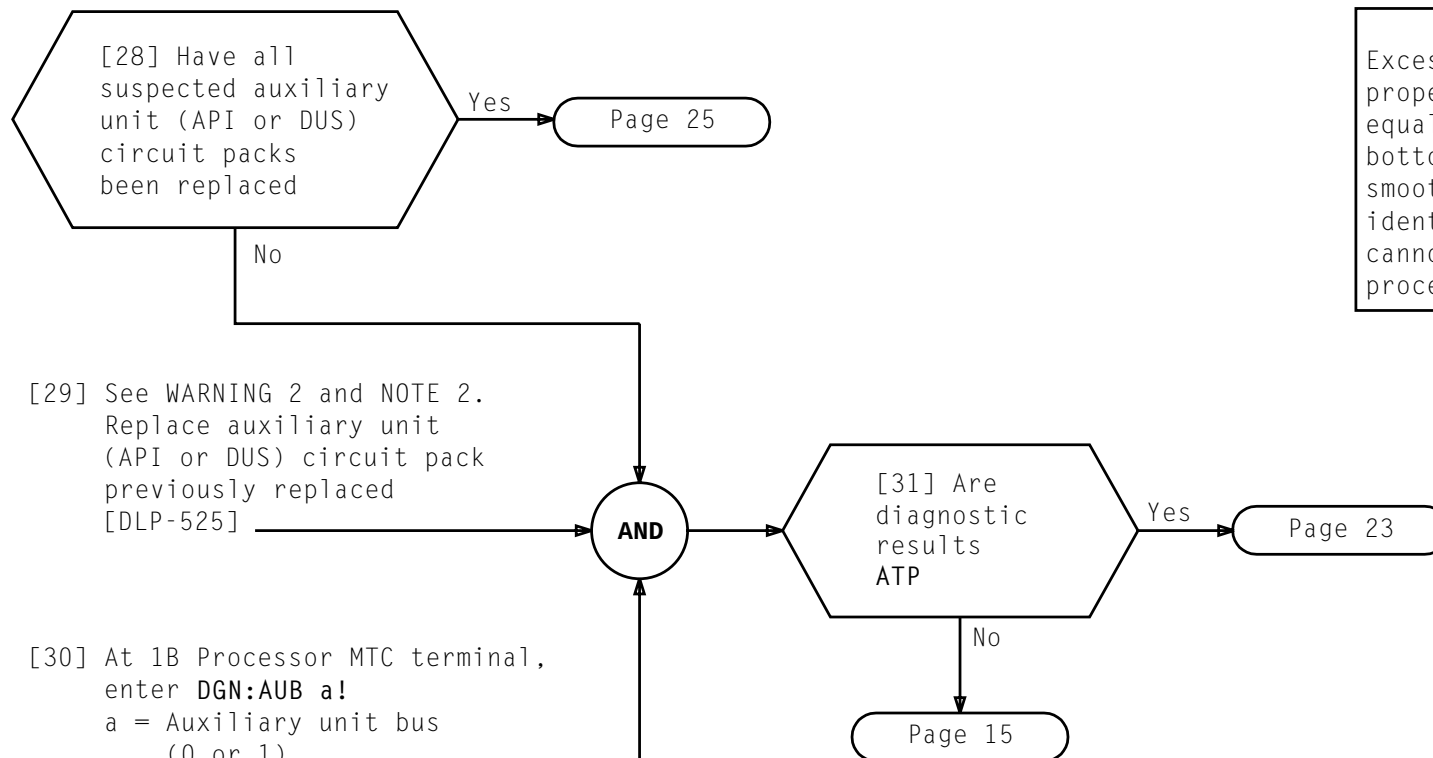
NOTE 1
Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 1
A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

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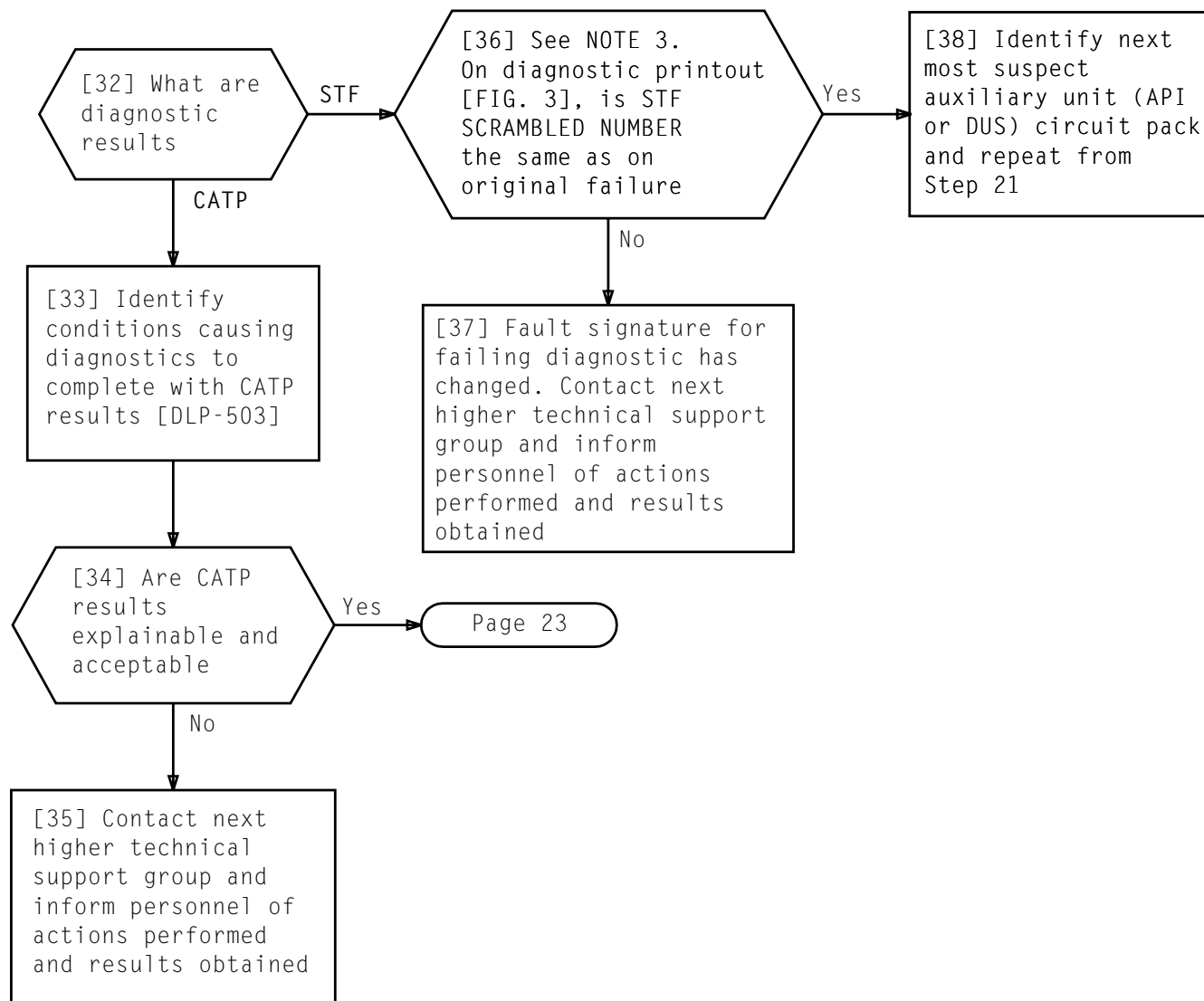


NOTE 2
Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 2
A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

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NOTE 3 The STF SCRAMBLED NUMBER indicates if all the diagnostic raw data (test and mismatch) is identical or different for two diagnostic runs. If TLP SCRAMBLED NUMBER value is same, diagnostic raw data is identical. Otherwise, diagnostic raw data has changed in some manner		
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CLEAR AUXILIARY UNIT BUS (AUB) DIAGNOSTIC FAILURE BY ANALYZING RAW DATA

UNIT FAILING
DIAGNOSTICS
CONTAINING
SUSPECTED FAULTY
EQUIPMENT

SUSPECTED
FAULTY
EQUIPMENT CODE
AND FUNCTION

SUSPECTED
FAULTY
EQUIPMENT
LOCATION

STF
SCRAMBLED
NUMBER

LOCATION OF
SUSPECTED FAULTY
EQUIPMENT NOT IN
UNIT FAILING
DIAGNOSTICS

EQUIPMENT CODE
AND FUNCTION OF
SUSPECTED FAULTY
EQUIPMENT NOT IN
UNIT FAILING
DIAGNOSTICS

UNIT CONTAINING
SUSPECTED FAULTY
EQUIPMENT NOT IN
UNIT FAILING
DIAGNOSTICS

```

M 28 DGN: CC 0 TERMINATED AT PH 56 ADR 4666 AFTER TEST 343    MSG STARTED
#896

M 28 DGN: CC 0 PH 56 STF (9,00000000 00000000)    MSG IP
      TEST      MISMATCH      SUPPLEMENTARY DATA
      19      00400000
      26      00400000
#897

M 28 ANALY:TLPFILE :CC 0 SUMMARY DATA    MSG STARTED
KEY:   V1      V2      V3      V4      V5      V6
TD : 03020014 00000000 00000523 00700000 00000000 00000000
ED : 01060020 00000000 00132014 00000000 00132123 00000000
ED : 00050001 00000000 00024016 00000000 00000000 00000000
MFNUM : 00000523
#898

M 28 ANALY:TLPFILE: CC 0 SUSPECTED FAULTY EQUIPMENT    MSG IP
                        IN UNIT UNDER TEST

MFNUM : 00000523
FLN 00015.640
EQPT LOC      CODE (FN)      NOTE WT  FS SYM  SD  HELPER ID
-----
1B PROC-041-062 KLV24 (CKUT ) 1 10 7 1 4A148
1B PROC-041-046 KLV8  (CB1  ) 2 9 1 4A148
#899

M 28 ANALY:TLPFILE: CC 0 SUSPECTED FAULTY EQUIPMENT    MSG IP
                        NOT IN UNIT UNDER TEST

MFNUM : 00000523
EQPT LOC      CODE (FN)      NOTE WT  FS SYM  SD  HELPER ID
-----
1B PROC-141-062 KLV24 (CKUT ) 1 1 7 1 4A148 :CC 1
NEQLS 00000006
#900

M28 ANALY:TLPFILE: CC 0 SUSPECTED FAULTY EQUIPMENT    MSG COMPL
                        NOTES

MFNUM : 00000523
NOTES:
1 (COM01)----SPECIAL PROCEDURES ARE REQUIRED FOR CIRCUIT PACK
REPLACEMENT. REFER TO THE ASSOCIATED TOP.
#901

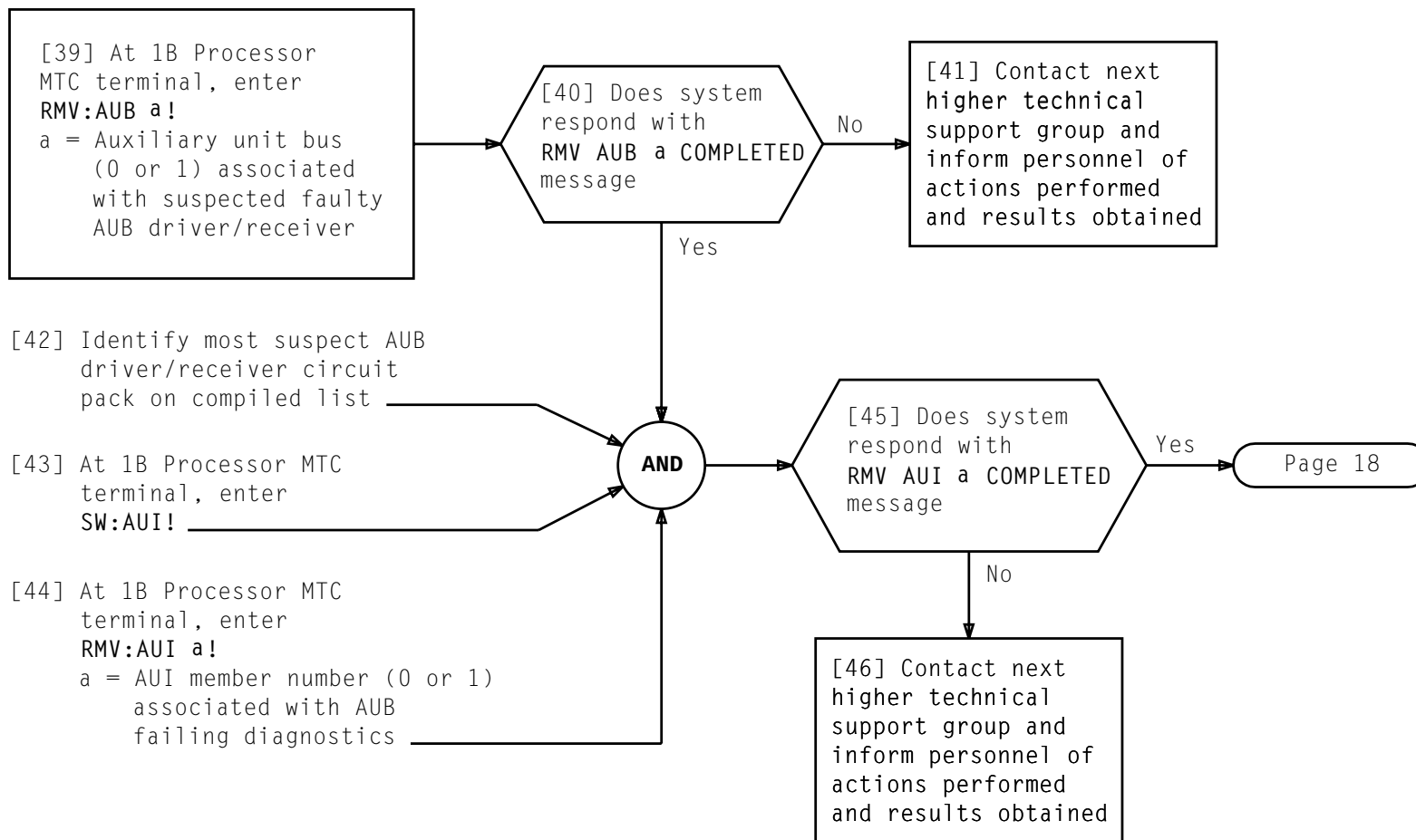
M 28 DGN: CC 0 STOPPED STF (1.9,15364222)    MSG COMPL
05/20/92 00:28:38
#902

```

FIG. 3 - Sample Printout of Diagnostic Failure With TLP Suspected Faulty Equipment List

**CLEAR AUXILIARY UNIT BUS (AUB) DIAGNOSTIC FAILURE BY ANALYZING
RAW DATA**

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[47] See WARNING 3 and
NOTE 4. Replace suspect
circuit pack
[DLP-500]

[48] Allow ample time
for diagnostics to
complete

[49] At 1B Processor MTC
terminal, enter
RST:AUI a!
a = AUI member number
(0 or 1)

[50] At 1B Processor MTC
terminal, enter
SW:AUI!

[51] At 1B Processor MTC
terminal, enter
DGN:AUB a!
a = AUB member
number (0 or 1)

AND

[52] Are
diagnostic
results
ATP

No

Page 19

Yes

Page 23

NOTE 4

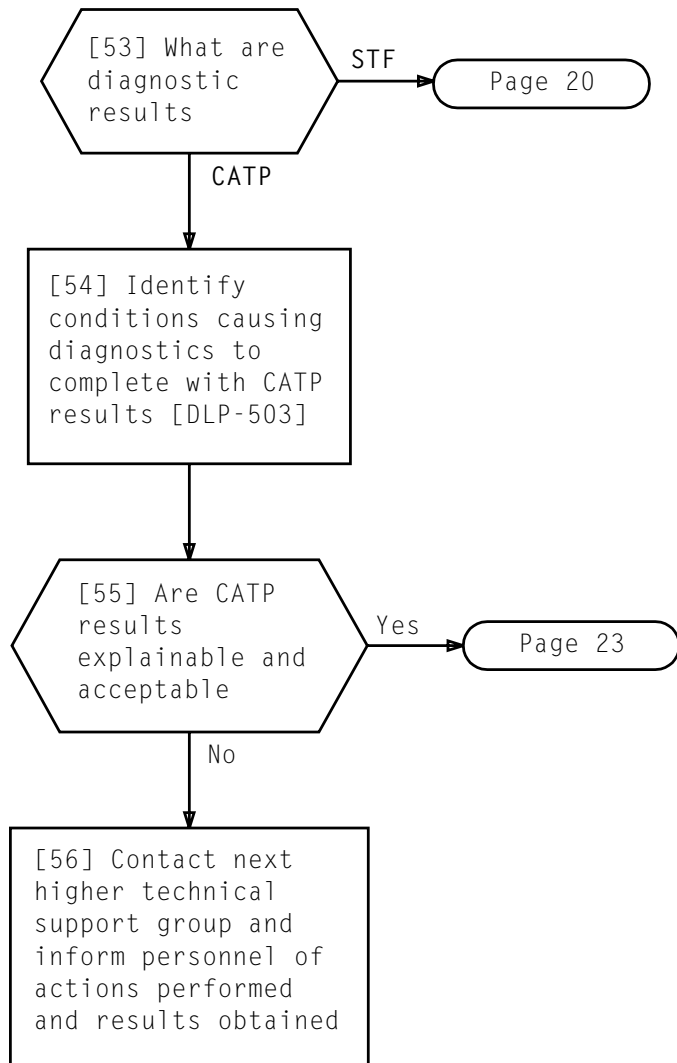
Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

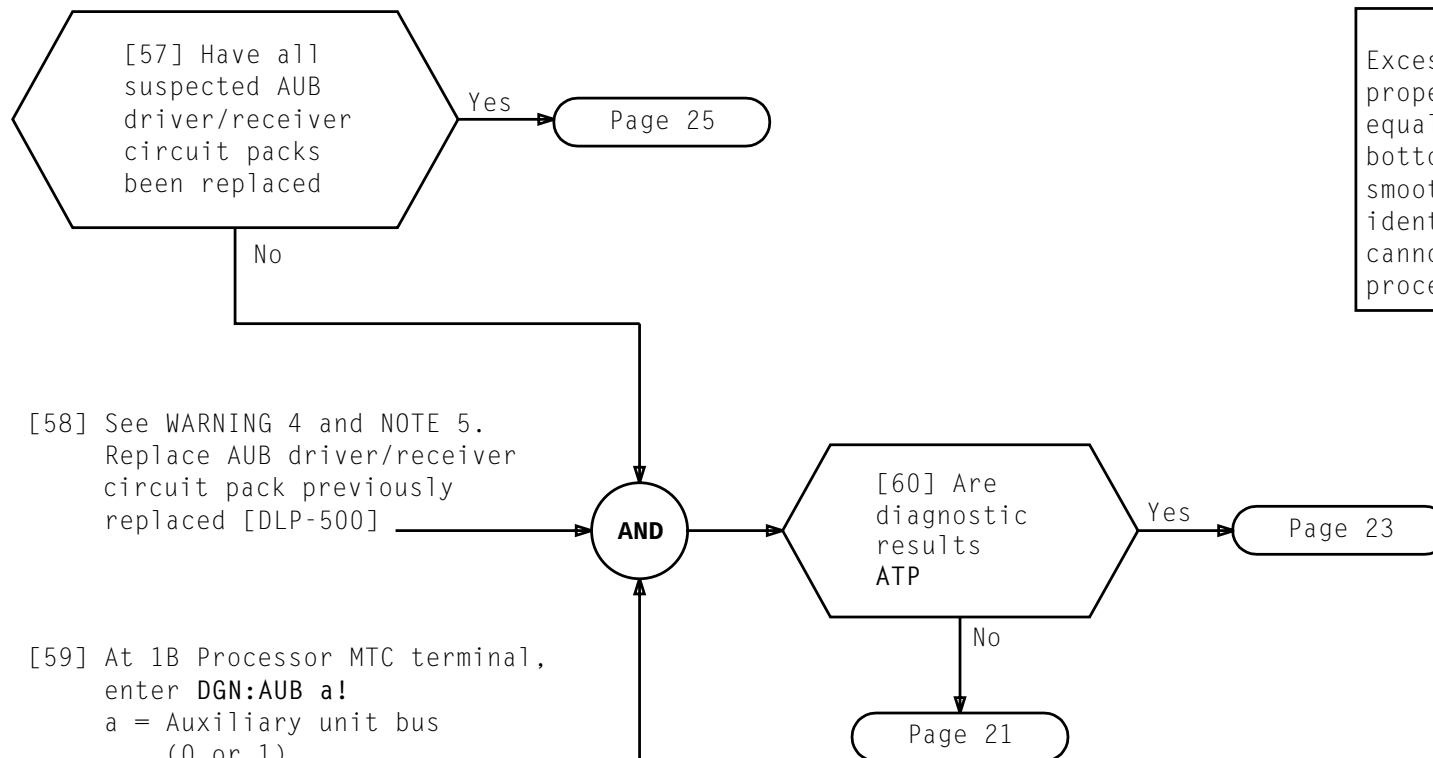
WARNING 3

A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads, or connector pins

**CLEAR AUXILIARY UNIT BUS (AUB) DIAGNOSTIC FAILURE BY ANALYZING
RAW DATA**

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NOTE 5

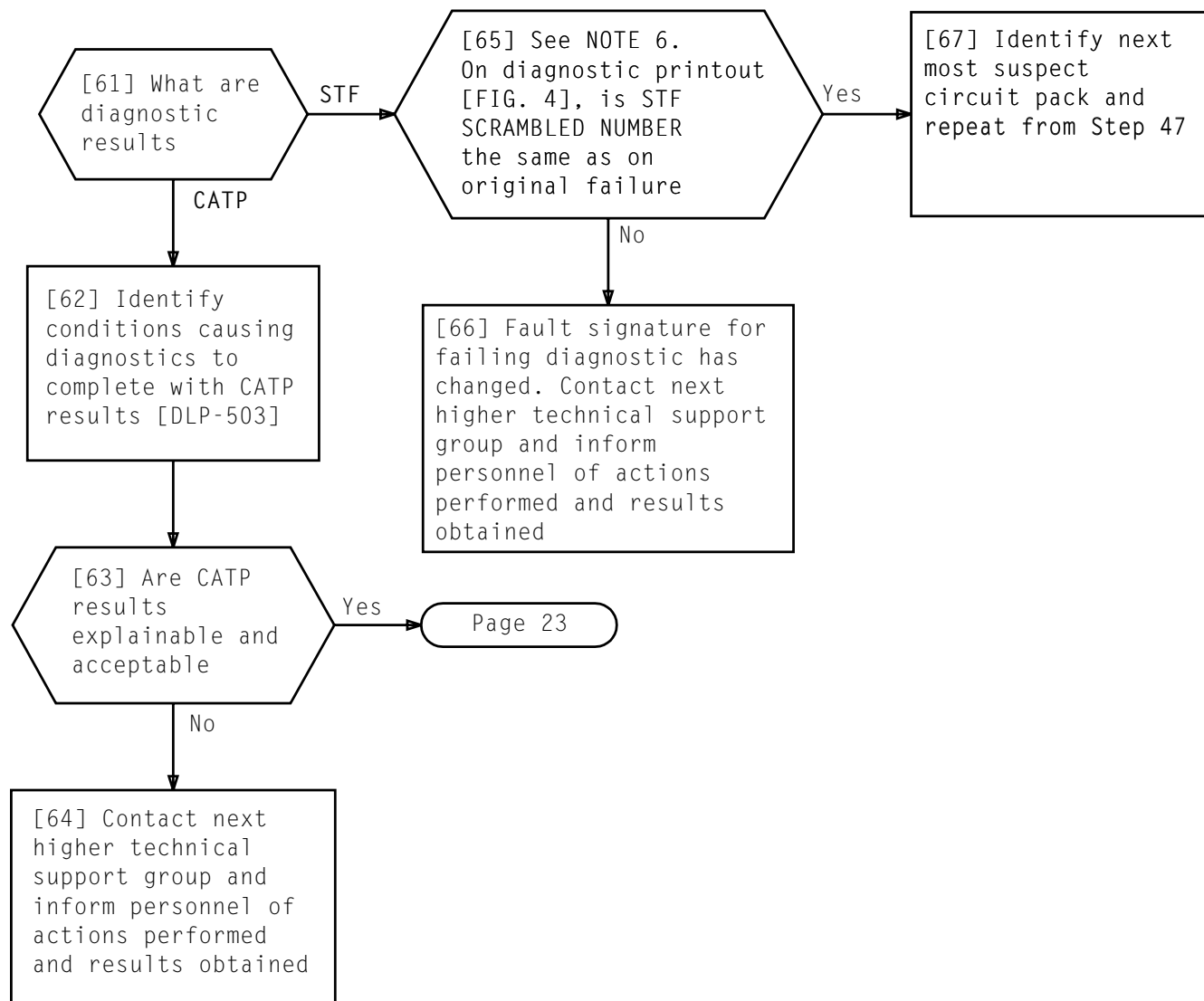
Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 4

A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

CLEAR AUXILIARY UNIT BUS (AUB) DIAGNOSTIC FAILURE BY ANALYZING RAW DATA

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NOTE 6		
The STF SCRAMBLED NUMBER indicates if all the diagnostic raw data (test and mismatch) is identical or different for two diagnostic runs. If TLP SCRAMBLED NUMBER value is same, diagnostic raw data is identical. Otherwise, diagnostic raw data has changed in some manner		
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CLEAR AUXILIARY UNIT BUS (AUB) DIAGNOSTIC FAILURE BY ANALYZING RAW DATA

UNIT FAILING
DIAGNOSTICS
CONTAINING
SUSPECTED FAULTY
EQUIPMENT

SUSPECTED
FAULTY
EQUIPMENT CODE
AND FUNCTION

SUSPECTED
FAULTY
EQUIPMENT
LOCATION

STF
SCRAMBLED
NUMBER

```

M 28 DGN: CC 0 TERMINATED AT PH 56 ADR 4666 AFTER TEST 343    MSG STARTED
#896

M 28 DGN: CC 0 PH 56 STF (9,00000000 00000000) MSG IP
      TEST   MISMATCH   SUPPLEMENTARY DATA
      19     00400000
      26     00400000
#897

M 28 ANALY:TLPFILE :CC 0 SUMMARY DATA    MSG STARTED
KEY:   V1      V2      V3      V4      V5      V6
TD : 03020014 00000000 00000523 00700000 00000000 00000000
ED : 01060020 00000000 00132014 00000000 00132123 00000000
ED : 00050001 00000000 00024016 00000000 00000000 00000000
MFNUM : 00000523
#898

M 28 ANALY:TLPFILE: CC 0 SUSPECTED FAULTY EQUIPMENT    MSG IP
                        IN UNIT UNDER TEST

MFNUM : 00000523
FLN   00015.640
EQPT LOC      CODE (FN)      NOTE WT  FS SYM  SD  HELPER ID
-----
1B PROC-041-062 KLV24 (CKUT ) 1 10 7 1 4A148
1B PROC-041-046 KLV8  (CB1  ) 2 9 1 4A148
#899

M 28 ANALY:TLPFILE: CC 0 SUSPECTED FAULTY EQUIPMENT    MSG IP
                        NOT IN UNIT UNDER TEST

MFNUM : 00000523
EQPT LOC      CODE (FN)      NOTE WT  FS SYM  SD  HELPER ID
-----
1B PROC-141-062 KLV24 (CKUT ) 1 1 7 1 4A148 :CC 1
NEQLS 00000006
#900

M28 ANALY:TLPFILE: CC 0 SUSPECTED FAULTY EQUIPMENT    MSG COMPL
                        NOTES

MFNUM : 00000523
NOTES:
1 (COM01)-----SPECIAL PROCEDURES ARE REQUIRED FOR CIRCUIT PACK
REPLACEMENT. REFER TO THE ASSOCIATED TOP.
#901

M 28 DGN: CC 0 STOPPED STF (1.9,15364222) MSG COMPL
05/20/92 00:28:38
#902

```

LOCATION OF
SUSPECTED FAULTY
EQUIPMENT NOT IN
UNIT FAILING
DIAGNOSTICS

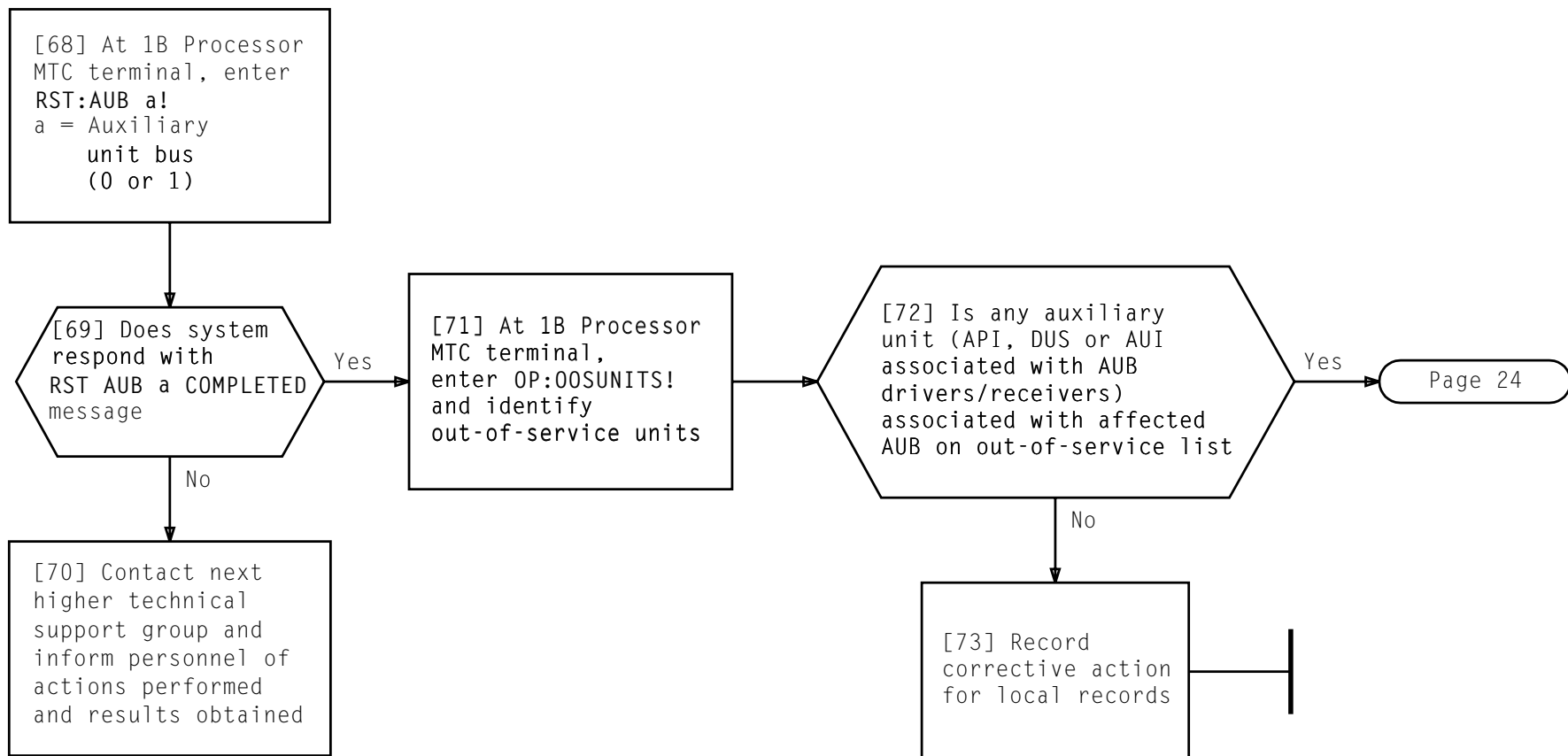
EQUIPMENT CODE
AND FUNCTION OF
SUSPECTED FAULTY
EQUIPMENT NOT IN
UNIT FAILING
DIAGNOSTICS

UNIT CONTAINING
SUSPECTED FAULTY
EQUIPMENT NOT IN
UNIT FAILING
DIAGNOSTICS

FIG. 4 - Sample Printout of Diagnostic Failure With TLP Suspected Faulty Equipment List

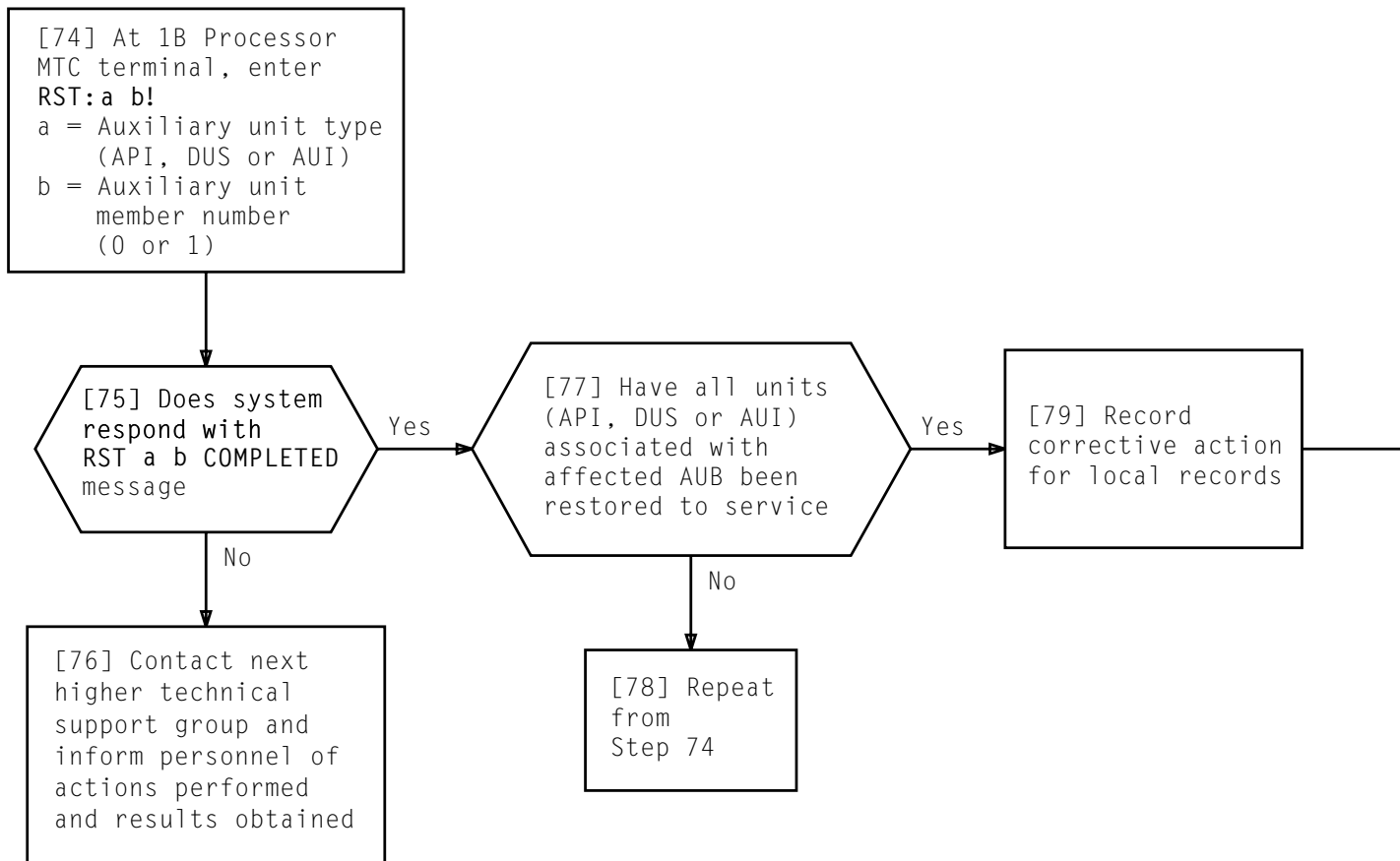
**CLEAR AUXILIARY UNIT BUS (AUB) DIAGNOSTIC FAILURE BY ANALYZING
RAW DATA**

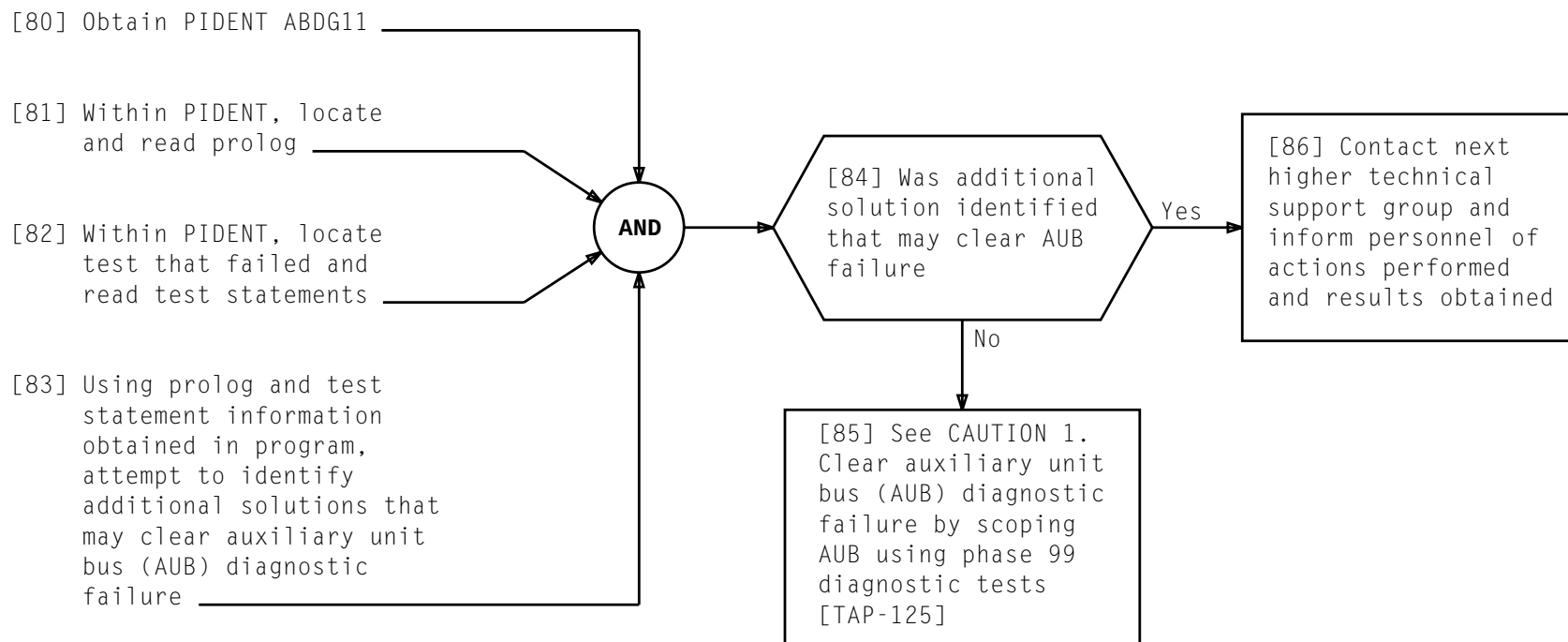
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CLEAR AUXILIARY UNIT BUS (AUB) DIAGNOSTIC FAILURE BY ANALYZING RAW DATA

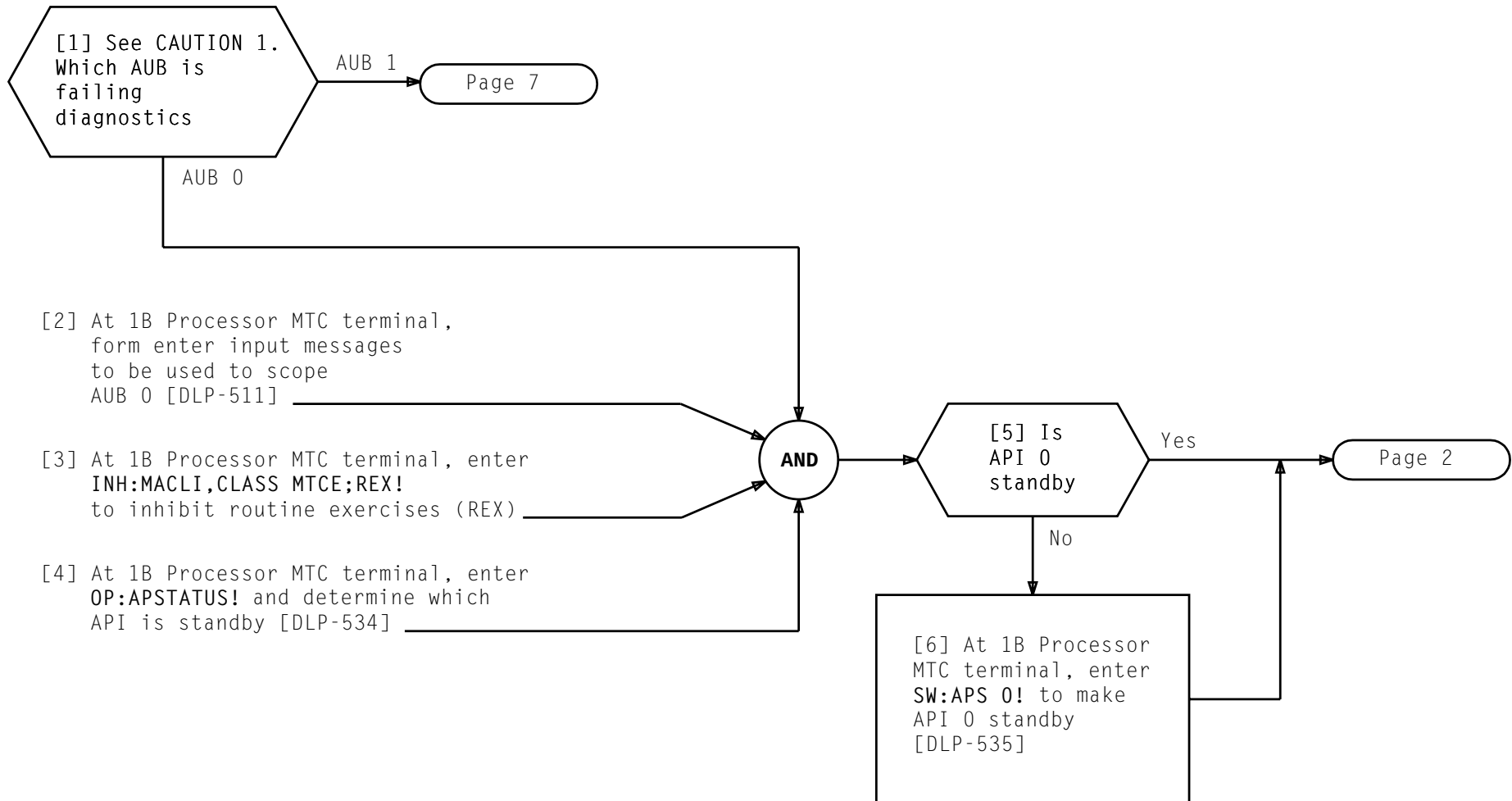
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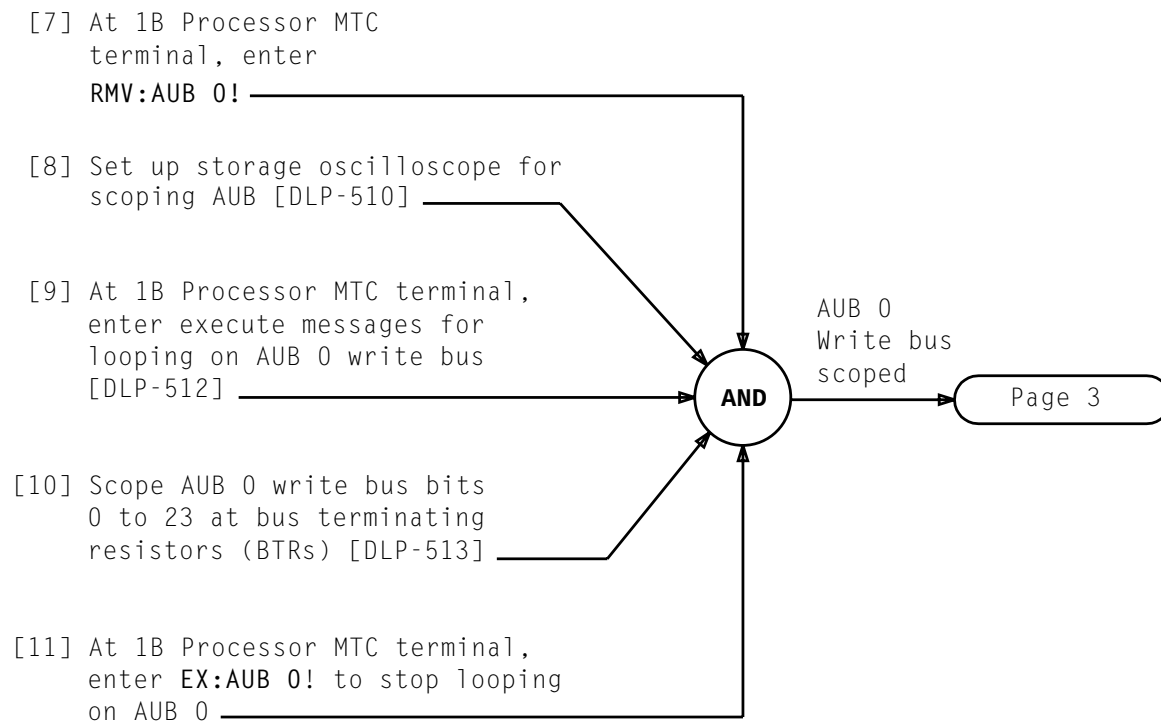
CAUTION 1 <i>To avoid service interruption, bus scoping must be performed at low-traffic periods</i>		
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CLEAR AUXILIARY UNIT BUS (AUB) DIAGNOSTIC FAILURE BY ANALYZING RAW DATA



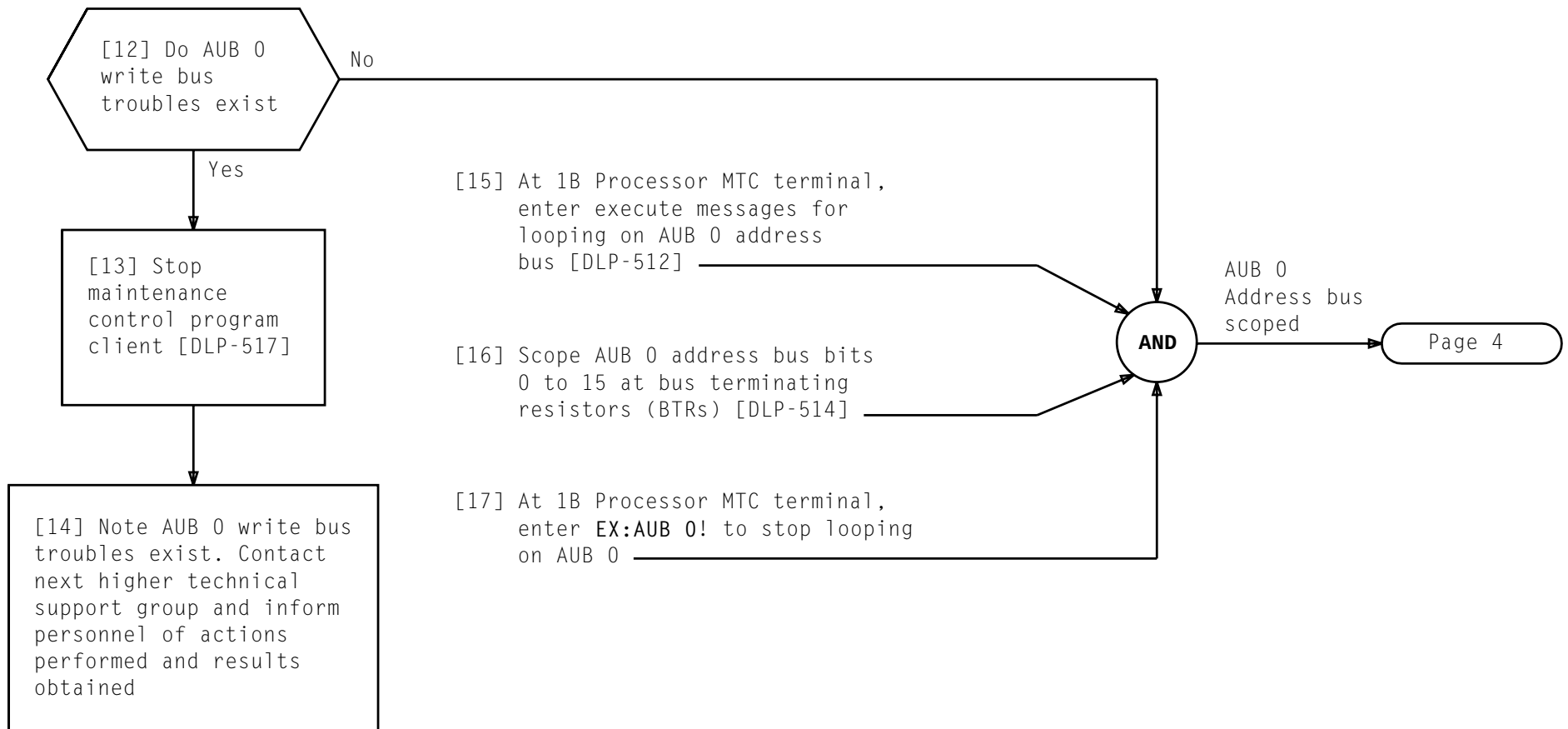
CLEAR AUXILIARY UNIT BUS (AUB) DIAGNOSTIC FAILURE BY SCOPING AUB USING PHASE 99 DIAGNOSTIC TESTS

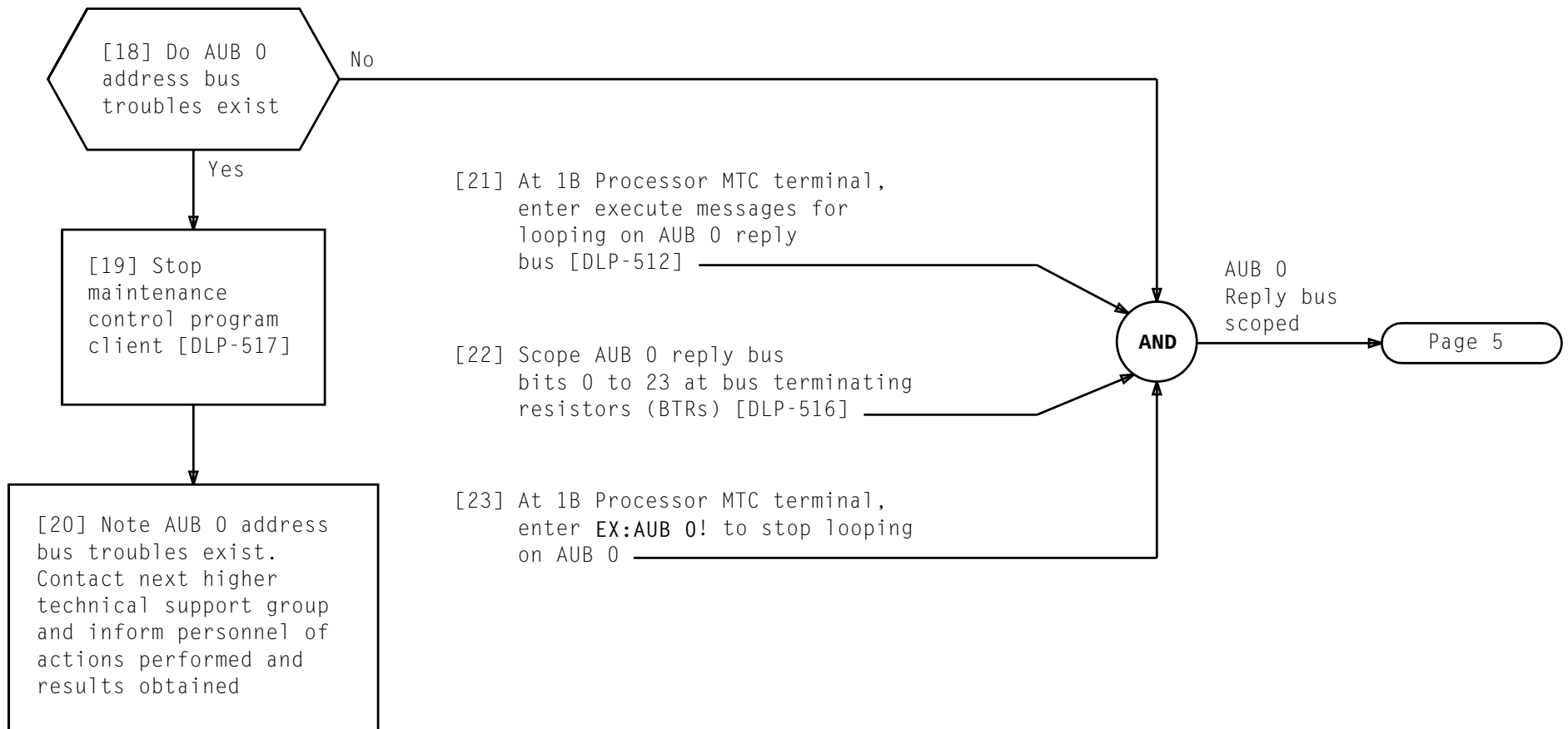
CAUTION 1 <i>To avoid service interruption, bus scoping must be performed at low-traffic periods</i>			
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234-351-004		TAP	
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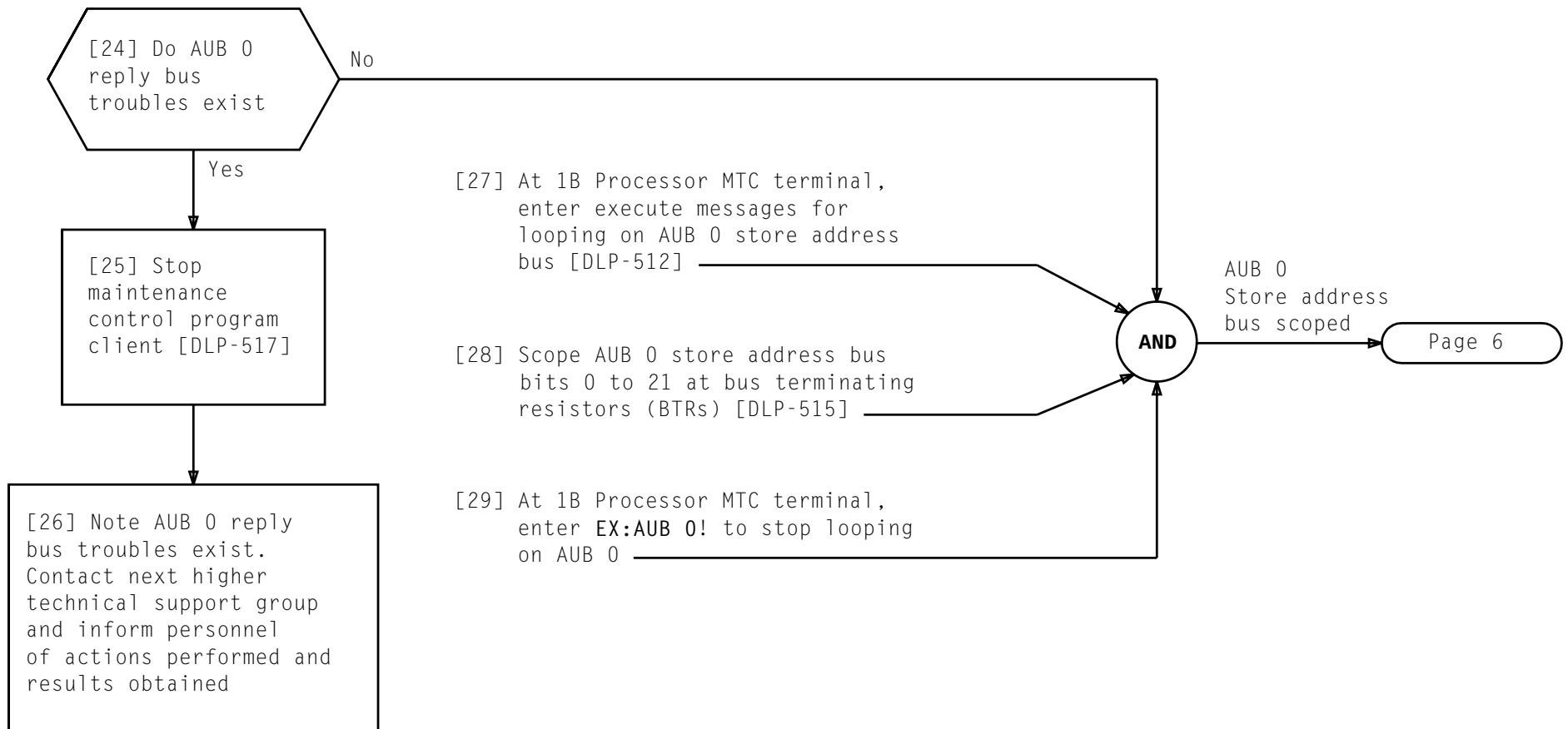


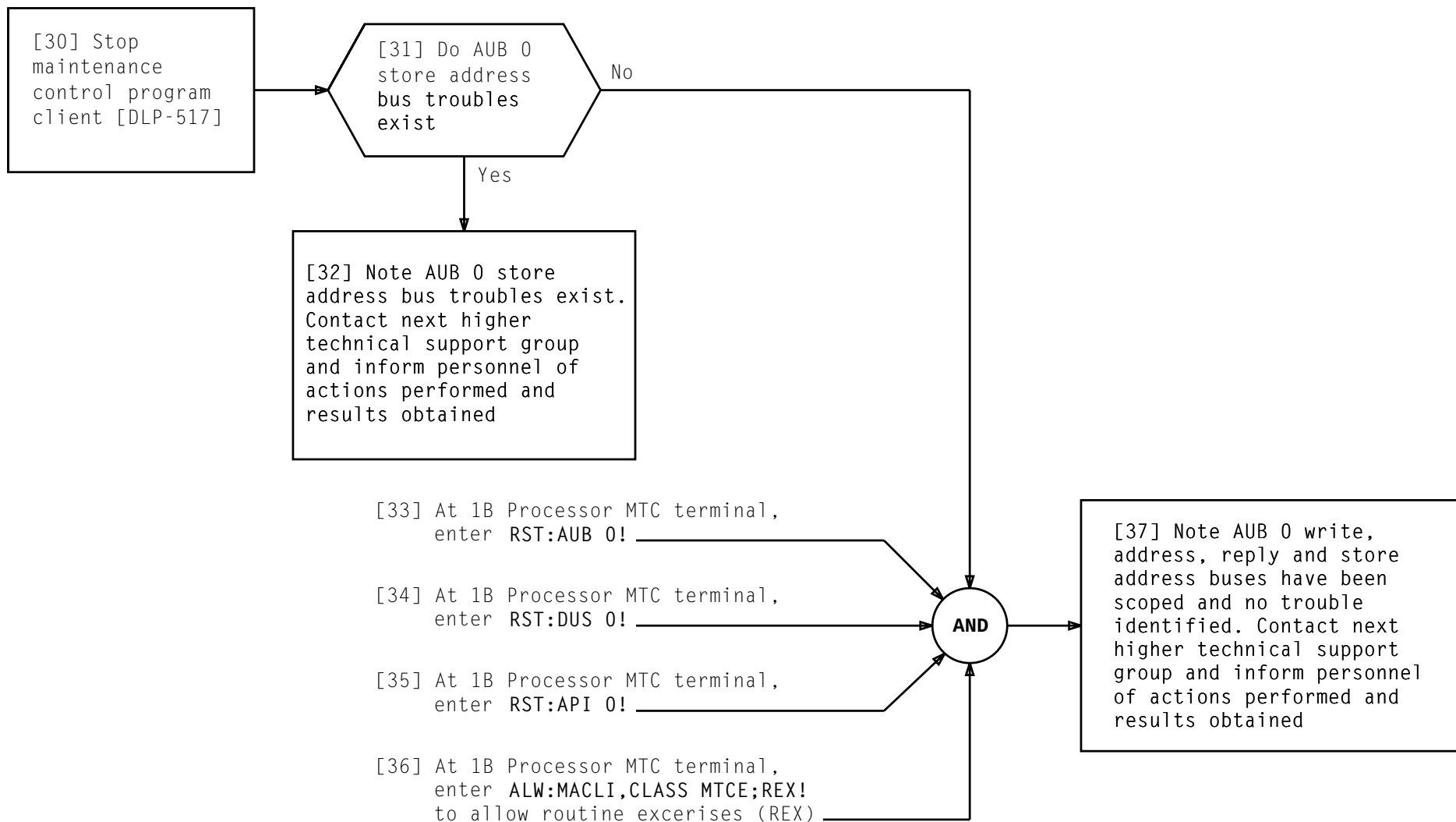
**CLEAR AUXILIARY UNIT BUS (AUB) DIAGNOSTIC FAILURE BY SCOPING AUB
USING PHASE 99 DIAGNOSTIC TESTS**

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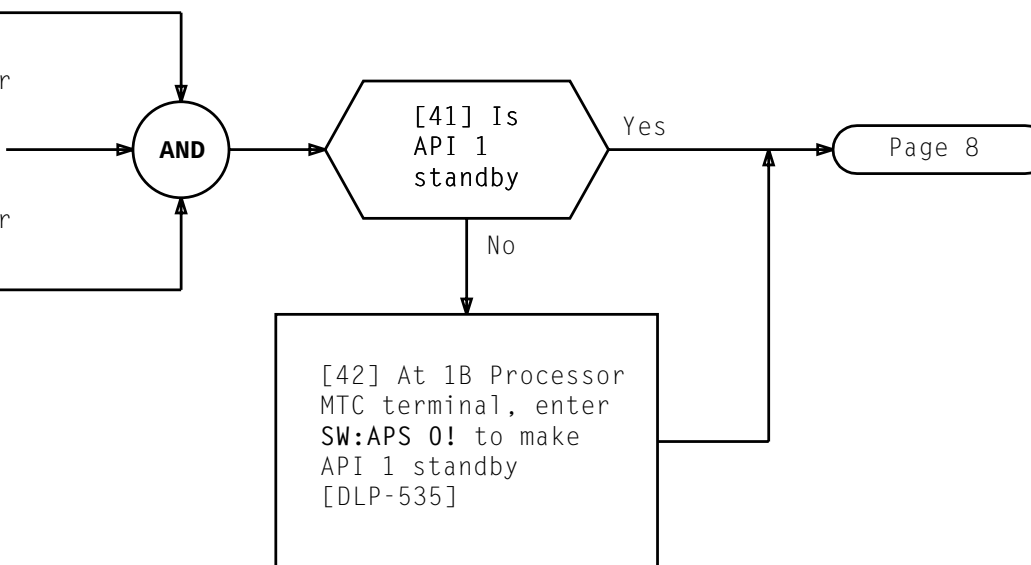




[38] At 1B Processor MTC terminal,
form enter input messages
to be used to scope
AUB 1 [DLP-511]

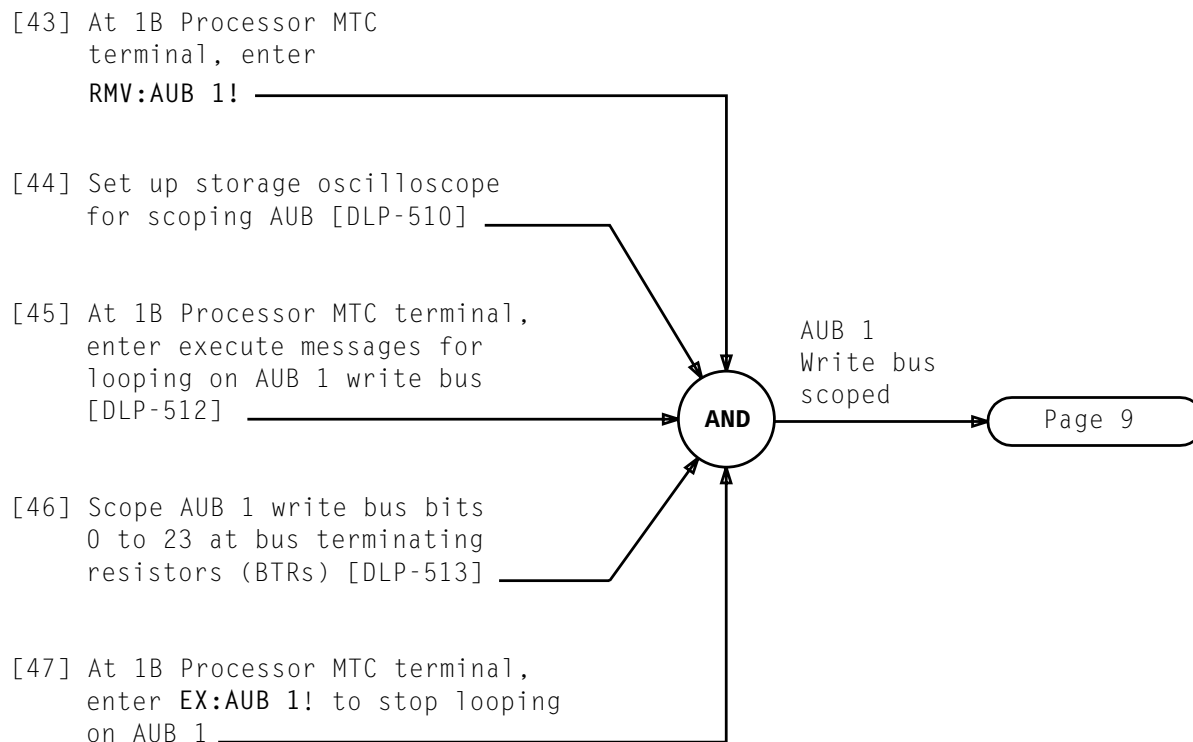
[39] At 1B Processor MTC terminal, enter
INH:MACLI,CLASS MTCE;REX!
to inhibit routine exercises (REX)

[40] At 1B Processor MTC terminal, enter
OP:APSTATUS! and determine which
API is standby [DLP-534]



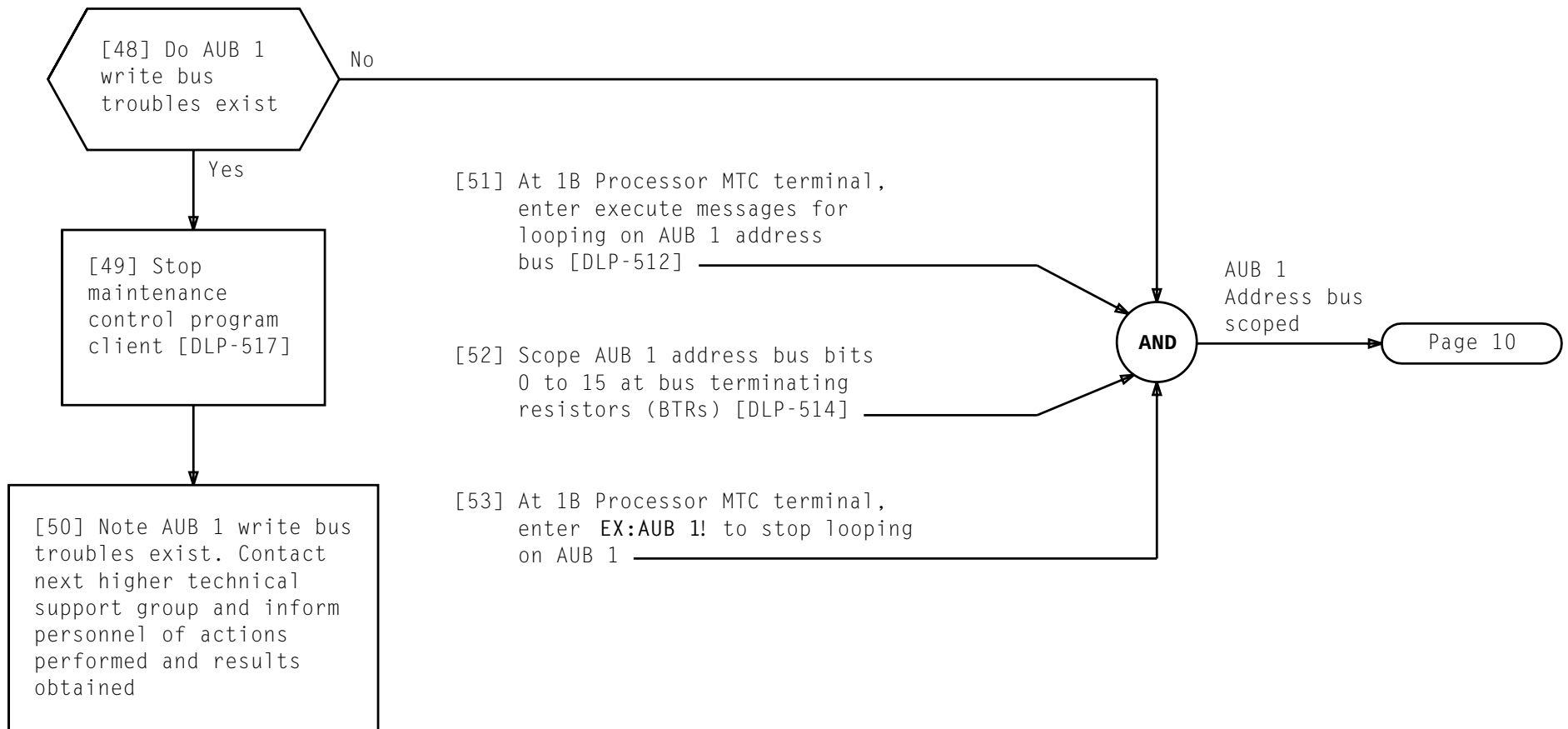
**CLEAR AUXILIARY UNIT BUS (AUB) DIAGNOSTIC FAILURE BY SCOPING AUB
USING PHASE 99 DIAGNOSTIC TESTS**

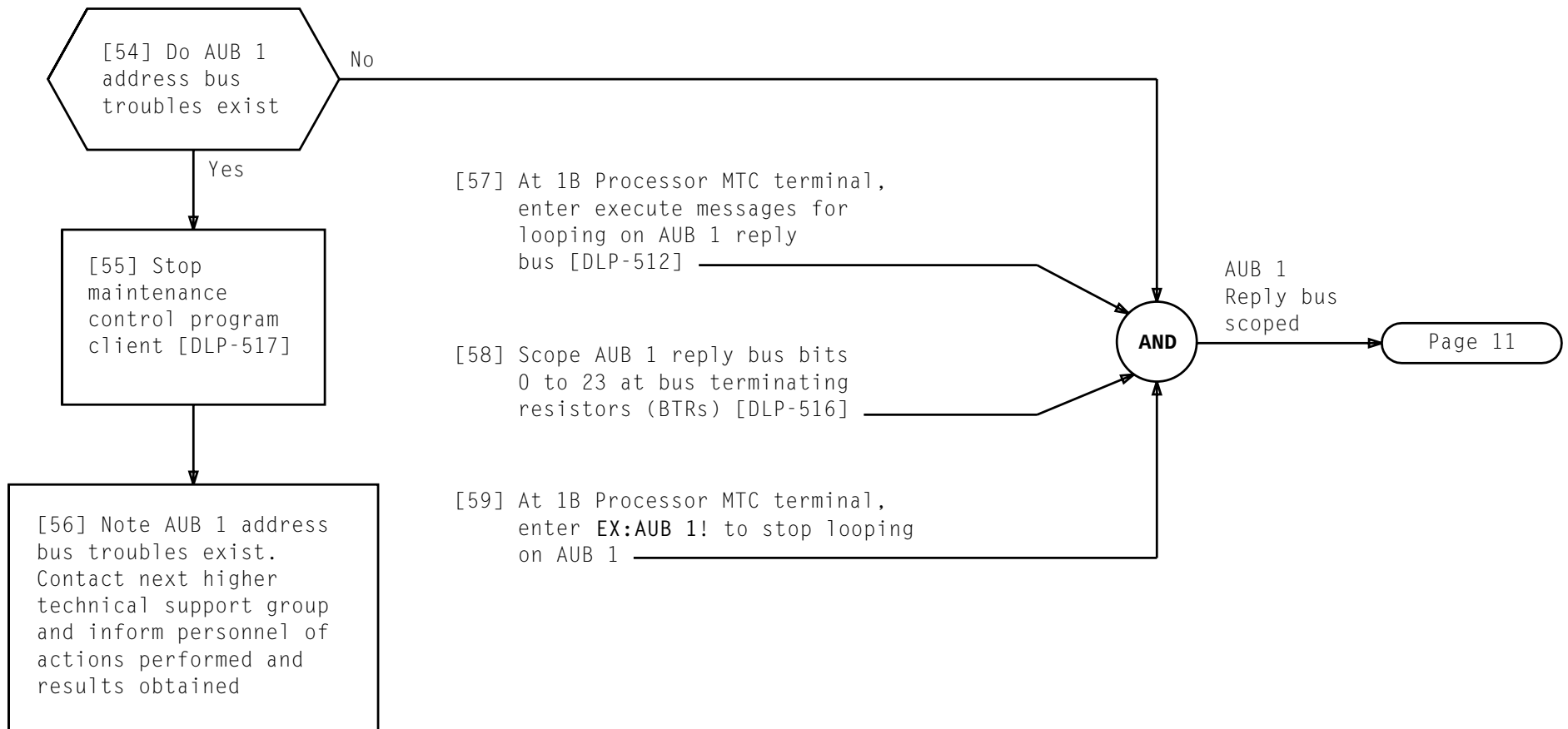
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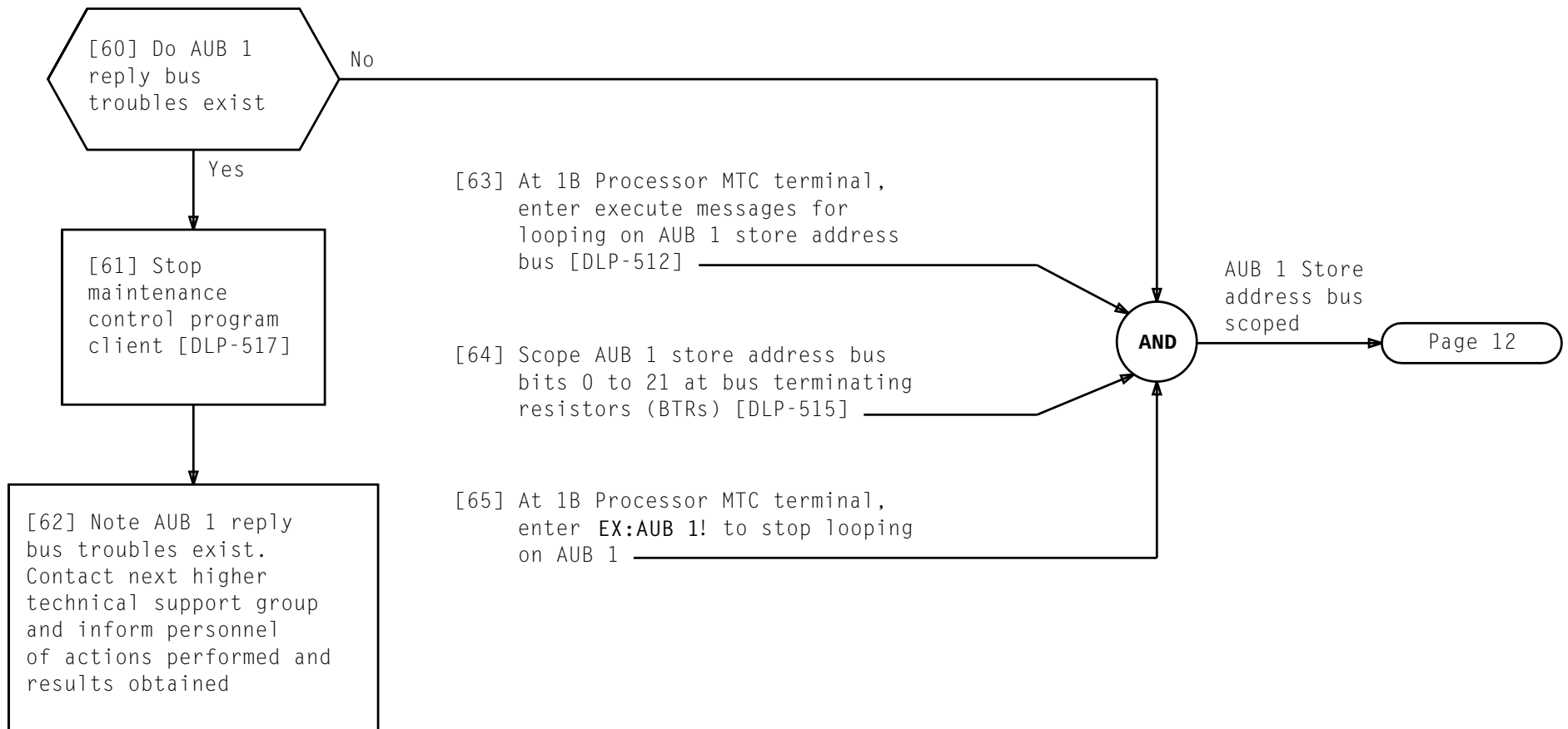


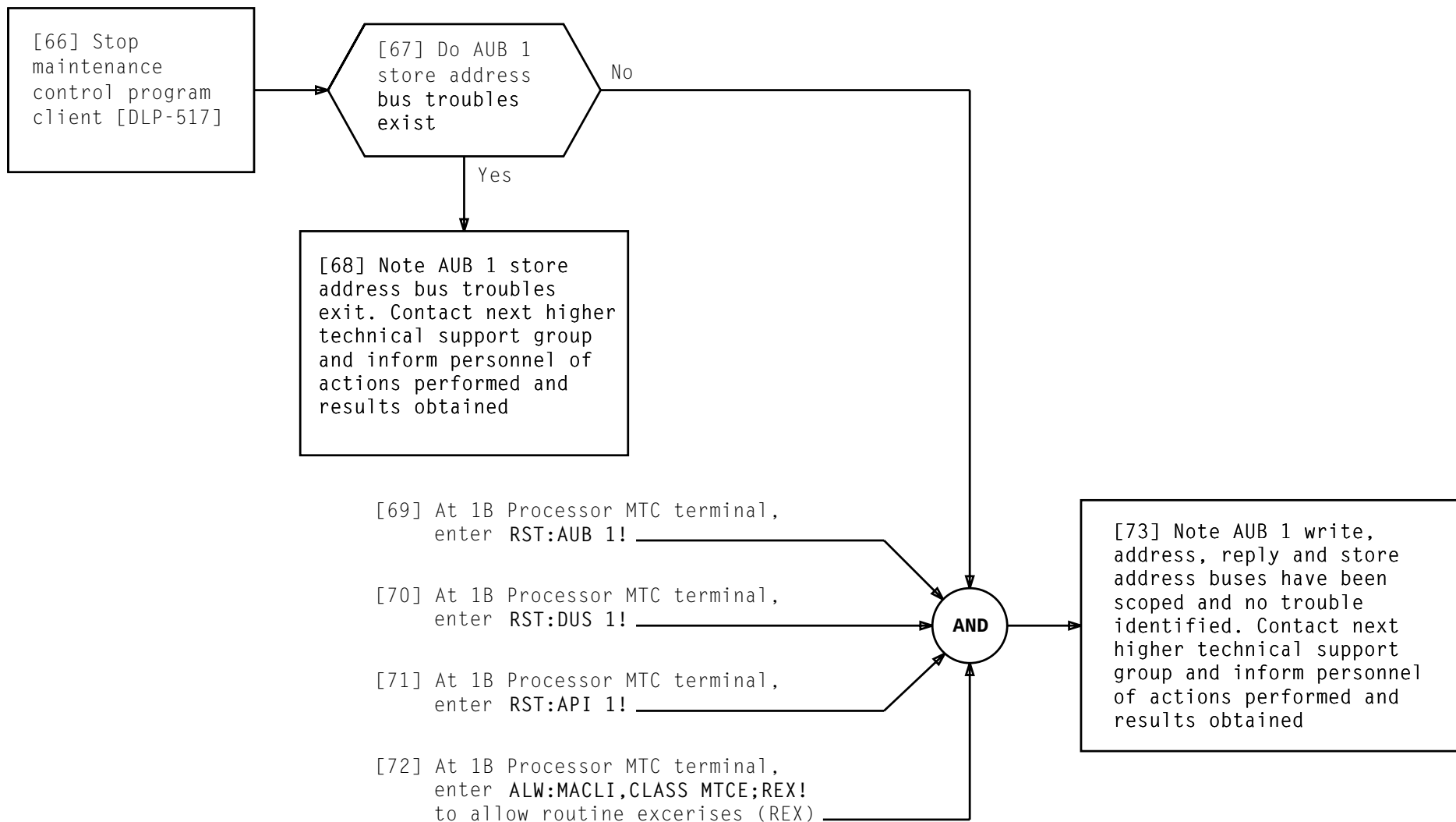
**CLEAR AUXILIARY UNIT BUS (AUB) DIAGNOSTIC FAILURE BY SCOPING AUB
USING PHASE 99 DIAGNOSTIC TESTS**

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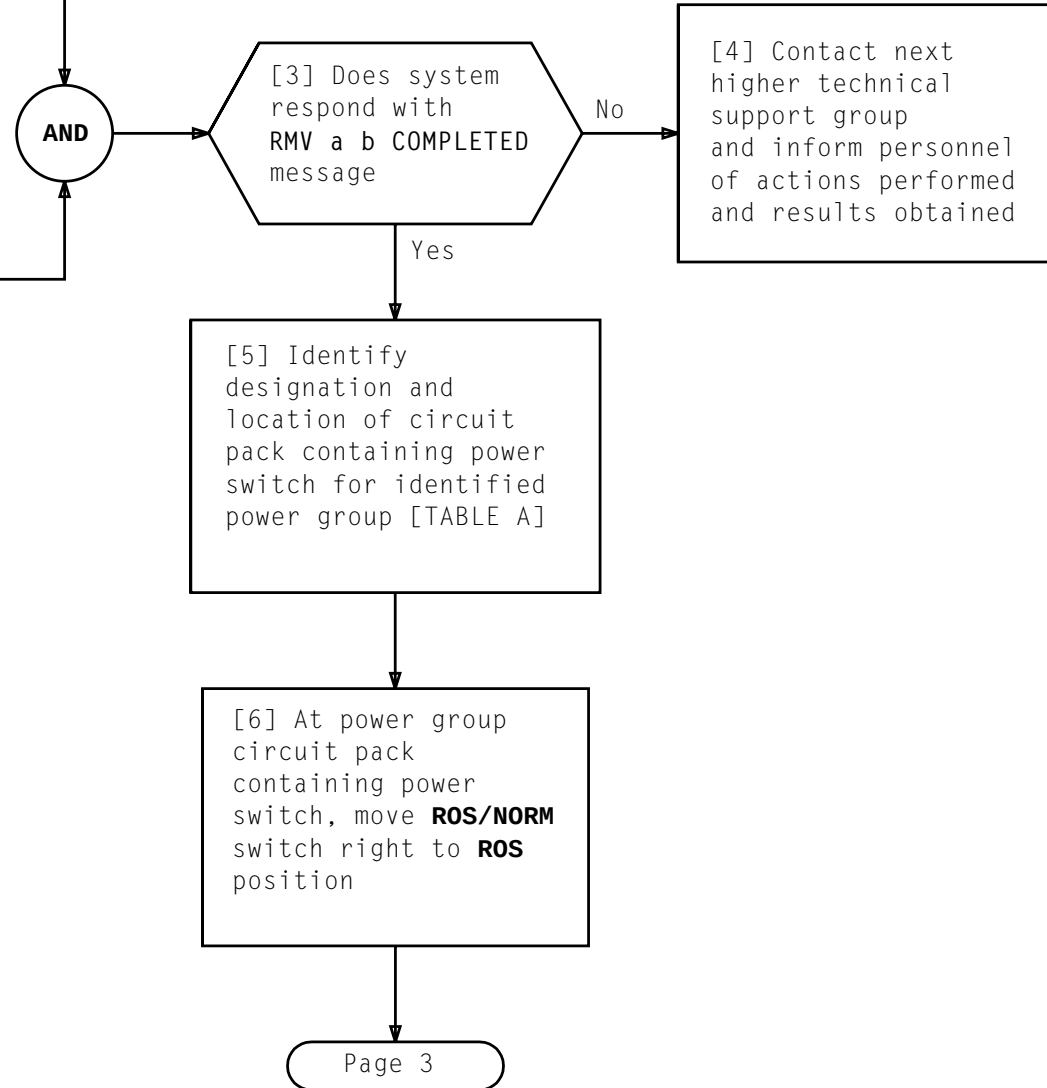






[1] Using 1B Processor output message [FIG. 1], identify power group failing automatic power monitor test (Phase 1)

[2] At 1B Processor MTC terminal, enter
RMV:a b!
 a = Unit type of power group failing test
 b = Unit member number



CLEAR AUTOMATIC POWER MONITOR TEST (PHASE 1) FAILURE – 1B PROCESSOR CABINET UNIT

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POWER GROUP
Failing Automatic
Power Monitor
Test

```

M 18 DGN: CC 1 PH 1 STF (1,00000000 00000000) MSG STARTED
TEST MISMATCH SUPPLEMENTARY DATA
1 00000010 00000000 00000102 00000010
#112

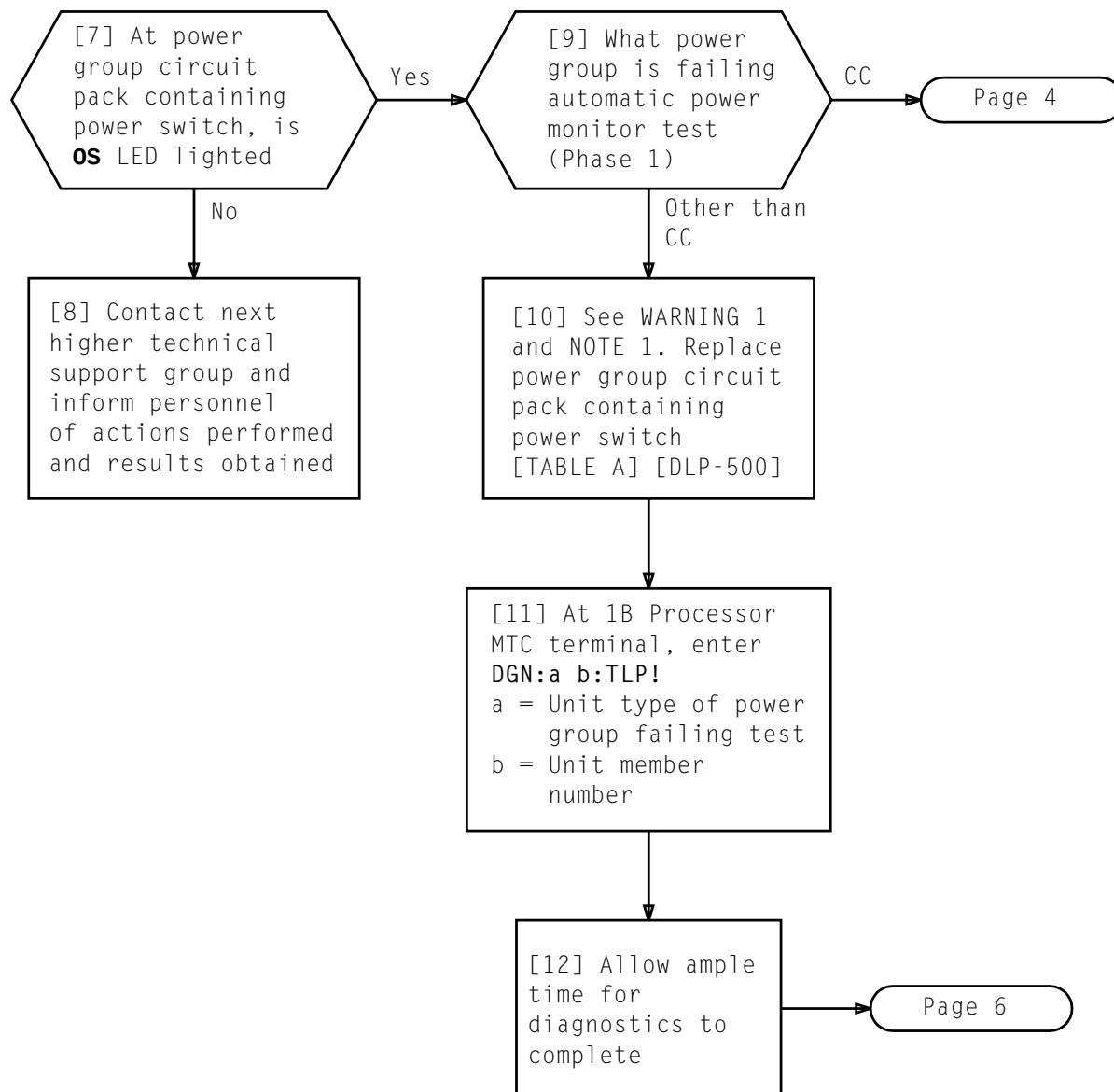
```

FIG. 1 – Sample Printout of Automatic Power Monitor Test (Phase 1) Failure

TABLE A POWER GROUP CIRCUIT PACKS CONTAINING POWER SWITCH		
POWER GROUP	CIRCUIT PACK CONTAINING POWER SWITCH	
	IDENTIFIER	LOCATION
CC	KLW11	41-014
AUI	KLW18	58-120
MUP	KLW25	58-086
CS	KLW1	24-006 thru 24-078 24-104 thru 24-176
PS	KLW2	41-128 thru 41-176
SSD	KLW15	58-168
XPWR	KLW23	58-030
Call Store Bus 0 Buffer	KLW26	24-086
Call Store Bus 1 Buffer	KLW27	24-096

**CLEAR AUTOMATIC POWER MONITOR TEST (PHASE 1) FAILURE –
1B PROCESSOR CABINET UNIT**

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NOTE 1
Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

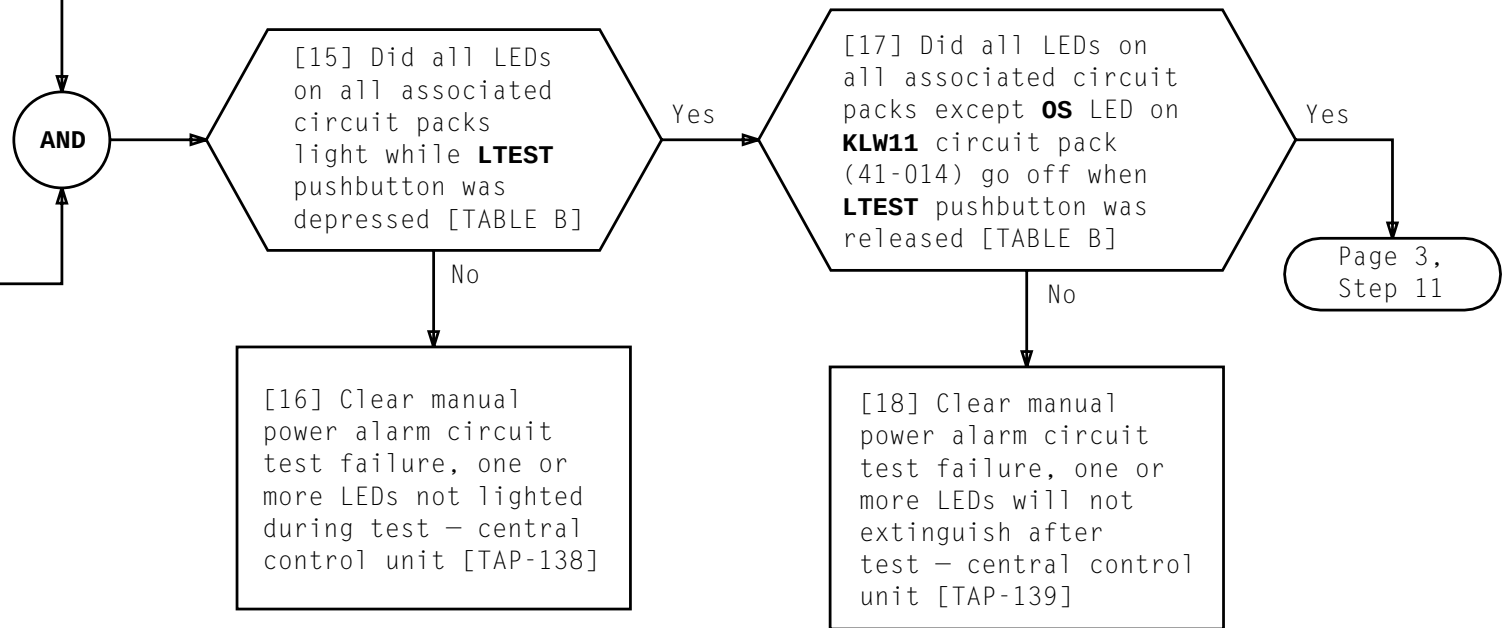
WARNING 1
A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

CLEAR AUTOMATIC POWER MONITOR TEST (PHASE 1) FAILURE – 1B PROCESSOR CABINET UNIT

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[13] At **KLW11** circuit pack (41-014), depress and hold **LTEST** pushbutton while observing all LEDs that light on all associated circuit packs [TABLE B]

[14] Release **LTEST** pushbutton



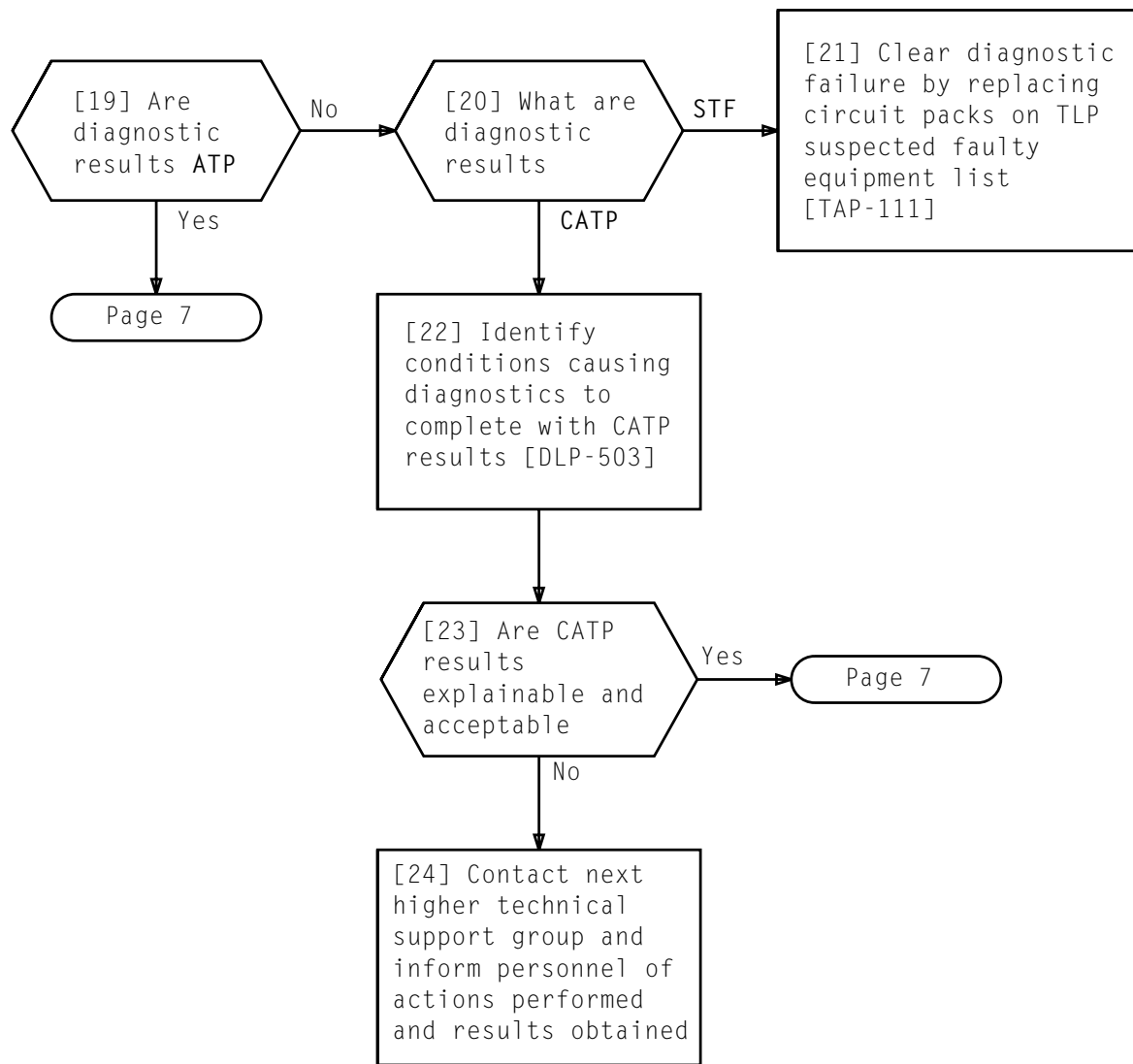
CLEAR AUTOMATIC POWER MONITOR TEST (PHASE 1) FAILURE – 1B PROCESSOR CABINET UNIT

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TABLE B CENTRAL CONTROL UNIT POWER ALARM CIRCUITRY LED LOCATIONS		
CIRCUIT PACK CONTAINING LEDS	CIRCUIT PACK LOCATION	NUMBER OF LEDS ON CIRCUIT PACK
KLW11	41-014	19
KLW12	58-014	16
KLW3	41-104	1
KLW4	41-112	1
KLW22/ KLW122/ KLW222	41-120	1

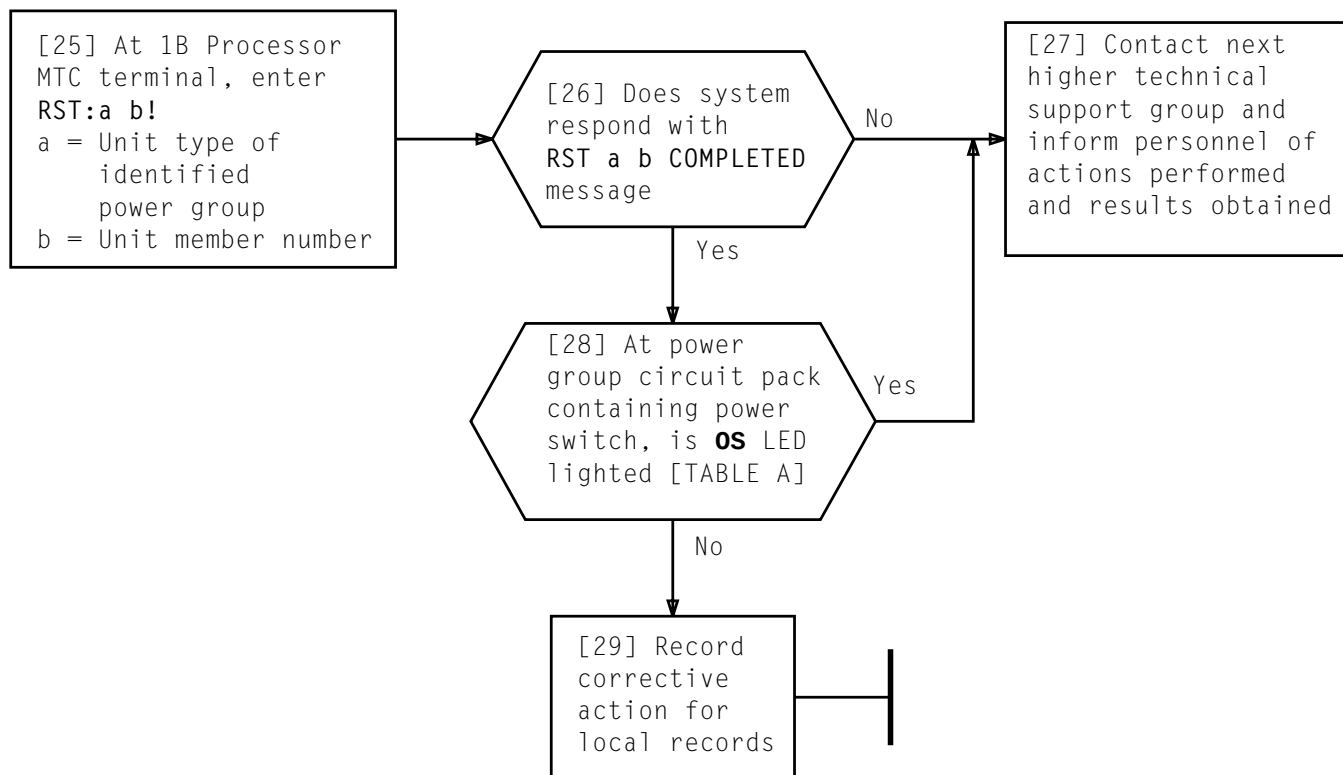
**CLEAR AUTOMATIC POWER MONITOR TEST (PHASE 1) FAILURE –
1B PROCESSOR CABINET UNIT**

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CLEAR AUTOMATIC POWER MONITOR TEST (PHASE 1) FAILURE – 1B PROCESSOR CABINET UNIT

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CLEAR AUTOMATIC POWER MONITOR TEST (PHASE 1) FAILURE – 1B PROCESSOR CABINET UNIT

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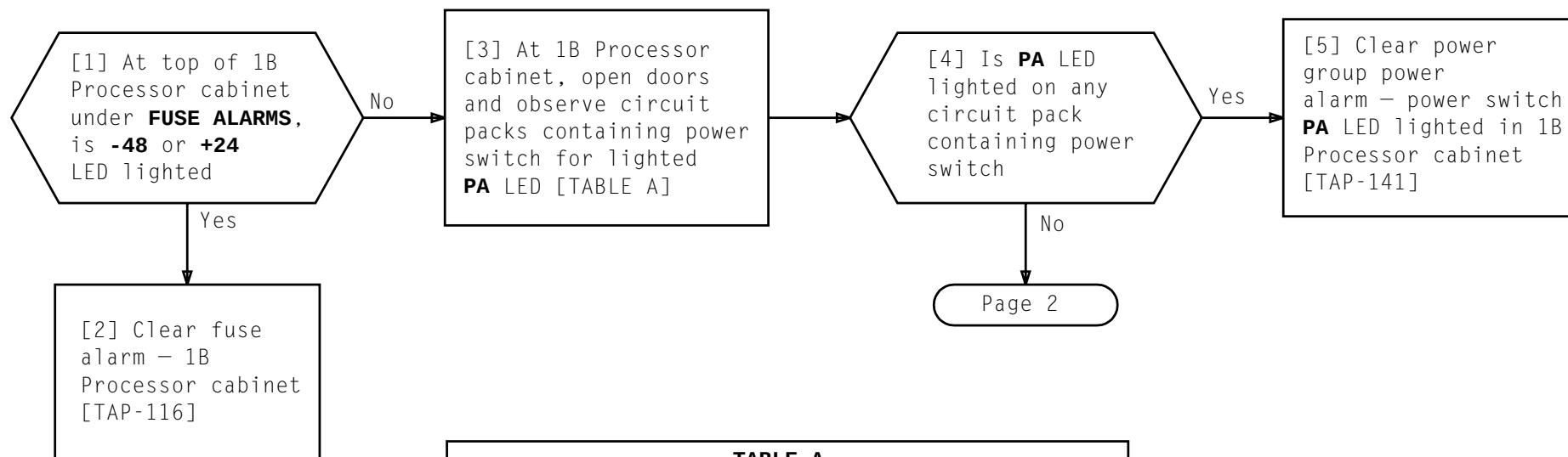


TABLE A POWER GROUP CIRCUIT PACKS CONTAINING POWER SWITCH		
POWER GROUP	CIRCUIT PACK CONTAINING POWER SWITCH	
	IDENTIFIER	LOCATION
CC	KLW11	41-014
AUI	KLW18	58-120
MUP	KLW25	58-086
CS	KLW1	24-006 thru 24-078 24-104 thru 24-176
PS	KLW2	41-128 thru 41-176
SSD	KLW15	58-168
XPWR	KLW23	58-030
CALL STORE BUS 0 BUFFER	KLW26	24-086
CALL STORE BUS 0 BUFFER	KLW27	24-096

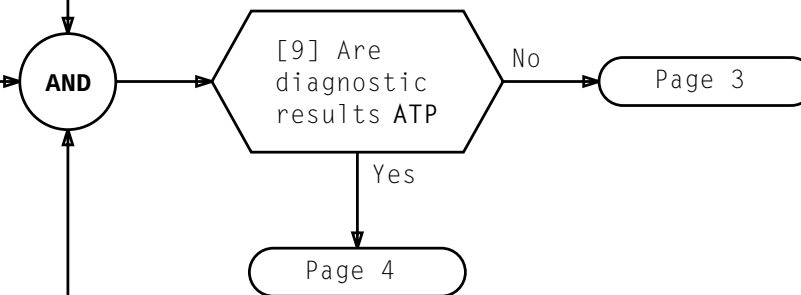
CLEAR POWER ALARM – PA LED LIGHTED ON 1B PROCESSOR CABINET FUSE UNIT COVER (BEZEL)

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[6] See NOTE 1. Identify first power group circuit pack containing power switch [TABLE A]

[7] See NOTE 2 and WARNING 1. Replace power group circuit pack containing power switch [DLP-500]

[8] After moving applicable **ROS/NORM** switch left to **NORM** position, allow ample time for diagnostics to complete



NOTES

1. It is suspected that a power alarm exists and no **PA** LED is lighted on a circuit pack power switch. At this point, circuit packs containing a power switch will be replaced one at a time in an attempt to isolate and clear the major alarm.
2. Excessive force is not required to seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 1

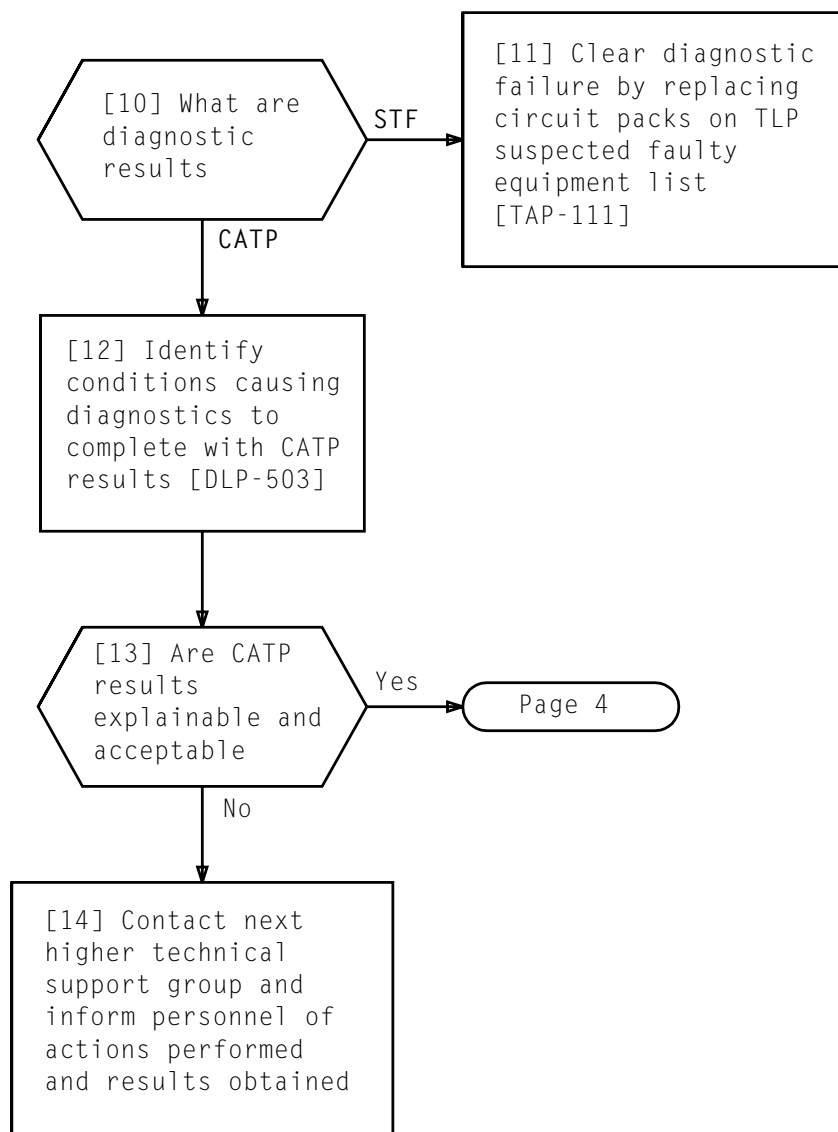
A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

CLEAR POWER ALARM – PA LED LIGHTED ON 1B PROCESSOR CABINET FUSE UNIT COVER (BEZEL)

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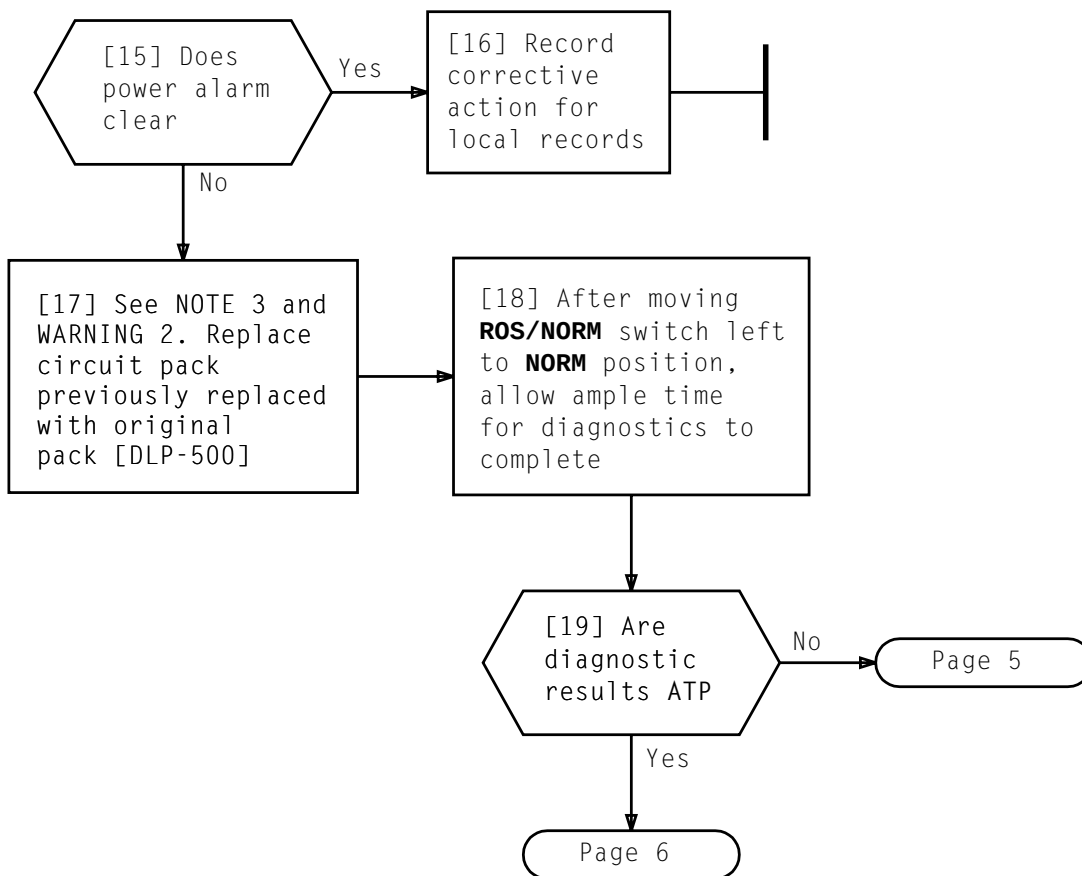
234-351-004 TAP

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CLEAR POWER ALARM – PA LED LIGHTED ON 1B PROCESSOR CABINET FUSE UNIT COVER (BEZEL)

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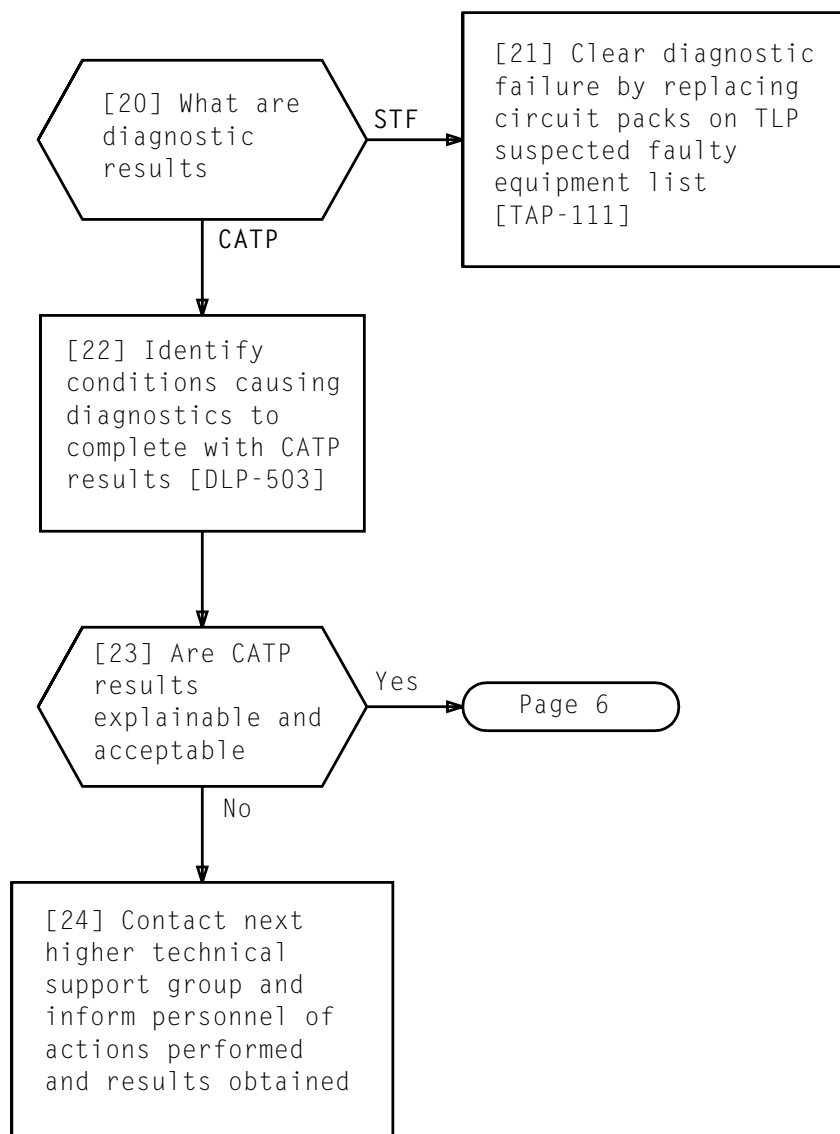


NOTE 3
Excessive force is not required to seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 2
A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

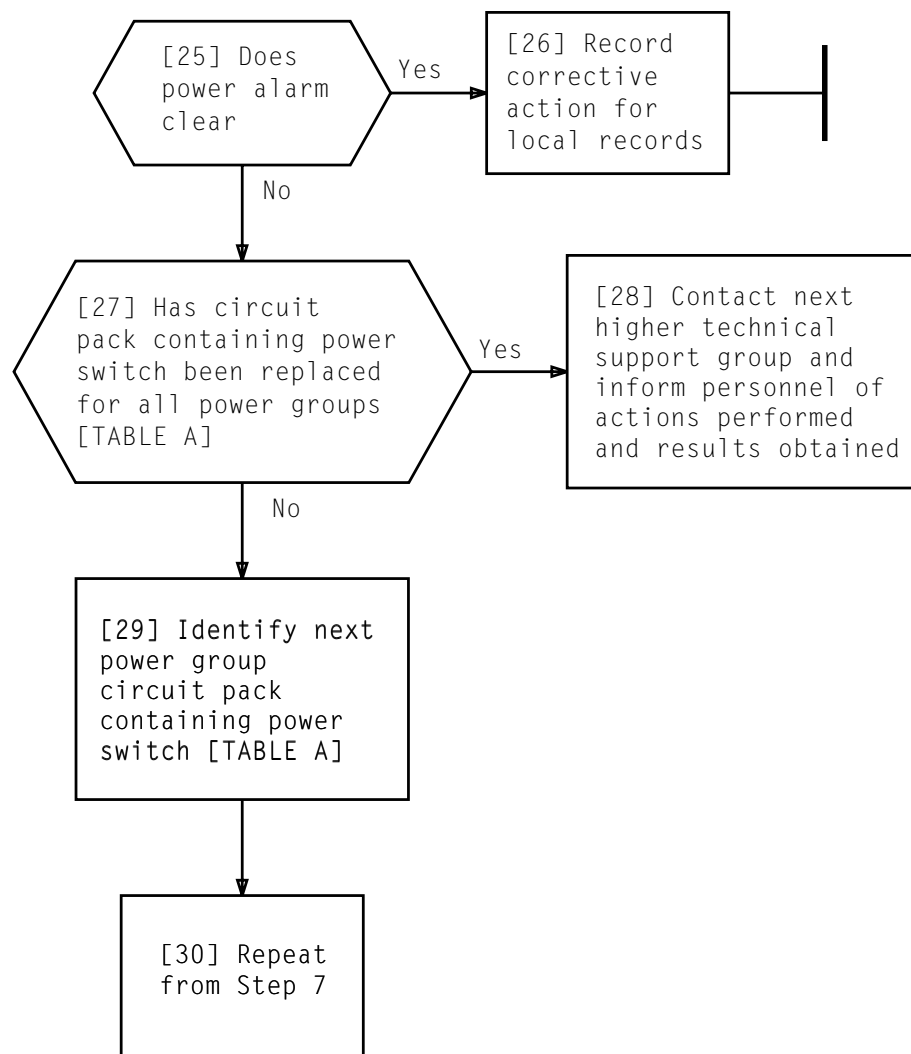
CLEAR POWER ALARM – PA LED LIGHTED ON 1B PROCESSOR CABINET FUSE UNIT COVER (BEZEL)

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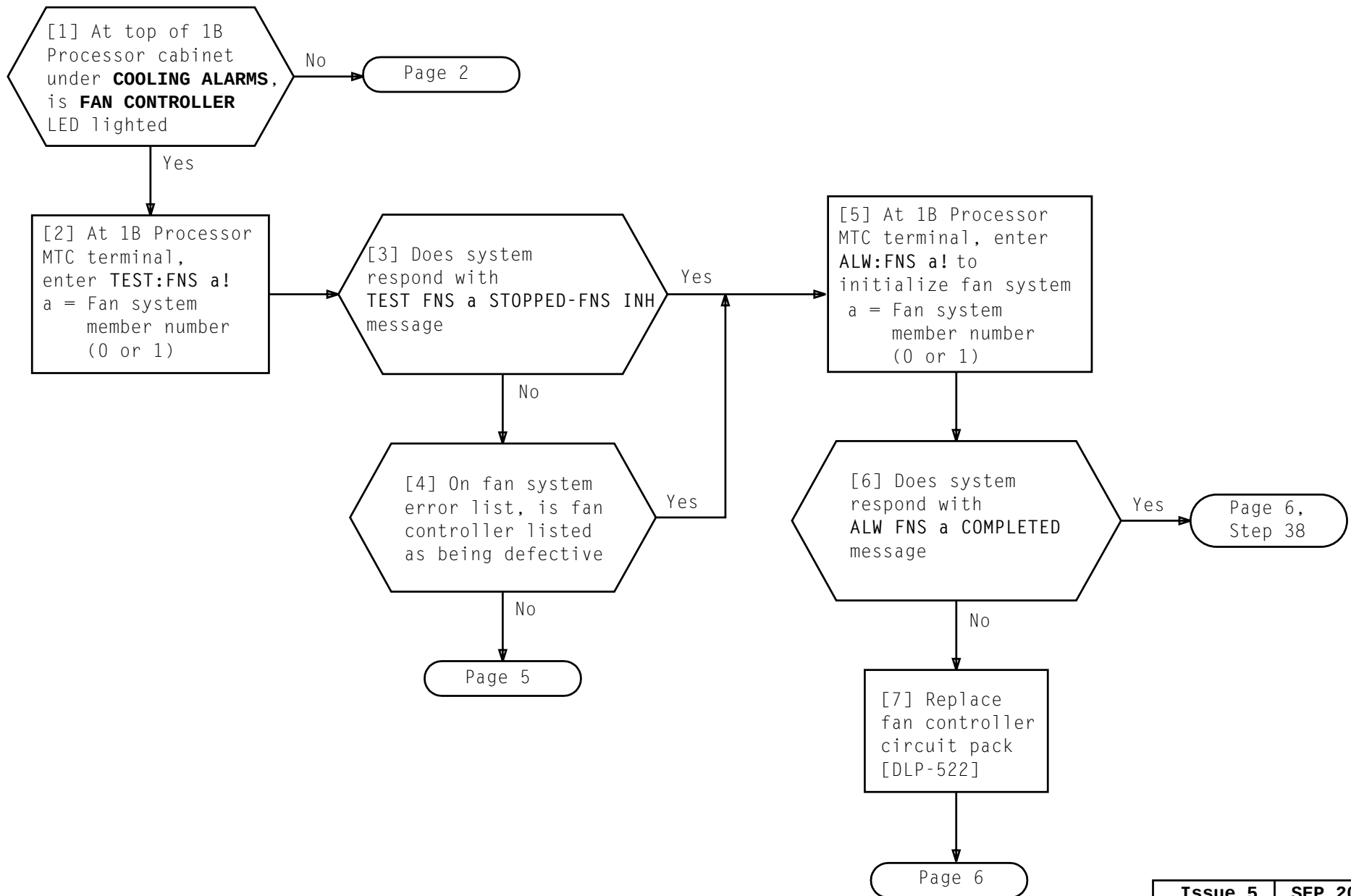
CLEAR POWER ALARM – PA LED LIGHTED ON 1B PROCESSOR CABINET FUSE UNIT COVER (BEZEL)

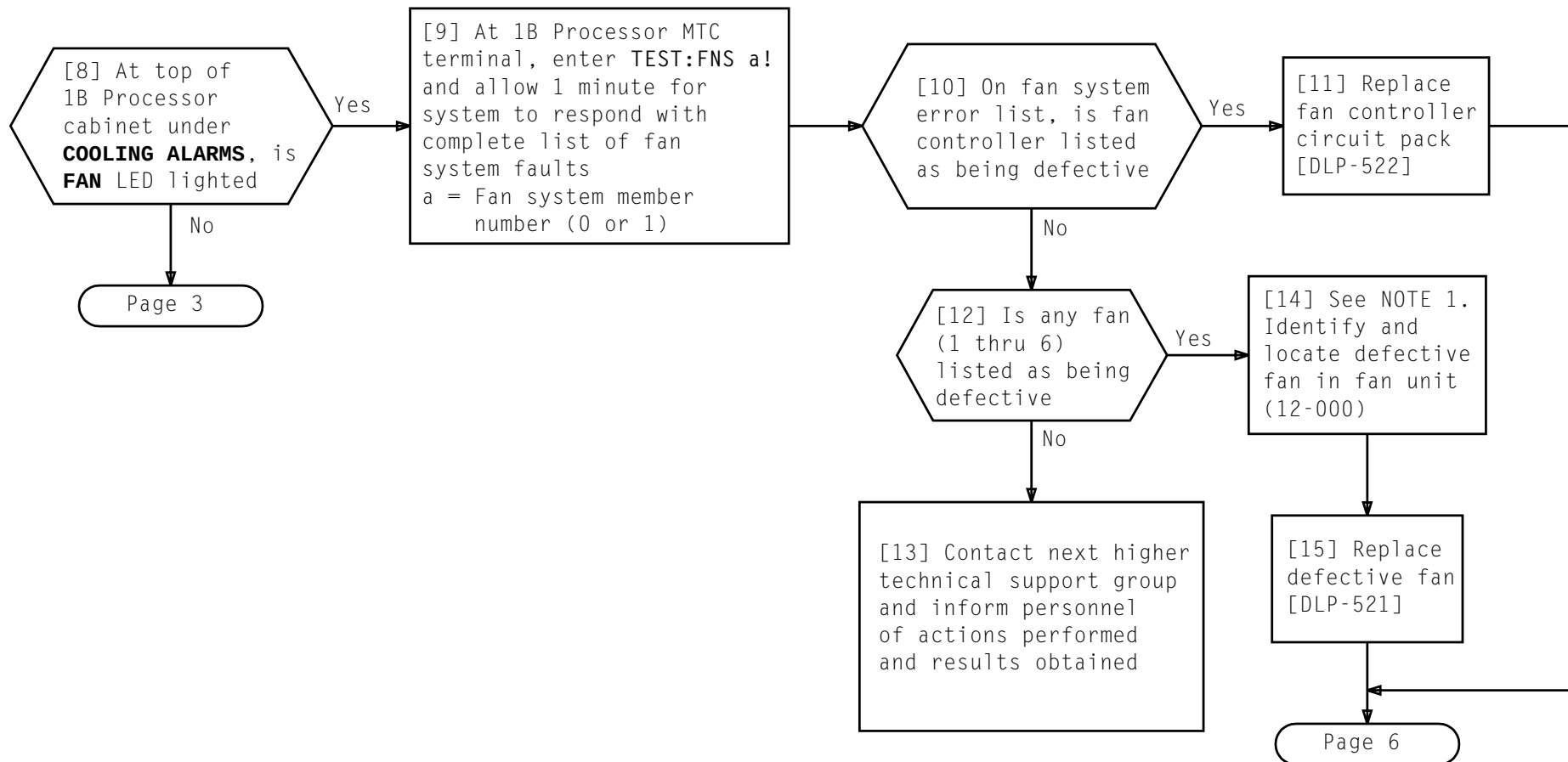
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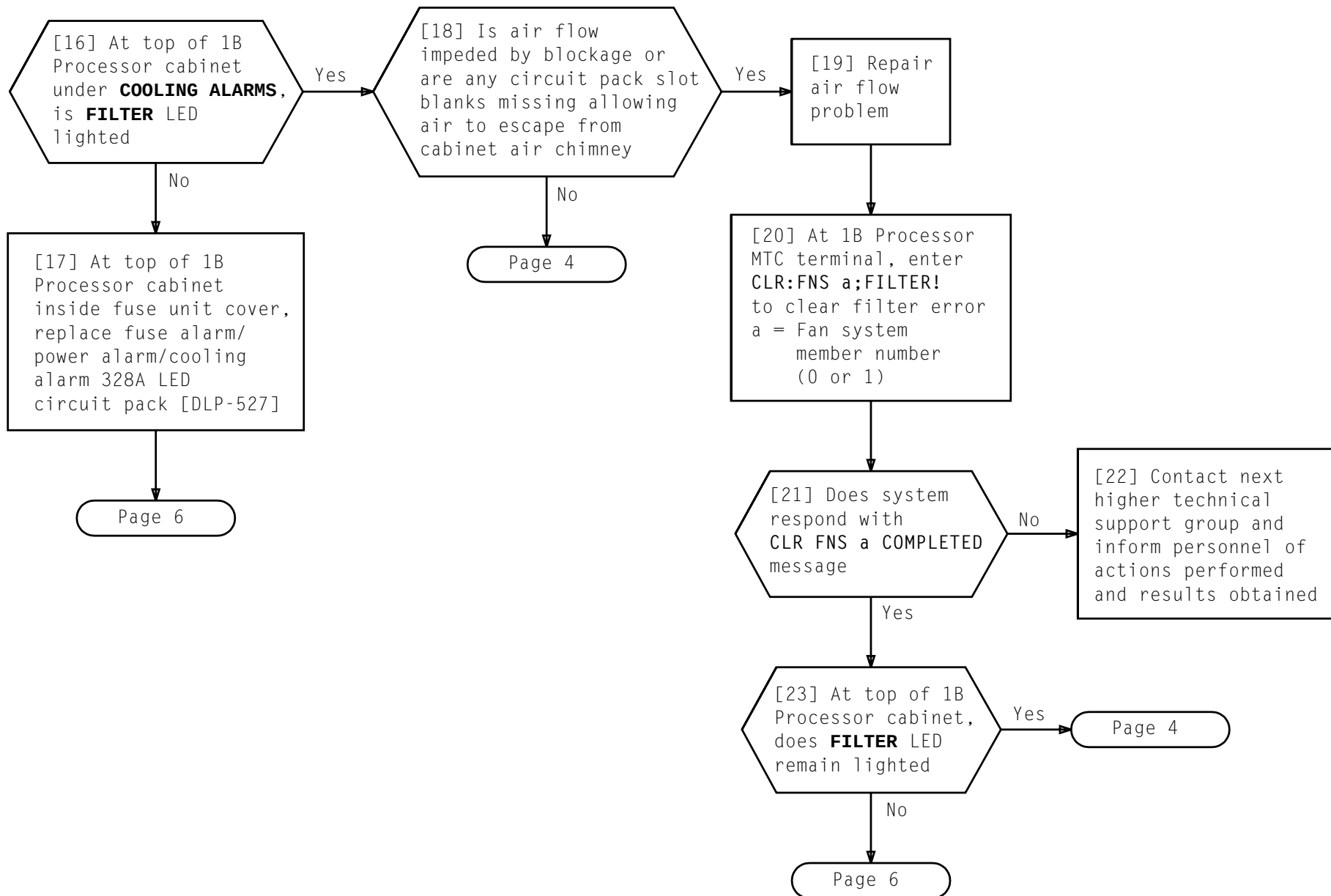
CLEAR POWER ALARM – PA LED LIGHTED ON 1B PROCESSOR CABINET FUSE UNIT COVER (BEZEL)

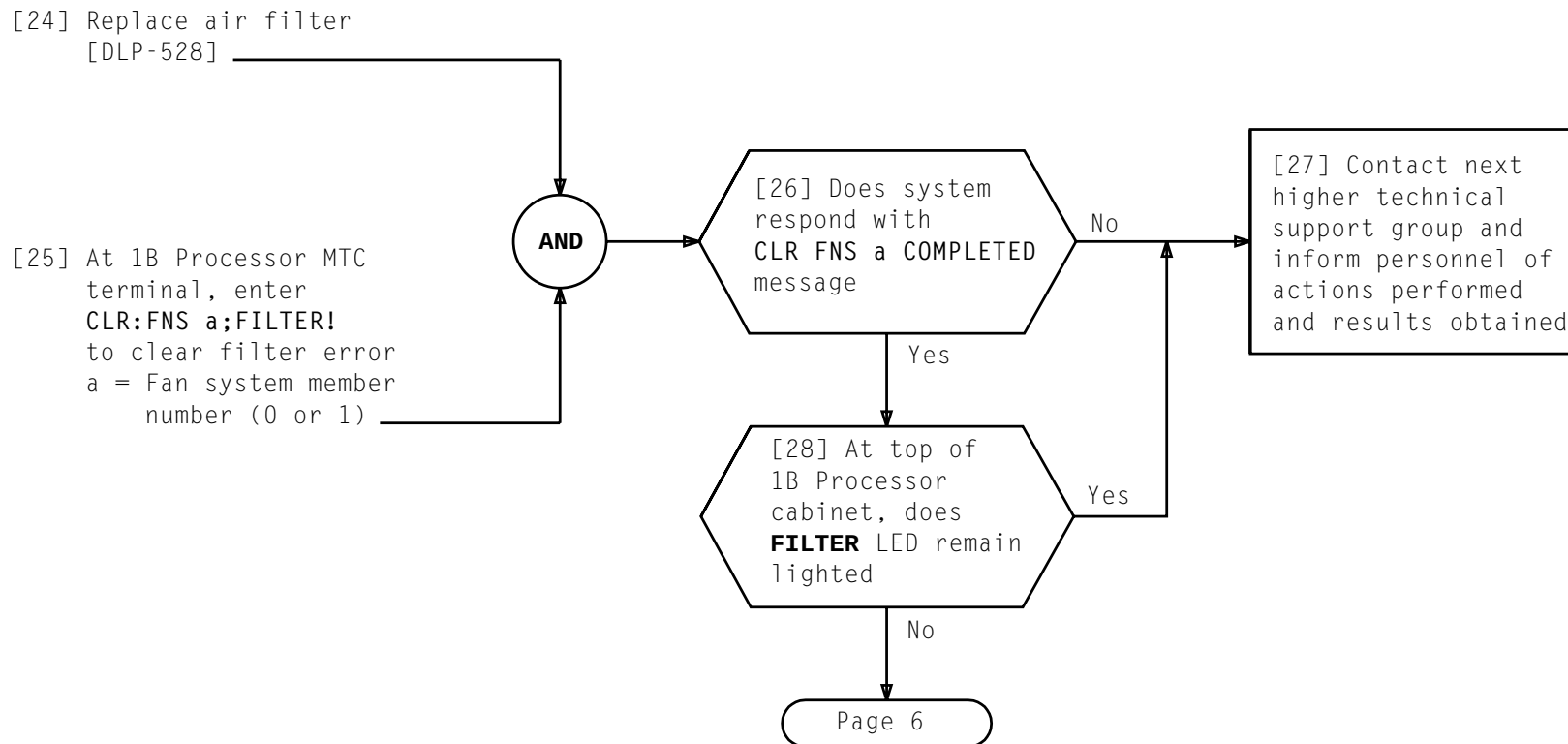
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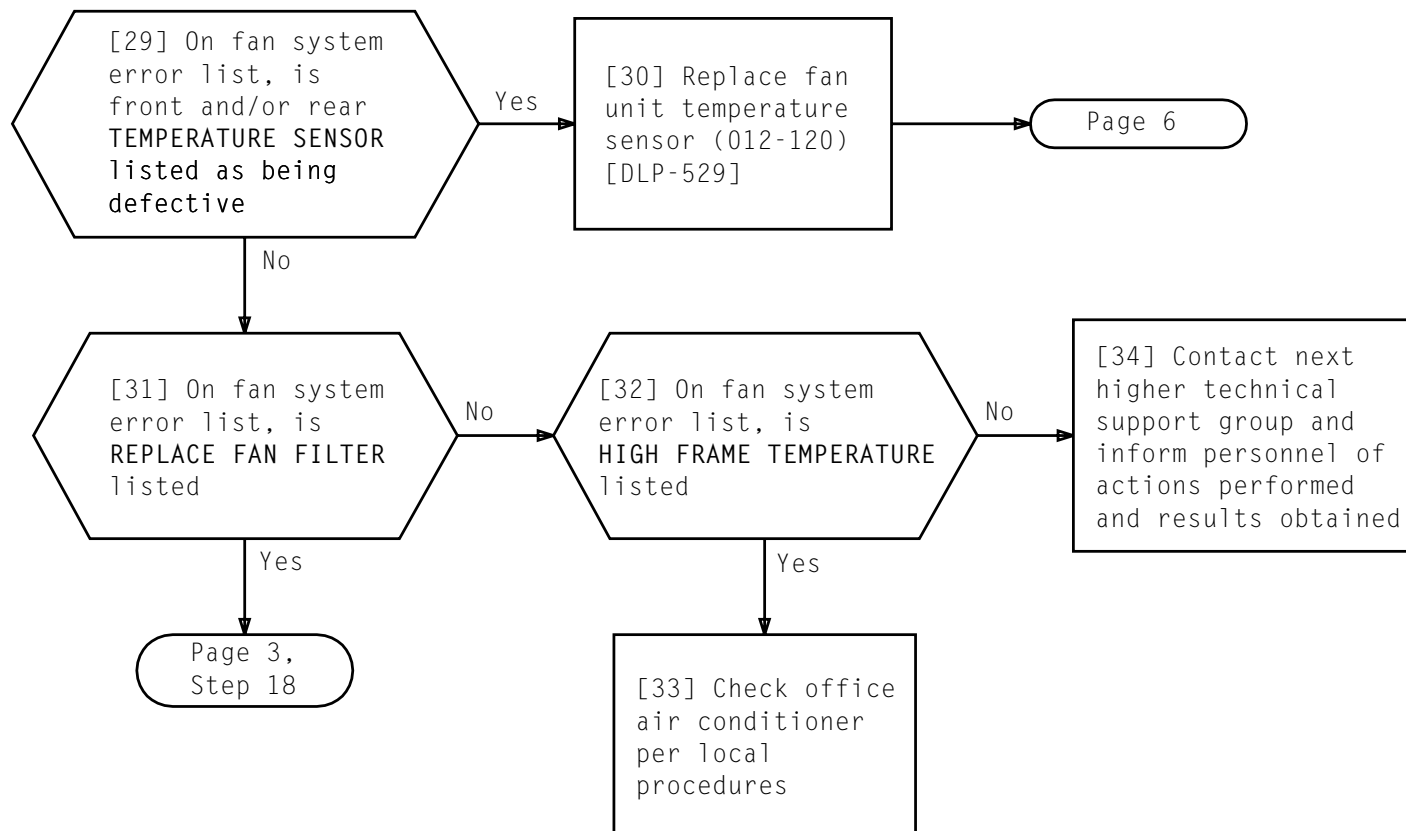


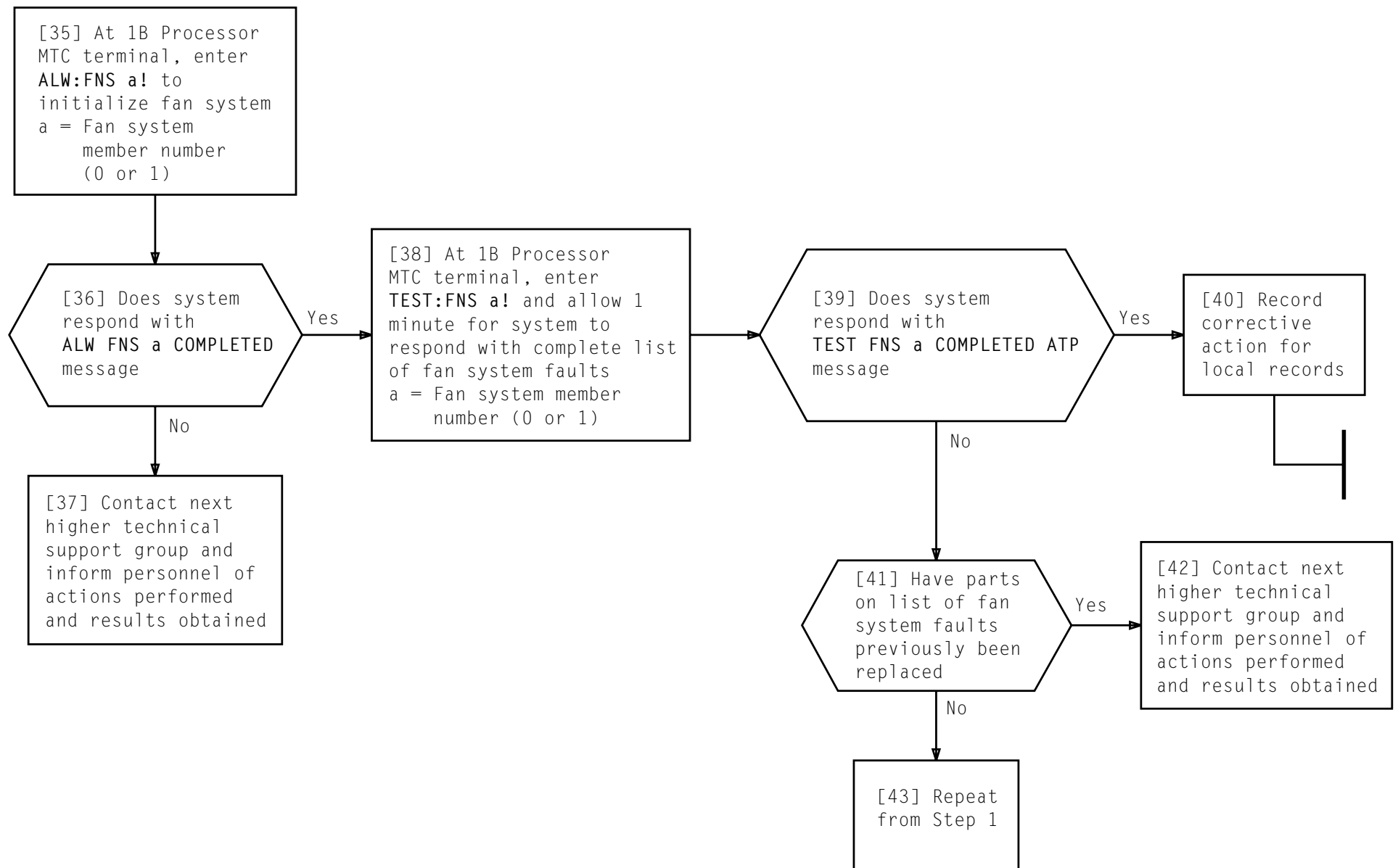


NOTE 1 Front fans are marked 1, 2 and 3 left to right across front of fan unit. Rear fans are marked 4, 5 and 6 left to right across rear of fan unit		
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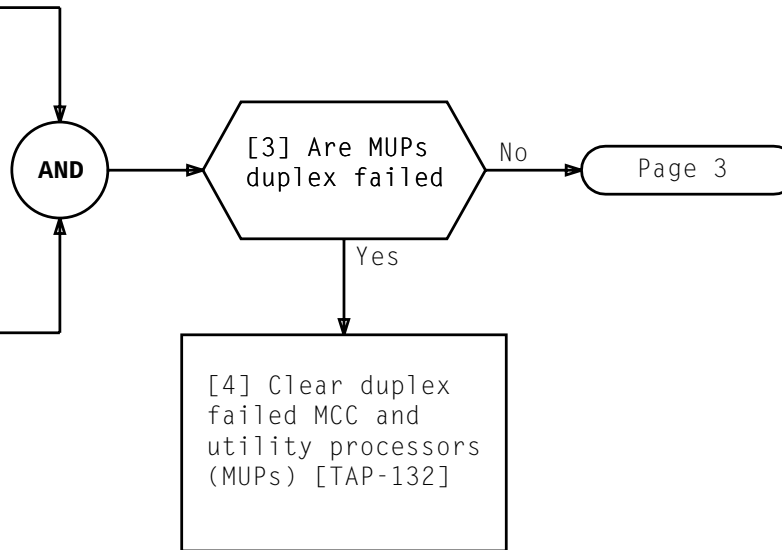






[1] At 1B Processor MTC terminal,
enter **OP:MUPSTAT!** and obtain MUP
status printout

[2] Using MUP status printout [FIG. 1]
and duplex MUP state indicators
[TABLE A], identify if MUPs are
duplex failed



**CLEAR MCC AND UTILITY PROCESSOR (MUP) UNRESPONSIVE
RS-232 CHANNEL**

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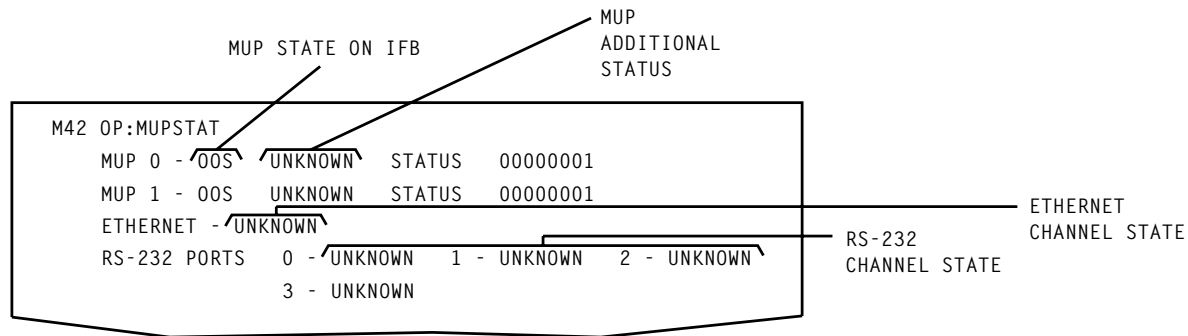
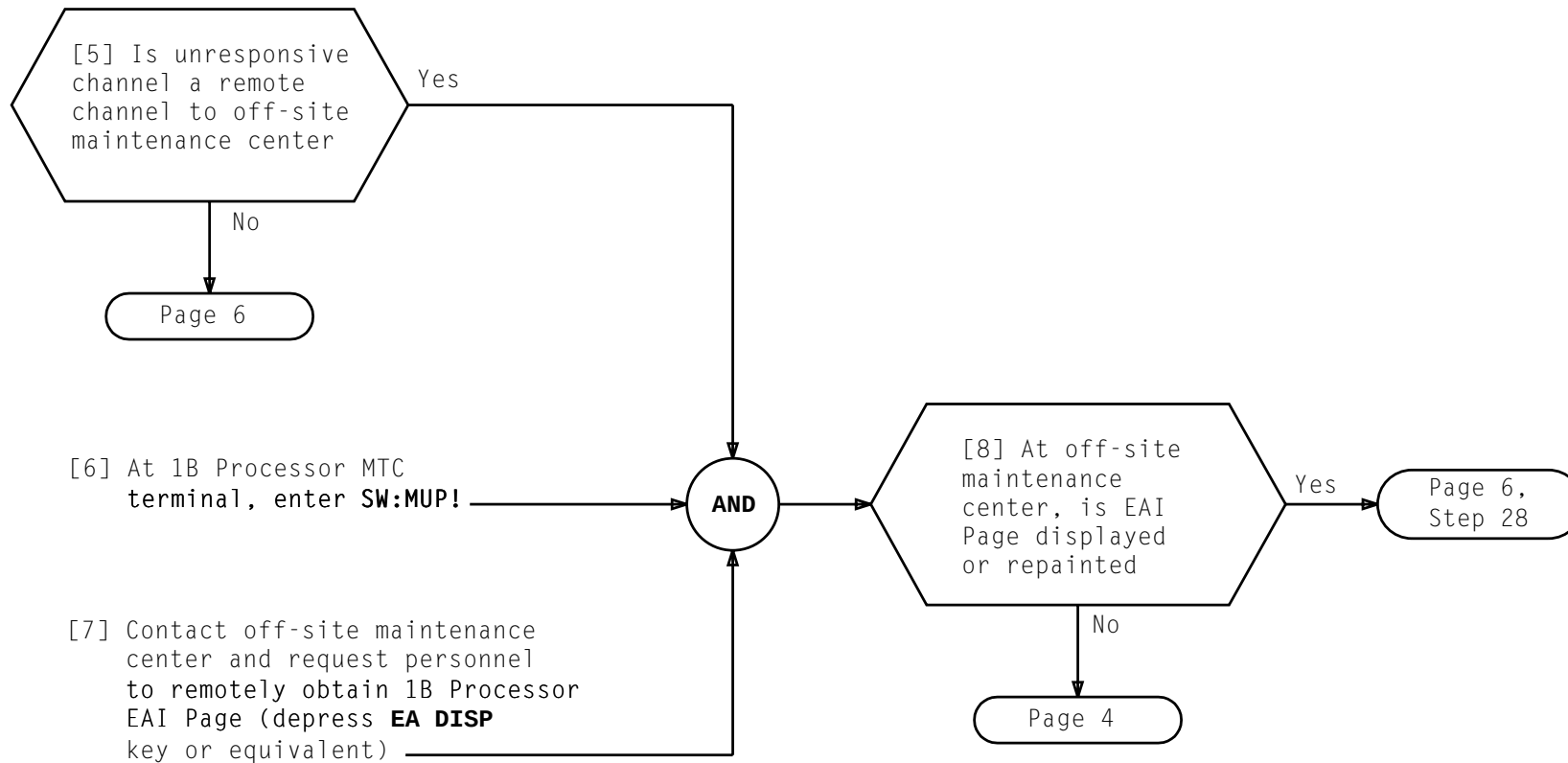


FIG. 1 – Sample Printout of MUP Status

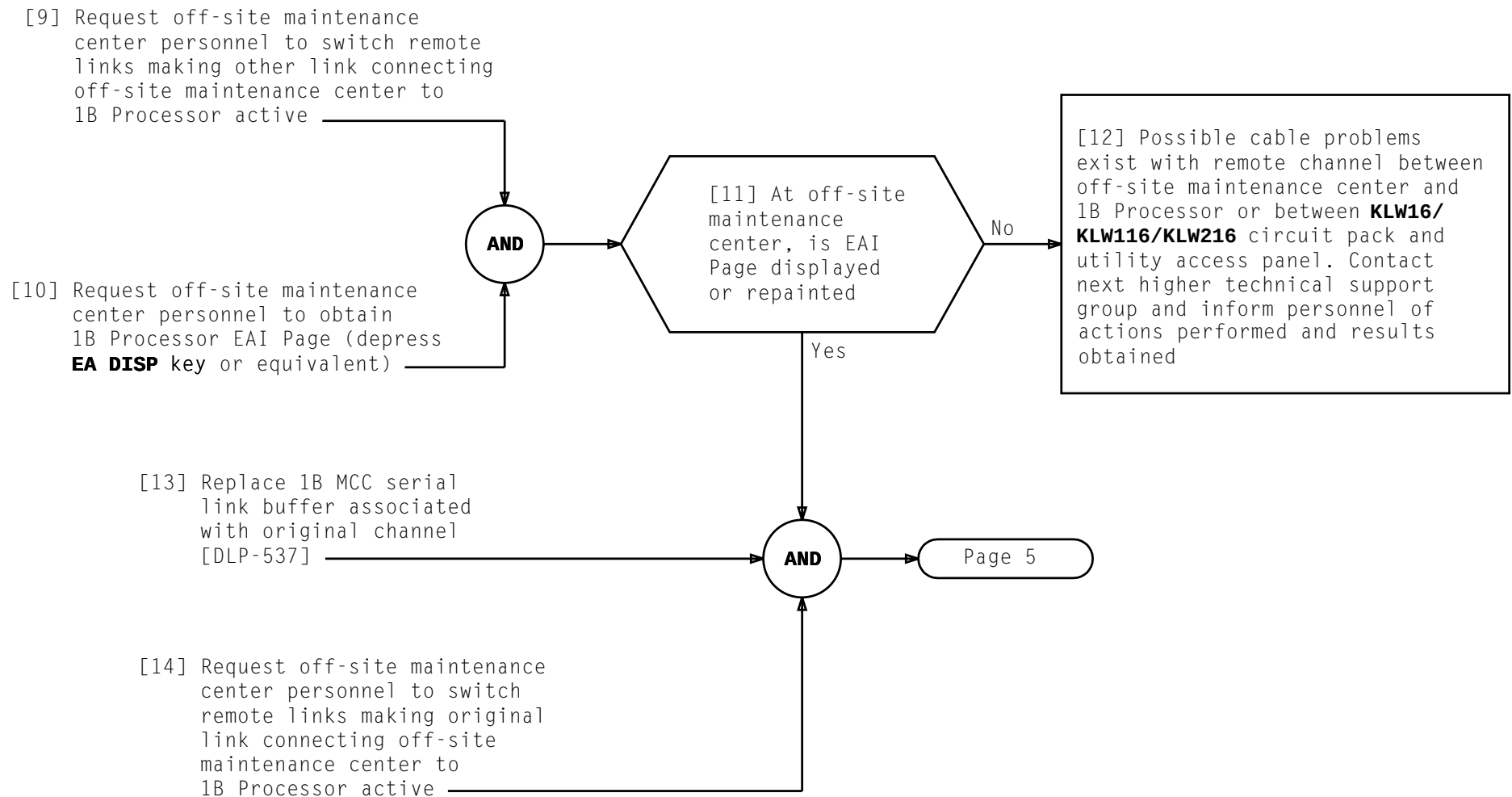
TABLE A DUPLX FAILED MUP INDICATORS	
MUP STATUS INDICATOR	DUPLEX FAILED STATE
MUP STATE ON IFB	If Both MUP 0 And MUP 1 Are Out-of-Service (OOO)
MUP ADDITIONAL STATUS	If Status Is UNKNOWN
ETHERNET CHANNEL STATE	If Status Is UNKNOWN
RS-232 CHANNEL STATE	If Status Is UNKNOWN

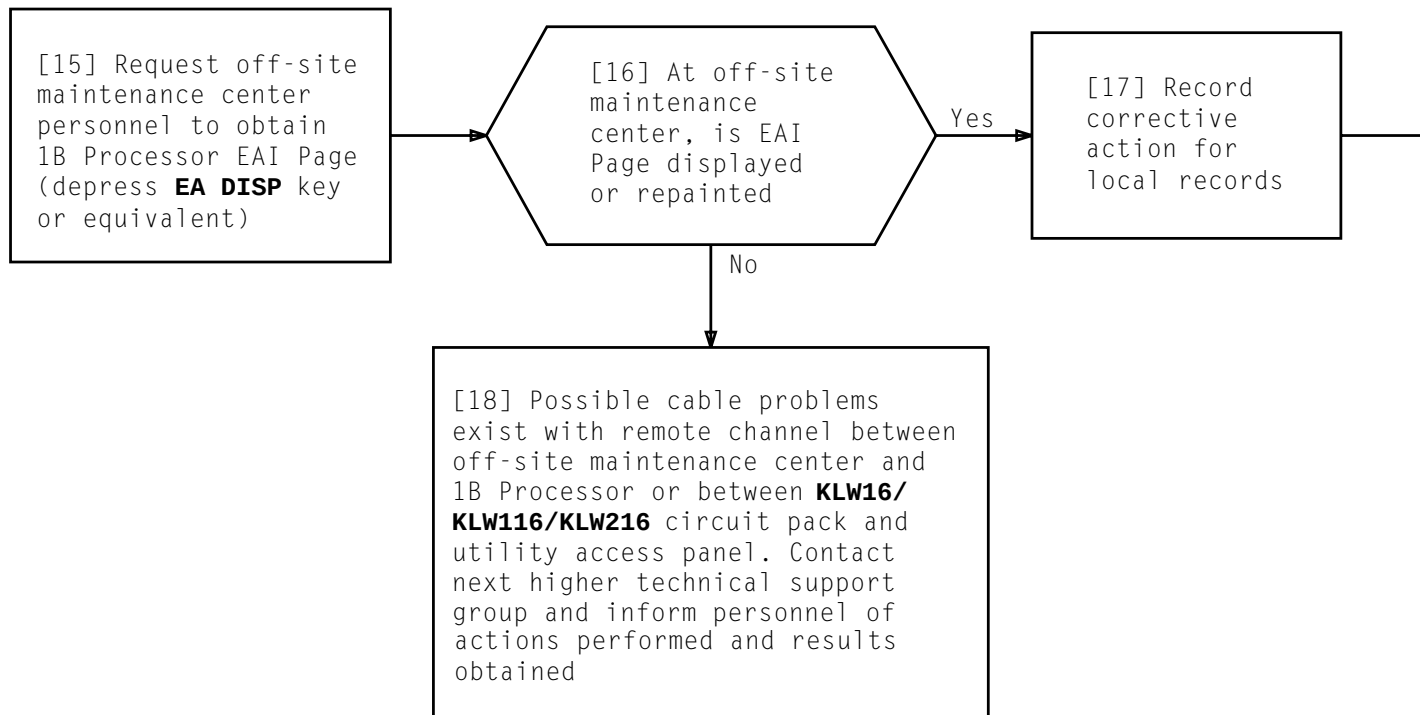
**CLEAR MCC AND UTILITY PROCESSOR (MUP) UNRESPONSIVE
RS-232 CHANNEL**



CLEAR MCC AND UTILITY PROCESSOR (MUP) UNRESPONSIVE RS-232 CHANNEL

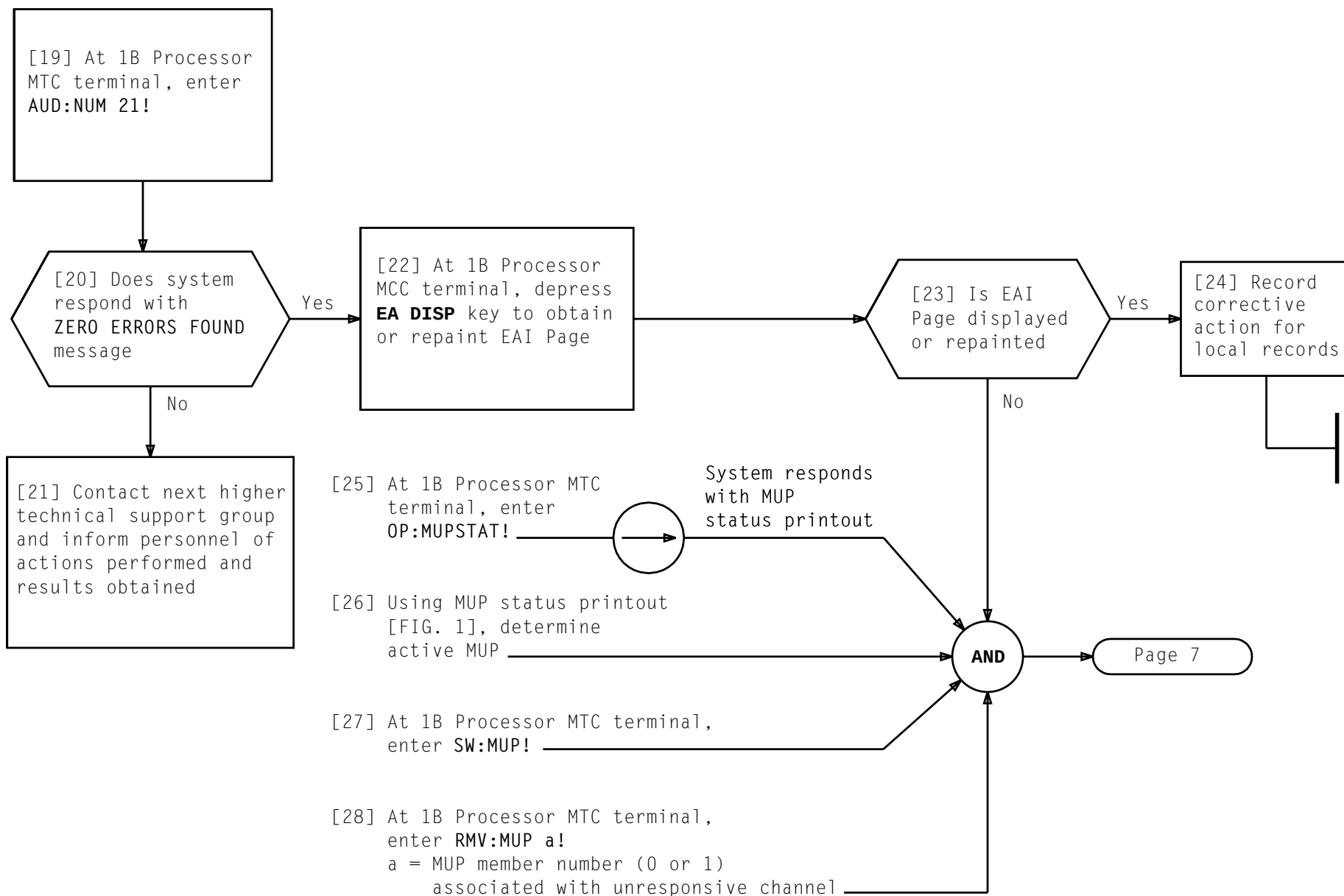
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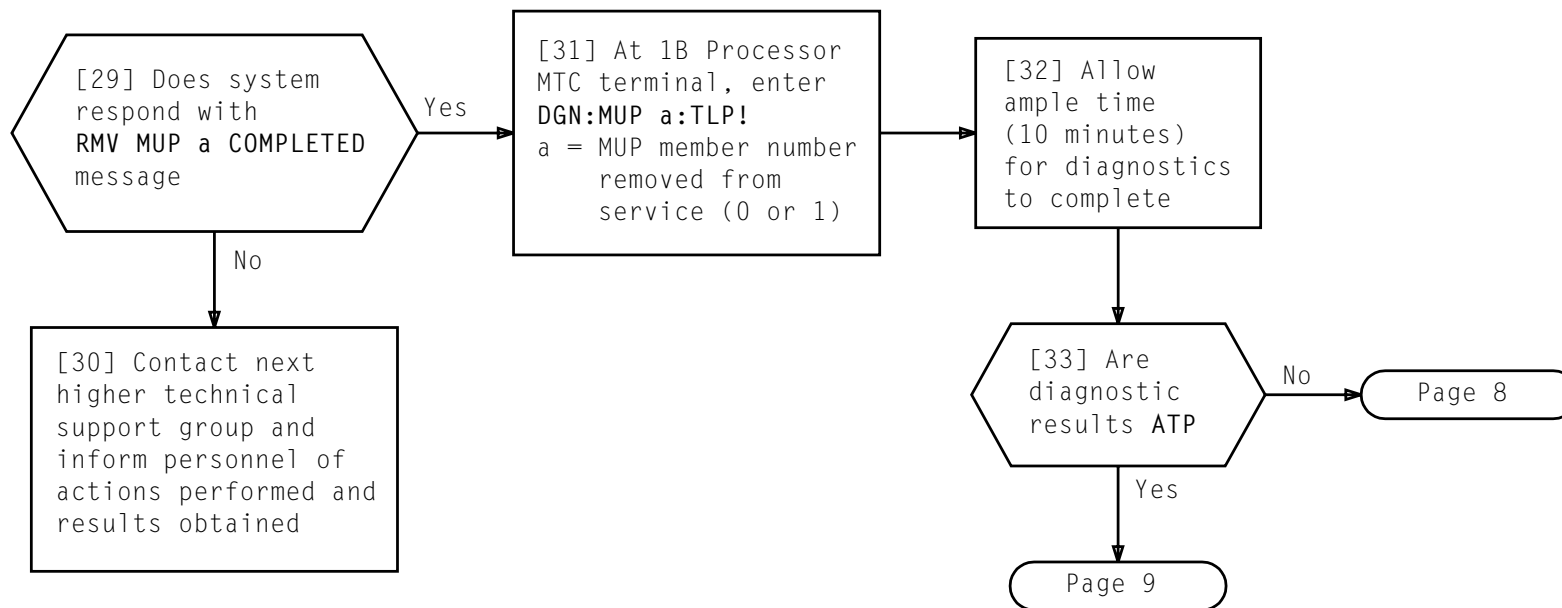
**CLEAR MCC AND UTILITY PROCESSOR (MUP) UNRESPONSIVE
RS-232 CHANNEL**

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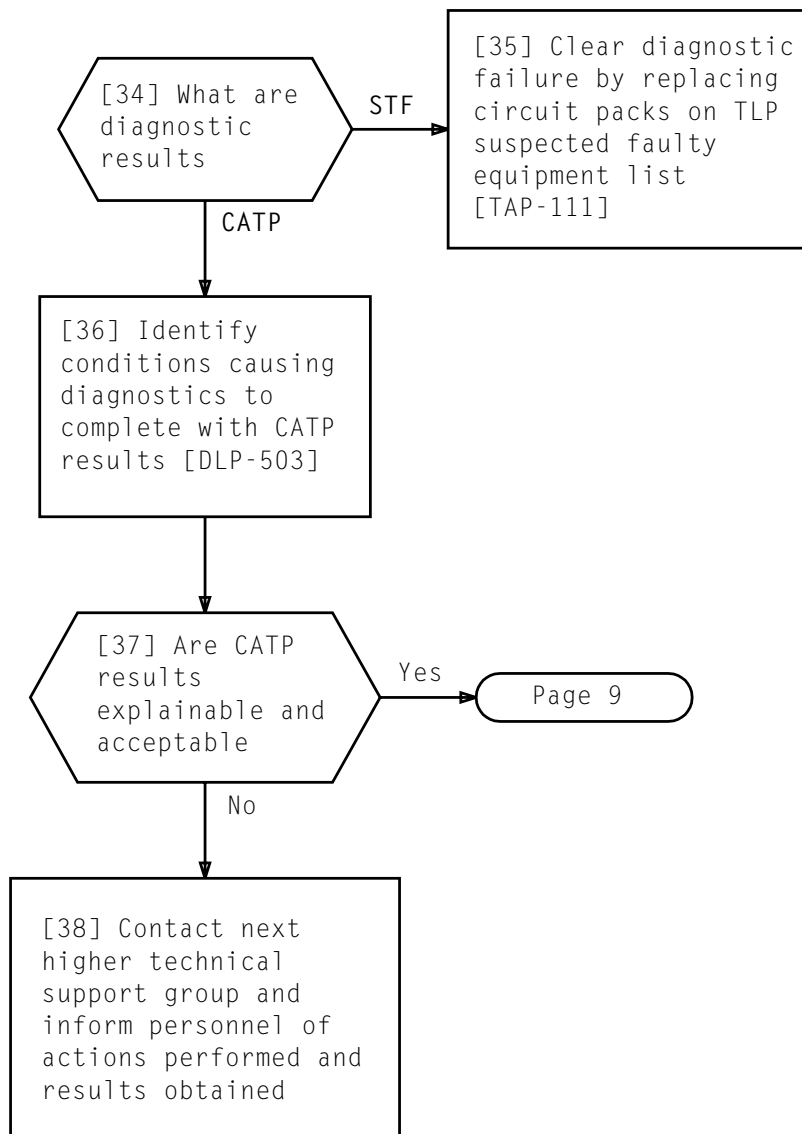
CLEAR MCC AND UTILITY PROCESSOR (MUP) UNRESPONSIVE RS-232 CHANNEL

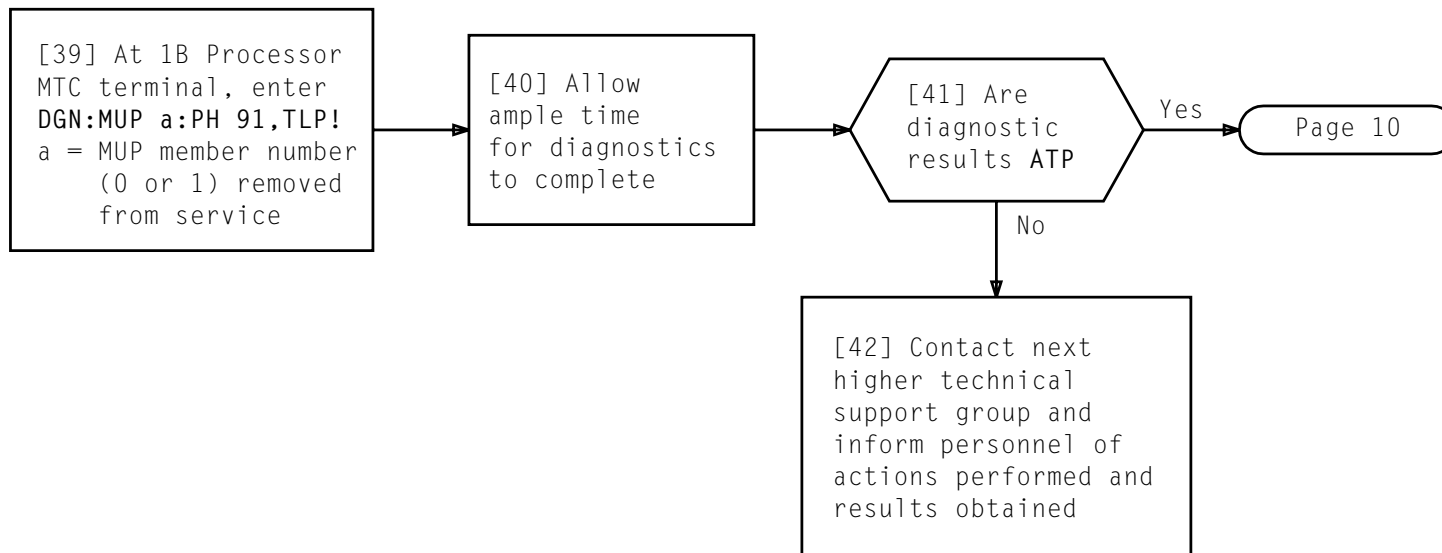
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**CLEAR MCC AND UTILITY PROCESSOR (MUP) UNRESPONSIVE
RS-232 CHANNEL**

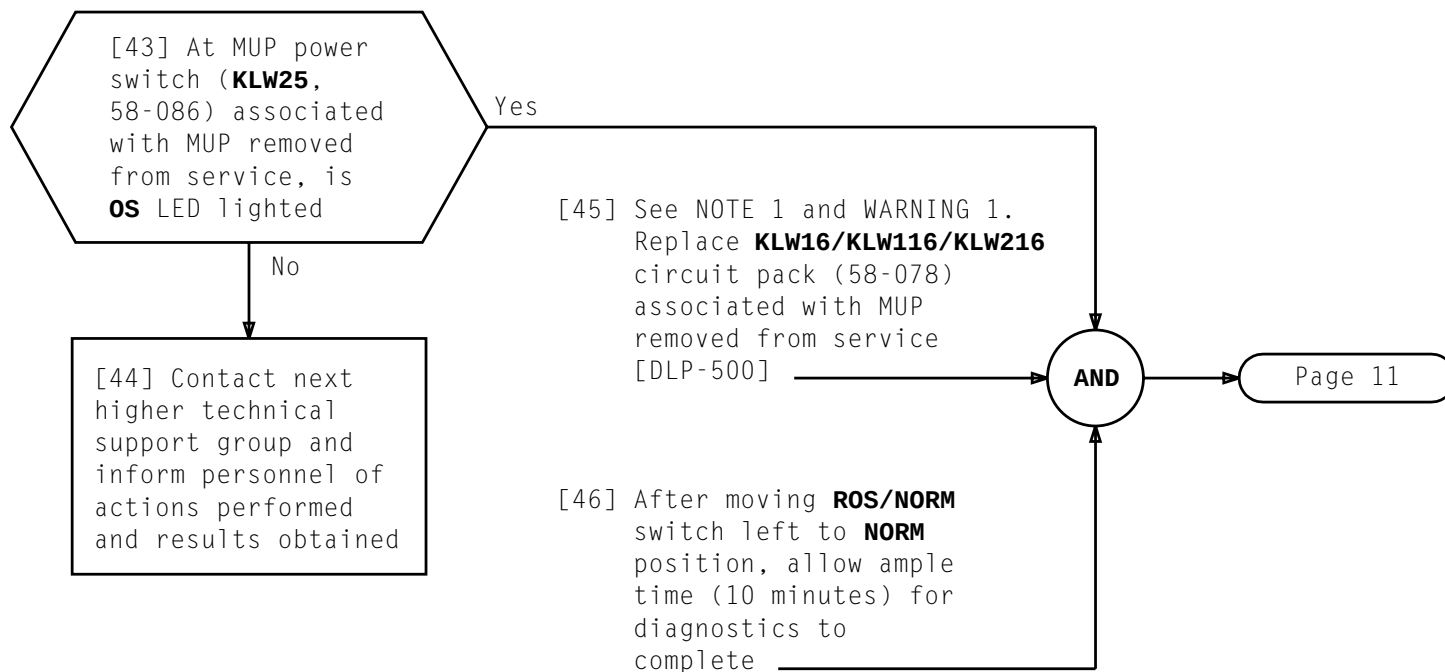
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**CLEAR MCC AND UTILITY PROCESSOR (MUP) UNRESPONSIVE
RS-232 CHANNEL**

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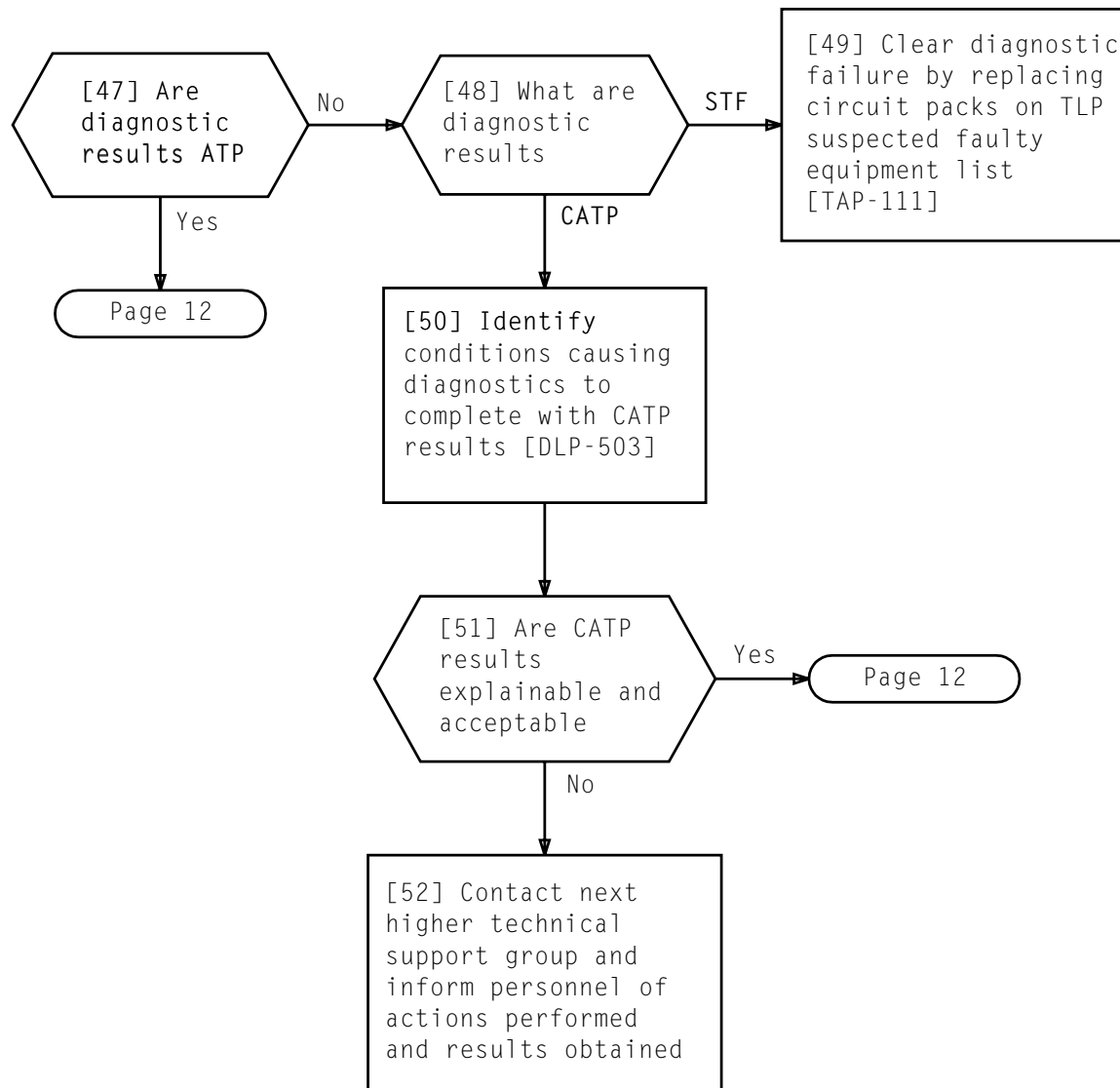


NOTE 1
Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 1
A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

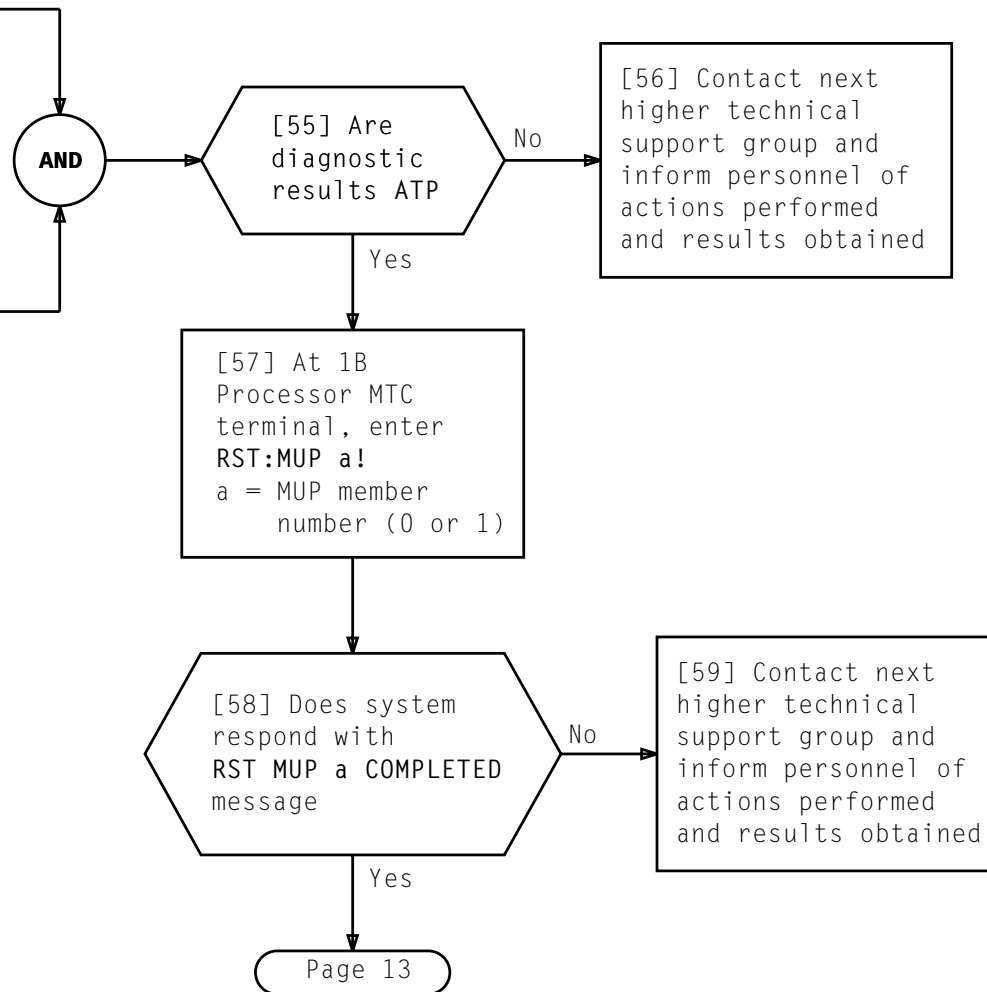
CLEAR MCC AND UTILITY PROCESSOR (MUP) UNRESPONSIVE RS-232 CHANNEL

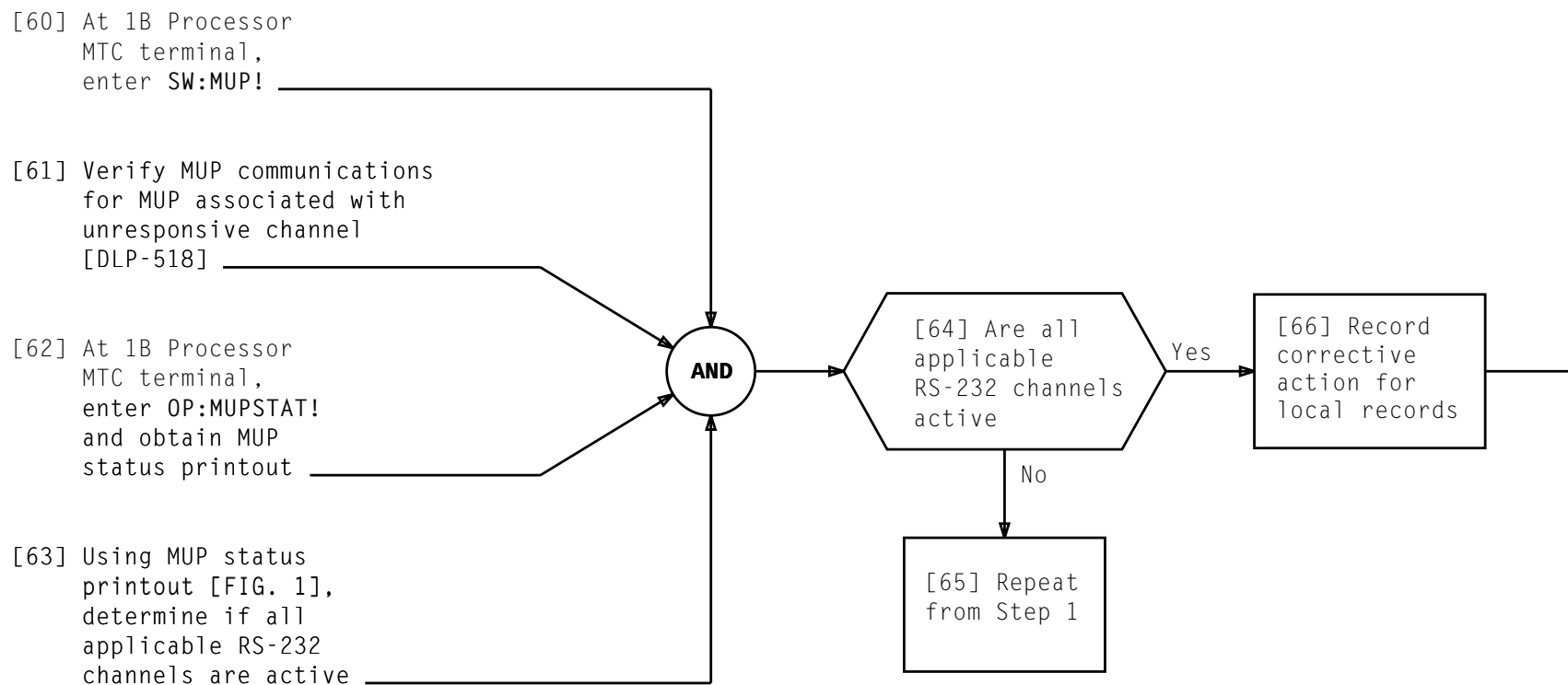
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[53] At 1B Processor MTC
terminal, enter
DGN:MUP a:PH 91,TLP!
a = MUP member number
(0 or 1)

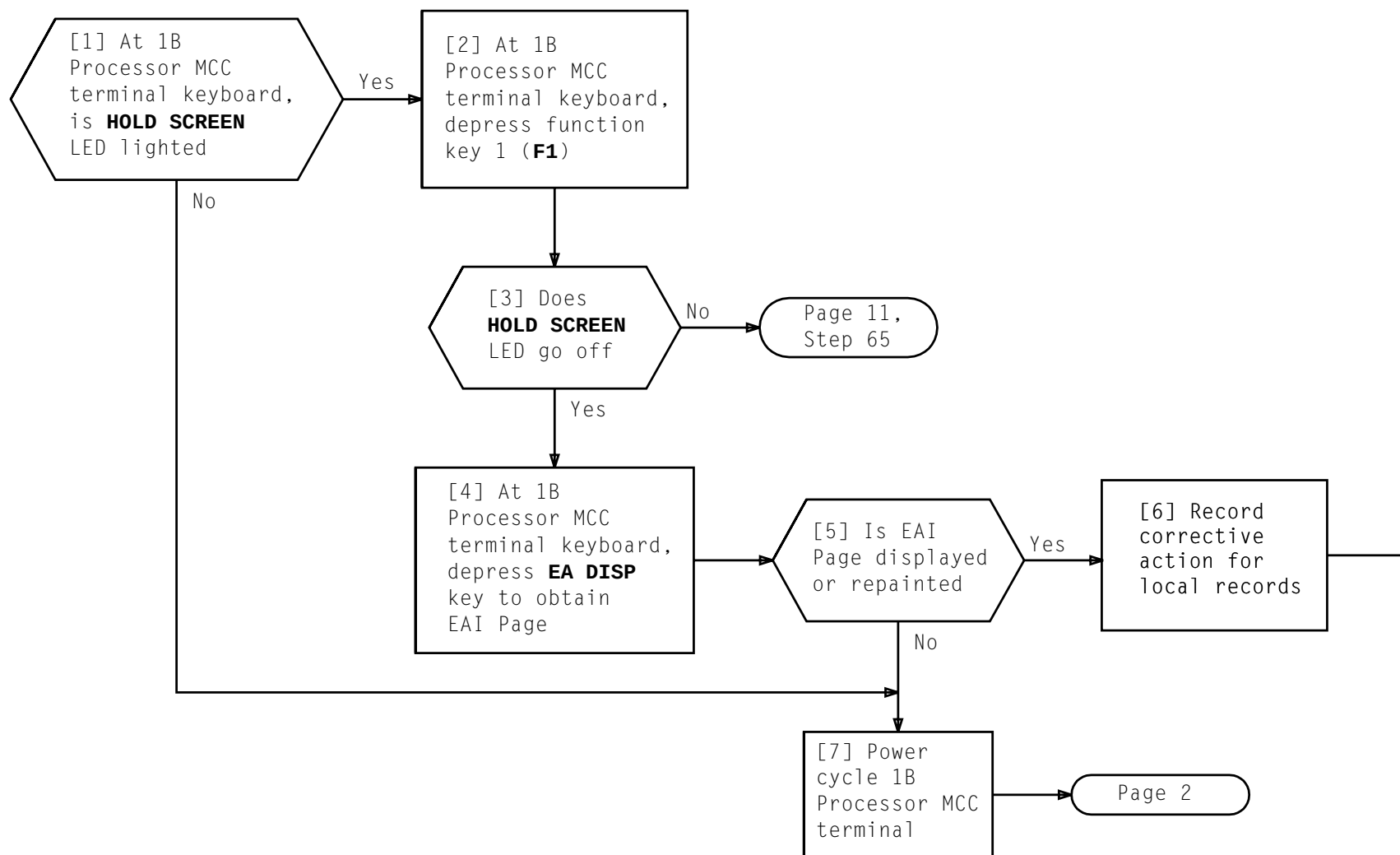
[54] Allow ample time
for diagnostics
to complete

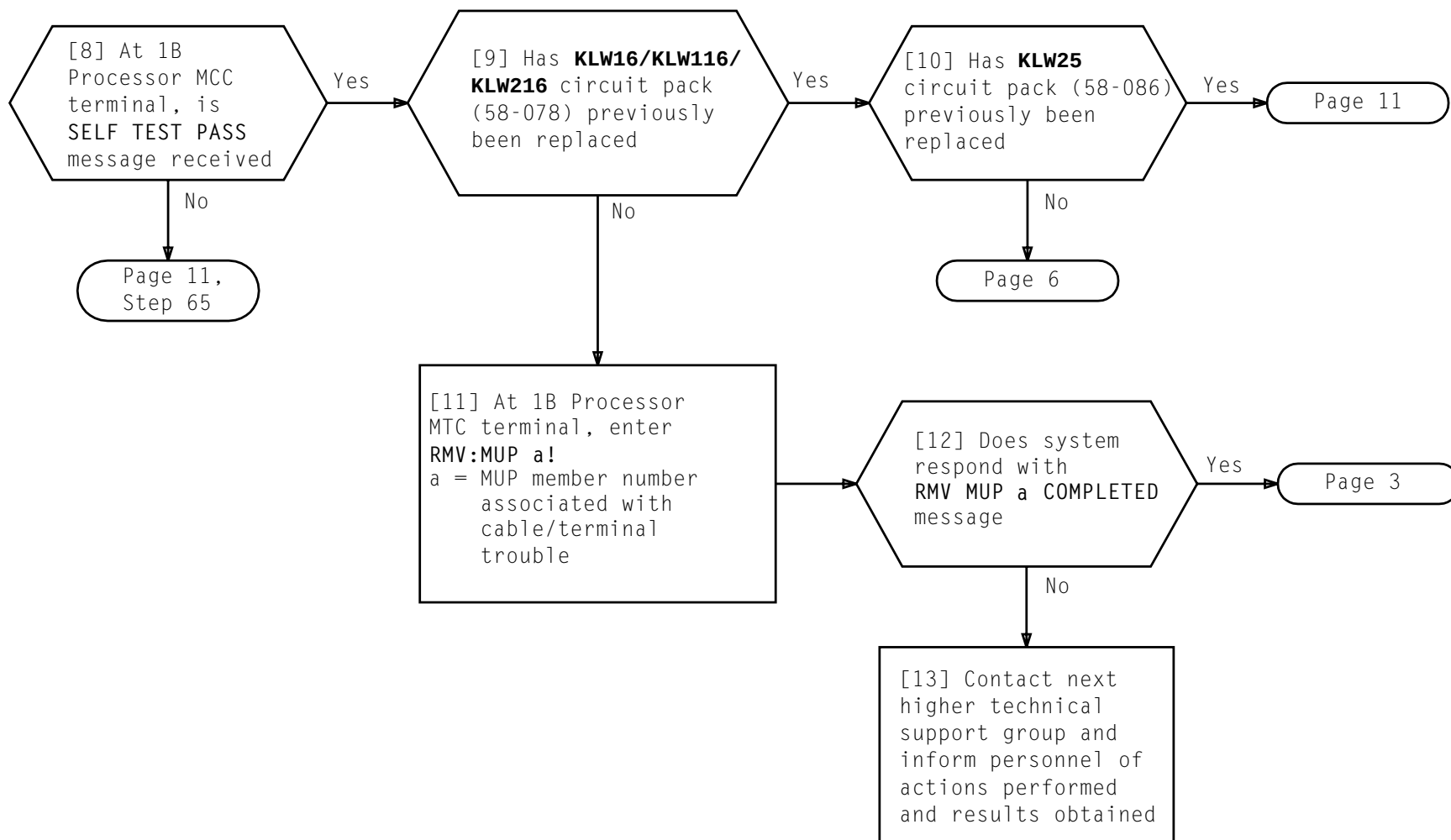




CLEAR MCC AND UTILITY PROCESSOR (MUP) UNRESPONSIVE RS-232 CHANNEL

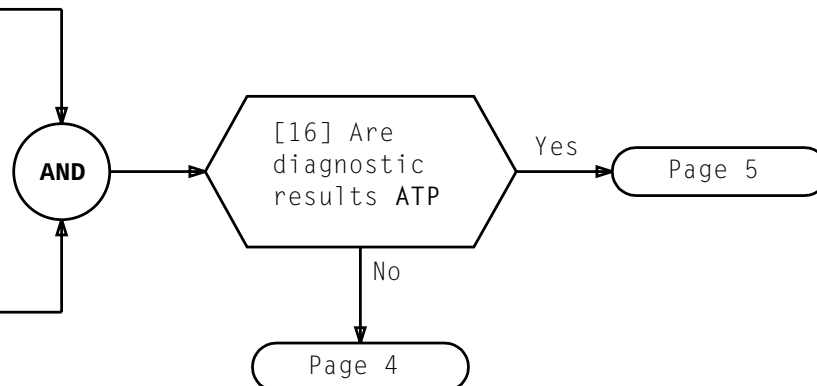
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[14] See NOTE 1 and WARNING 1.
 Replace **KLW16/KLW116/KLW216**
 circuit pack (58-078)
 [DLP-500]

[15] After moving **ROS/NORM**
 switch left to **NORM**
 position, allow ample
 time (10 minutes) for
 diagnostics to complete



NOTE 1

Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding.

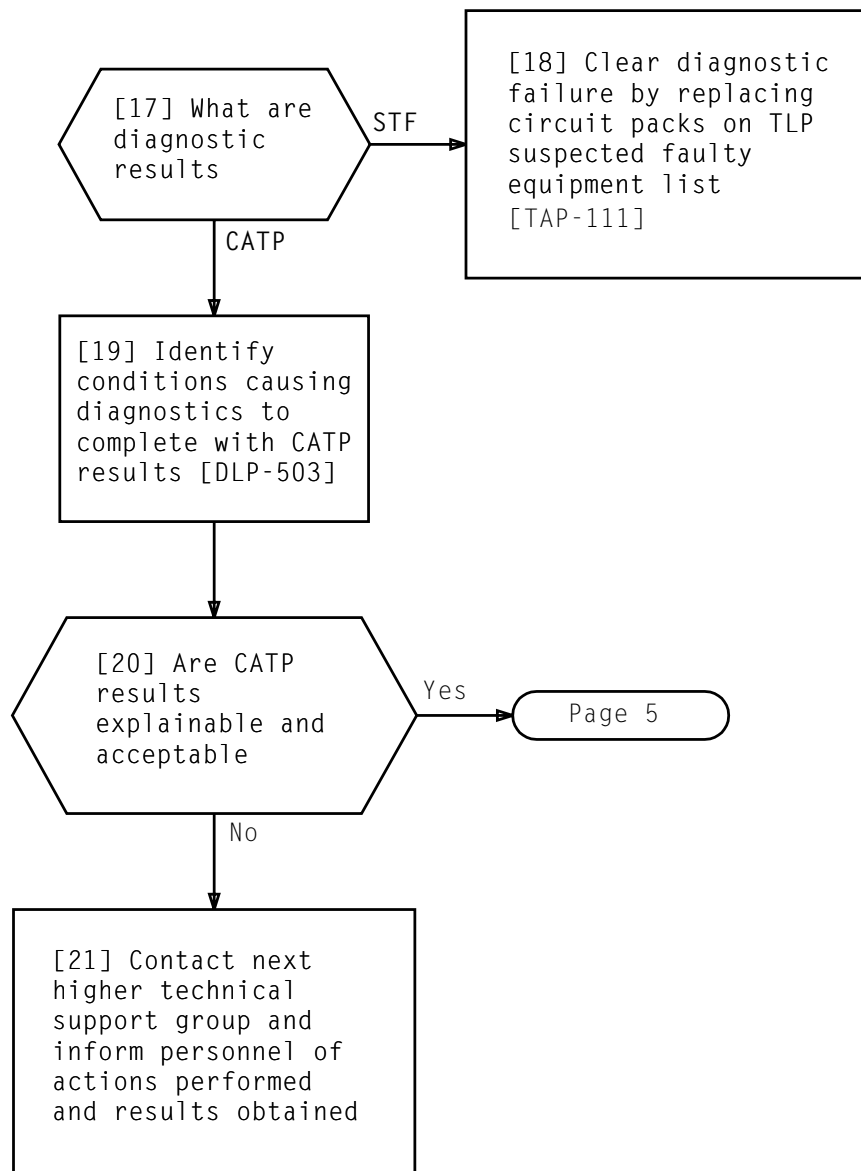
WARNING 1

A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

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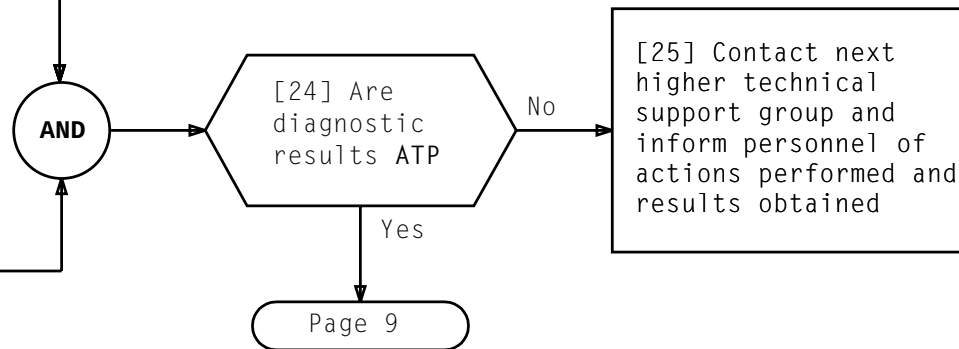


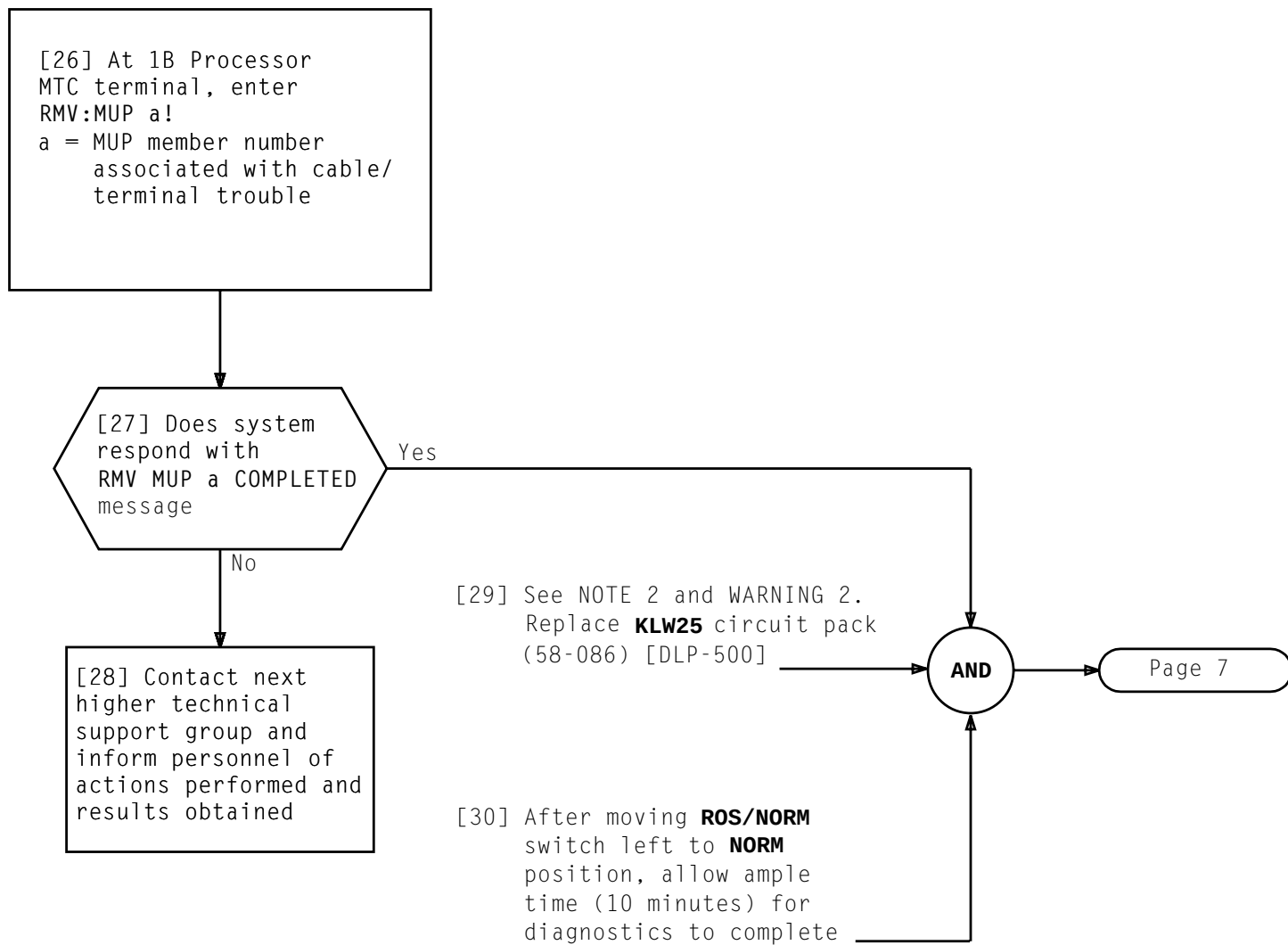
CLEAR MCC AND UTILITY PROCESSOR (MUP) CABLE/TERMINAL TROUBLE

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[22] At 1B Processor MTC
terminal, enter
DGN:MUP a:PH 91,TLP!
a = MUP member number
(0 or 1)

[23] Allow ample time
for diagnostics
to complete



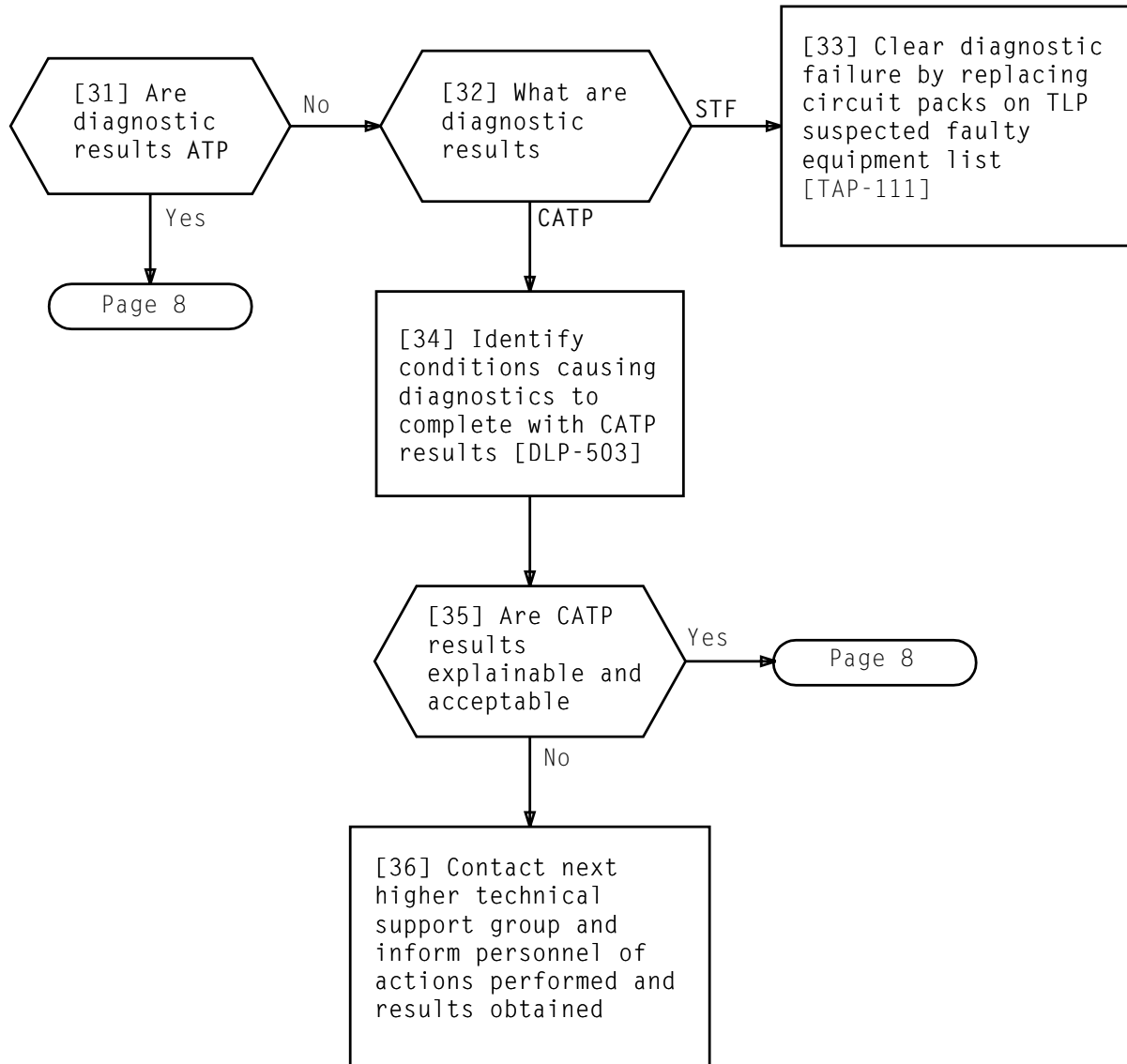


NOTE 2

Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 2

A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

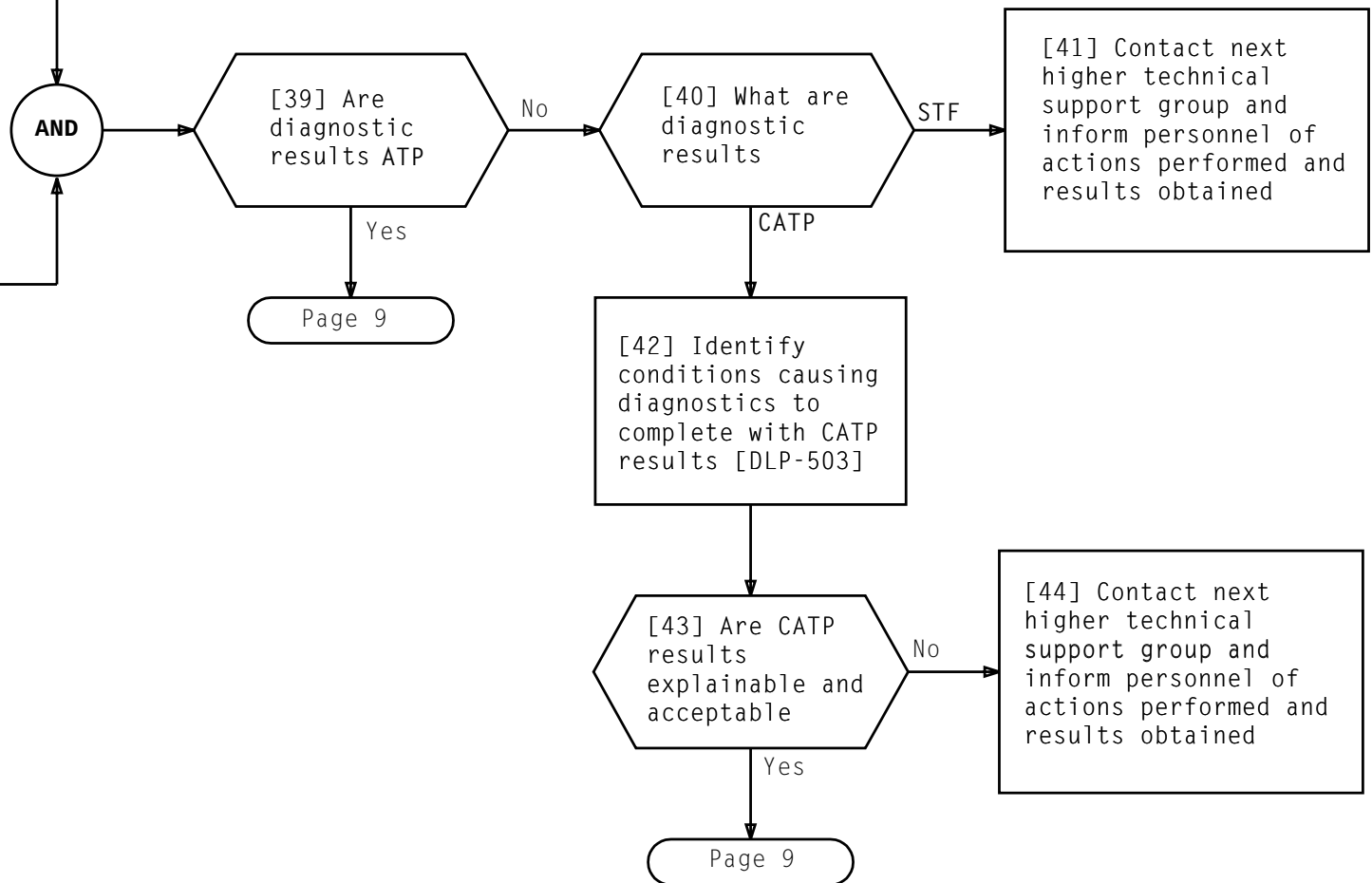


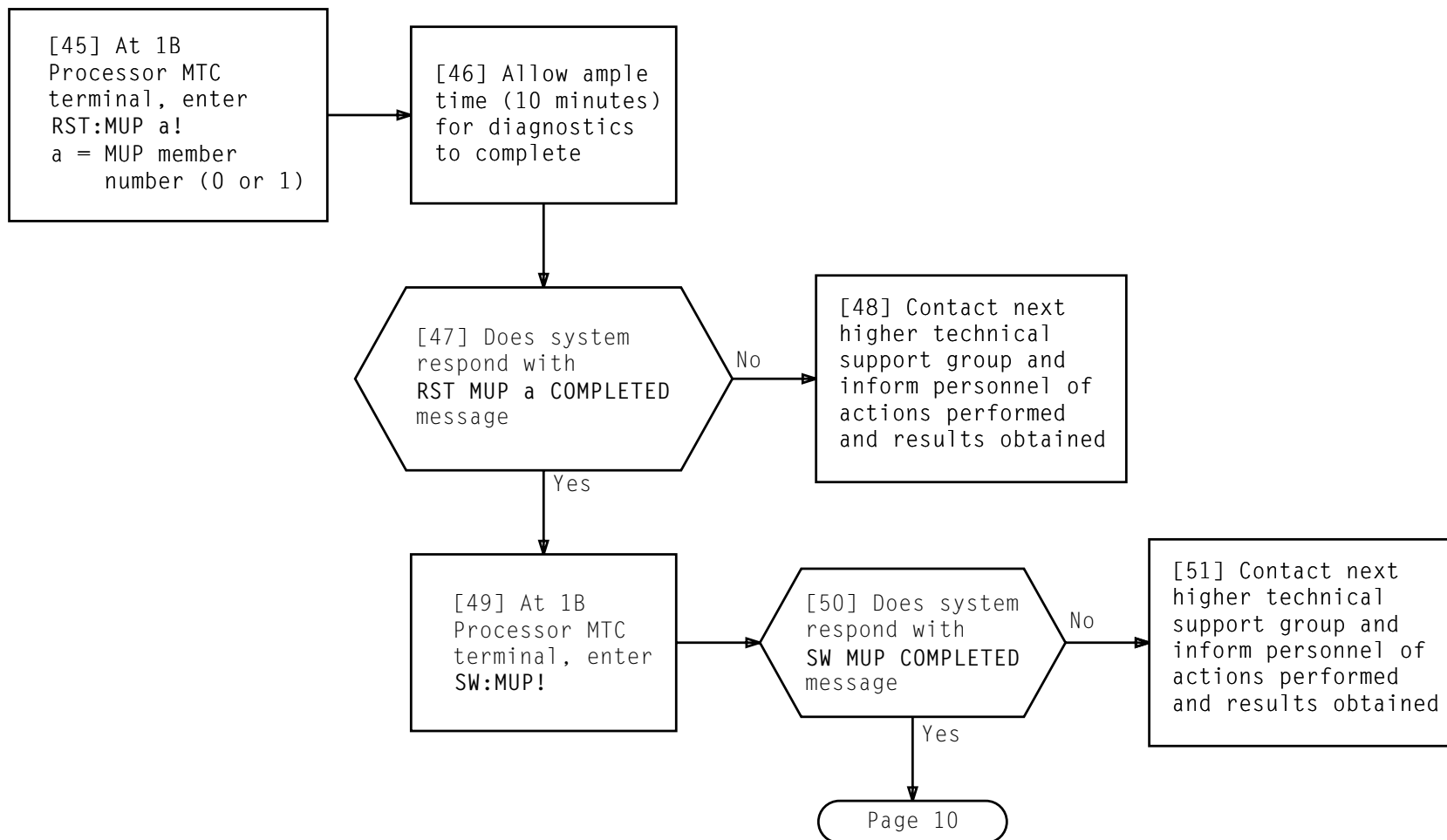
CLEAR MCC AND UTILITY PROCESSOR (MUP) CABLE/TERMINAL TROUBLE

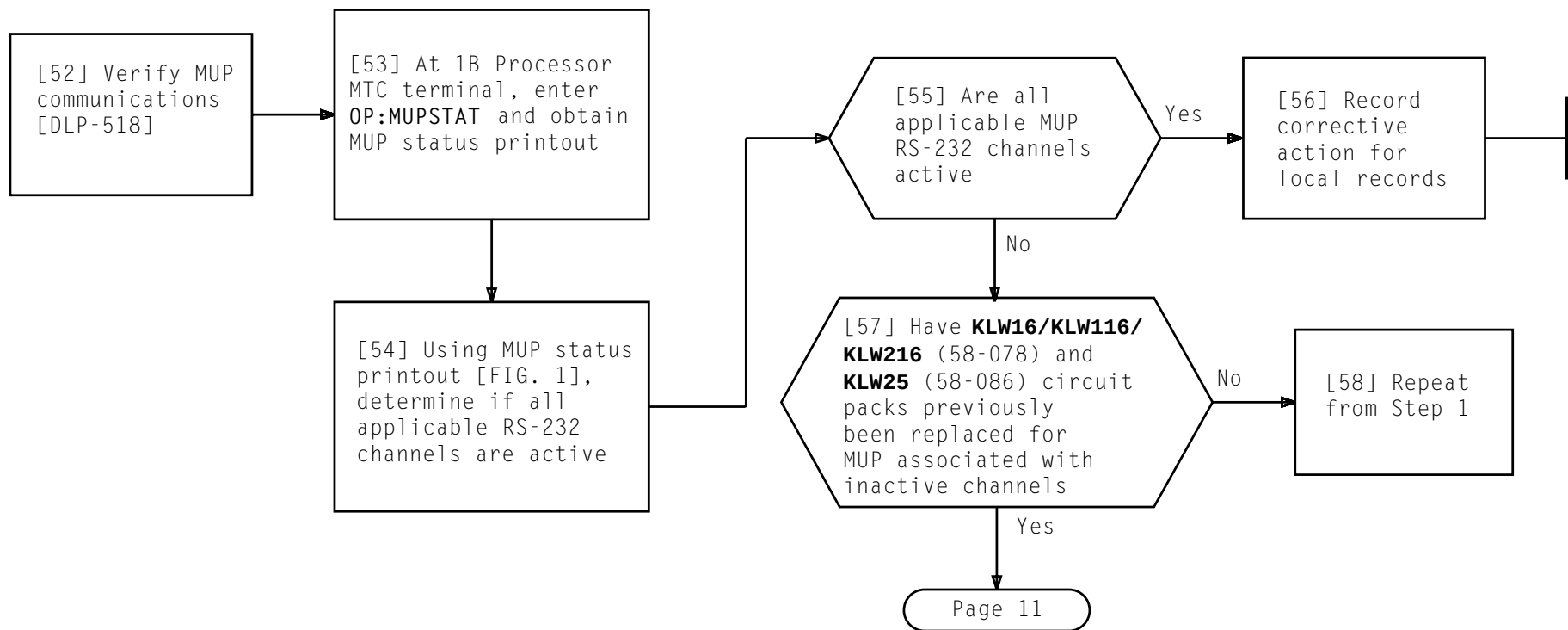
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[37] At 1B Processor MTC
terminal, enter
DGN:MUP a:PH 91,TLP!
a = MUP member number
(0 or 1)

[38] Allow ample time
for diagnostics to
complete







MUP STATE ON IFB

MUP ADDITIONAL STATUS

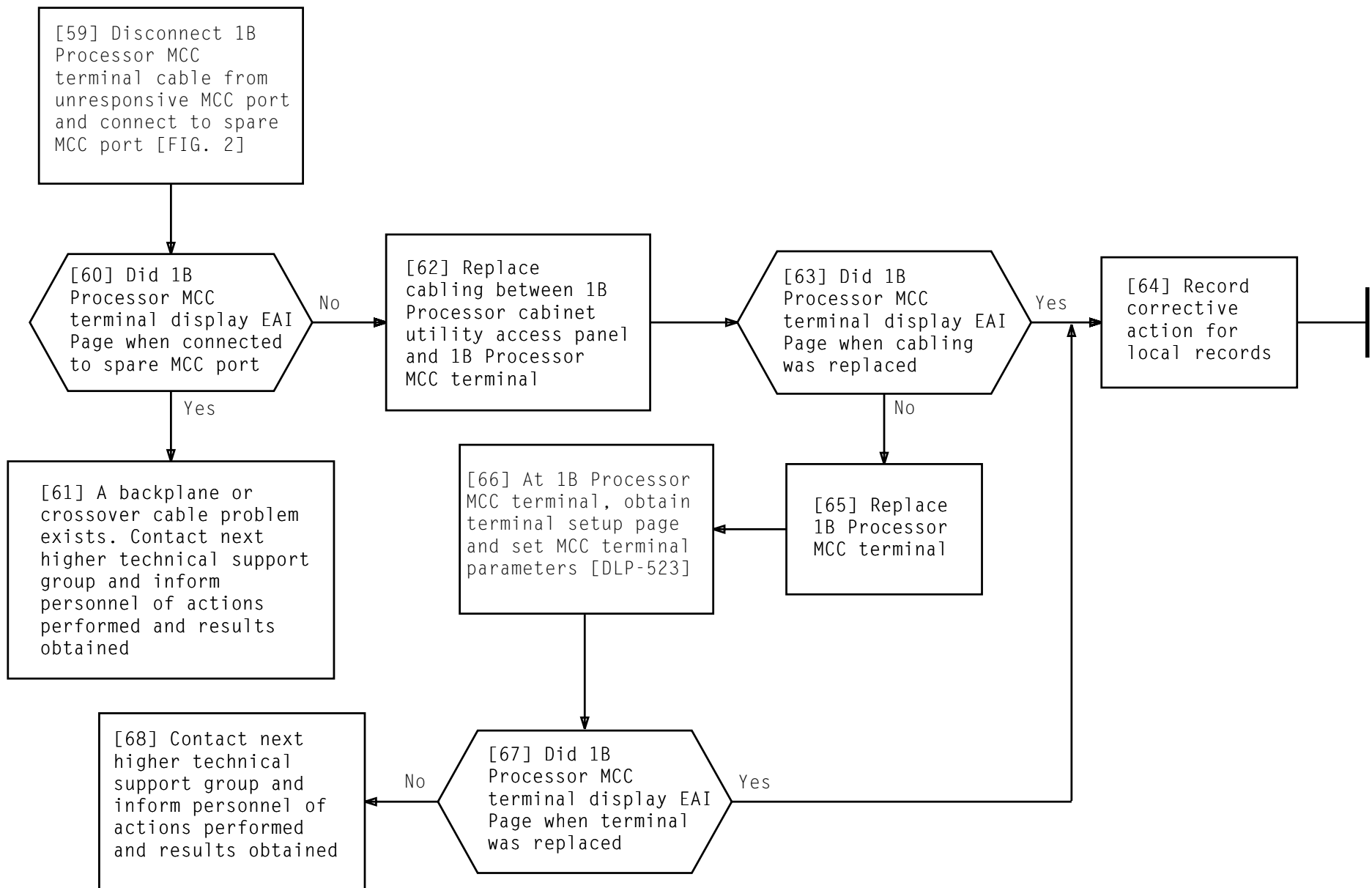
```

M42 OP:MUPSTAT
MUP 0 - 00S UNKNOWN STATUS 00000001
MUP 1 - 00S UNKNOWN STATUS 00000001
ETHERNET - UNKNOWN
RS-232 PORTS 0 - UNKNOWN 1 - UNKNOWN 2 - UNKNOWN
              3 - UNKNOWN
  
```

ETHERNET CHANNEL STATE

RS-232 CHANNEL STATE

FIG. 1 – Sample Printout of MUP Status



CLEAR MCC AND UTILITY PROCESSOR (MUP) CABLE/TERMINAL TROUBLE

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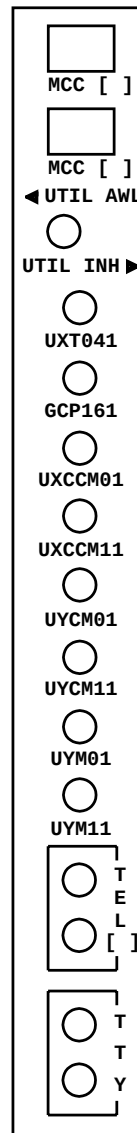


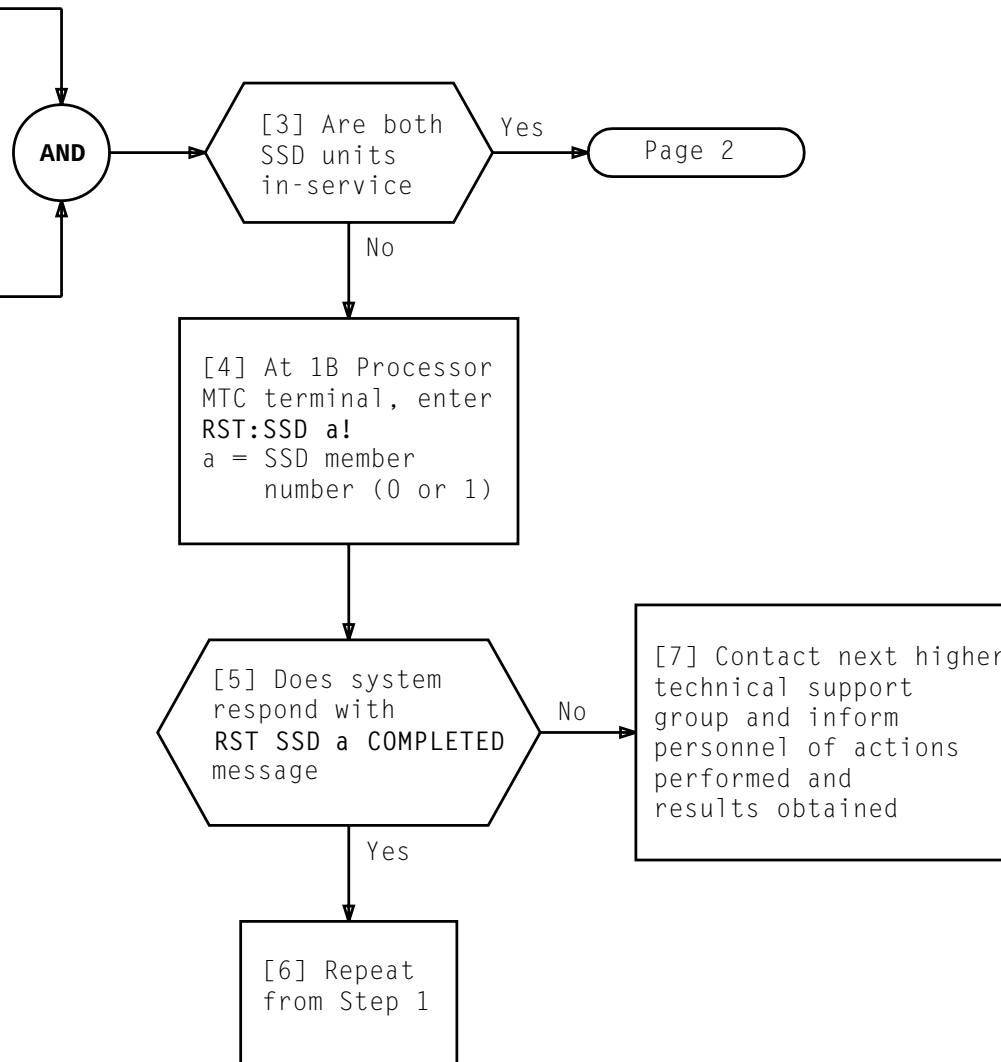
FIG. 2 - Sample Layout of MCC Terminal Connections
On 1B Processor Cabinet Utility Access Panel

CLEAR MCC AND UTILITY PROCESSOR (MUP) CABLE/TERMINAL TROUBLE

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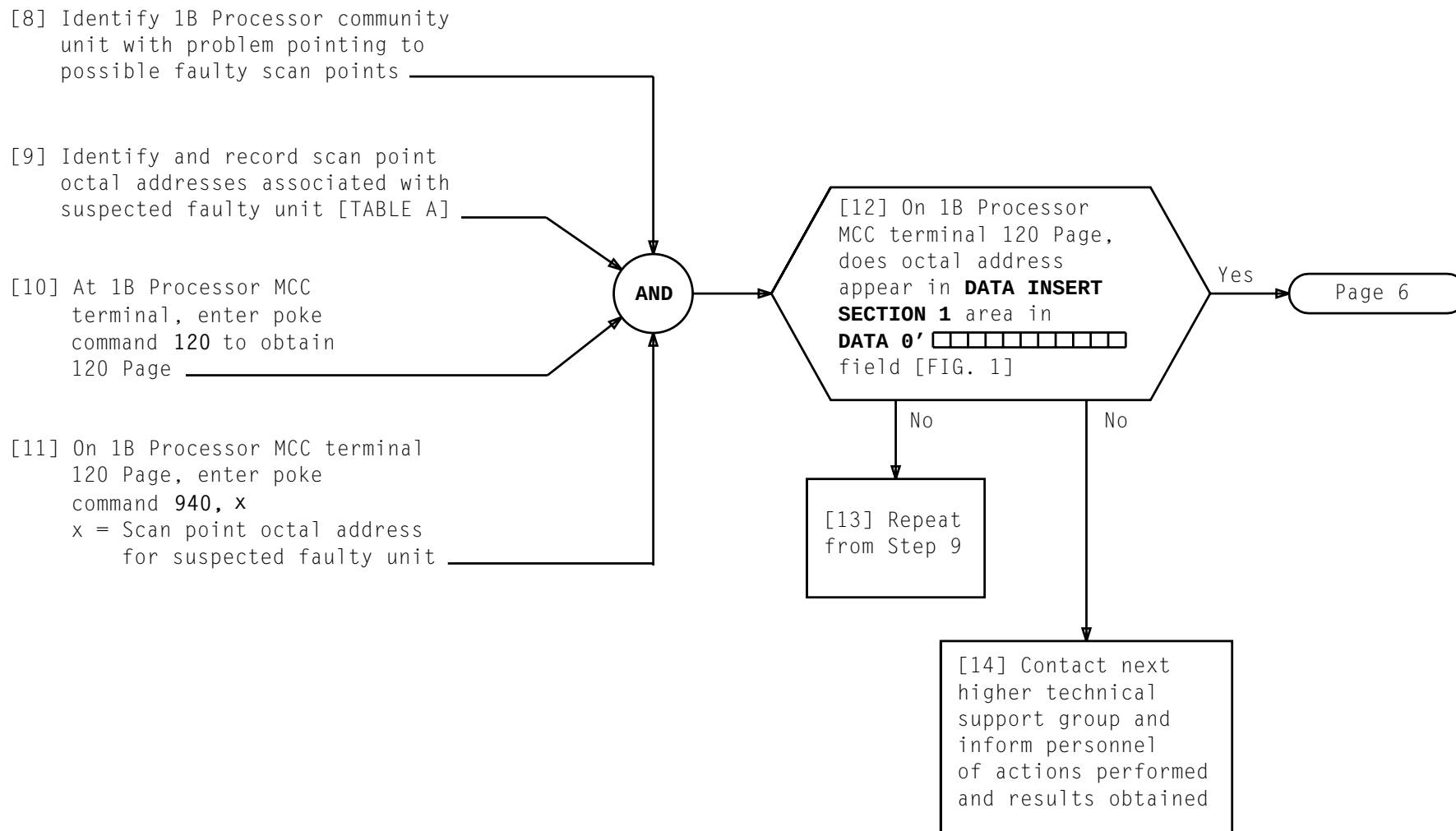
[1] At 1B Processor MTC terminal, enter
OP:OOSUNITS! and
obtain printout of all
out-of-service units

[2] Using printout of
out-of-service units,
ensure both SSD units
are in-service



CLEAR 1B PROCESSOR COMMUNITY SCAN AND SIGNAL DISTRIBUTOR (SSD) PROBLEM

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CLEAR 1B PROCESSOR COMMUNITY SCAN AND SIGNAL DISTRIBUTOR (SSD) PROBLEM

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TABLE A 1B PROCESSOR COMMUNITY SCAN POINT DATA									
1B PROCESSOR COMMUNITY UNIT	SCAN POINT			ASSOCIATED SSD UNIT	1B PROCESSOR COMMUNITY UNIT	SCAN POINT			ASSOCIATED SSD UNIT
	OCTAL ADDRESS	BINARY DISPLAY BITS				OCTAL ADDRESS	BINARY DISPLAY BITS		
		SCAN A	SCAN B				SCAN A	SCAN B	
CC0	40000100	17	16	SSD0	CS 12	40000000	13	12	SSD0
CC1	40000500	17	16	SSD1	CS 13	40000400	13	12	SSD1
PS 0	40000100	01	00	SSD0	CS 14	40000000	15	14	SSD0
PS 1	40000500	01	00	SSD1	CS 15	40000400	15	14	SSD1
PS 2	40000100	03	02	SSD0	CS 16	40000000	17	16	SSD0
PS 3	40000500	03	02	SSD1	CS 17	40000400	17	16	SSD1
PS 4	40000100	05	04	SSD0	CS 18	40000000	19	18	SSD0
PS 5	40000500	05	04	SSD1	CS 19	40000400	19	18	SSD1
PS 6	40000100	07	06	SSD0	CS 20	40000000	21	20	SSD0
PS 7	40000500	07	06	SSD1	CS 21	40000400	21	20	SSD1
PS 8	40000100	09	08	SSD0	CS 22	40000000	23	22	SSD0
PS 9	40000500	09	08	SSD1	CS 23	40000400	23	22	SSD1
PS 10	40000100	11	10	SSD0	CS 24	40000040	01	00	SSD0
PS 11	40000500	11	10	SSD1	CS 25	40000440	01	00	SSD1
PS 12	40000100	13	12	SSD0	CS 26	40000040	03	02	SSD0
PS 13	40000500	13	12	SSD1	CS 27	40000440	03	02	SSD1
CS 0	40000000	01	00	SSD0	CS 28	40000040	05	04	SSD0
CS 1	40000400	01	00	SSD1	CS 29	40000440	05	04	SSD1
CS 2	40000000	03	02	SSD0	CS 30	40000040	07	06	SSD0
CS 3	40000400	03	02	SSD1	CS 31	40000440	07	06	SSD1
CS 4	40000000	05	04	SSD0	CS 32	40000040	09	08	SSD0
CS 5	40000400	05	04	SSD1	CS 33	40000440	09	08	SSD1
CS 6	40000000	07	06	SSD0	CS 34	40000040	11	10	SSD0
CS 7	40000400	07	06	SSD1	CS 35	40000440	11	10	SSD1
CS 8	40000000	09	08	SSD0	CS 36	40000040	13	12	SSD0
CS 9	40000400	09	08	SSD1	CS 37	40000440	13	12	SSD1
CS 10	40000000	11	10	SSD0	CS 38	40000040	15	14	SSD0
CS 11	40000400	11	10	SSD1	CS 39	40000440	15	14	SSD1

**CLEAR 1B PROCESSOR COMMUNITY SCAN AND SIGNAL DISTRIBUTOR (SSD)
PROBLEM**

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TABLE A (Contd)									
1B PROCESSOR COMMUNITY SCAN POINT DATA									
1B PROCESSOR COMMUNITY UNIT	SCAN POINT			ASSOCIATED SSD UNIT	1B PROCESSOR COMMUNITY UNIT	SCAN POINT			ASSOCIATED SSD UNIT
	OCTAL ADDRESS	BINARY DISPLAY BITS				OCTAL ADDRESS	BINARY DISPLAY BITS		
		SCAN A	SCAN B				SCAN A	SCAN B	
BB 00	40000040	17	16	SSD0	DUS 0	40000240	19	18	SSD0
BB 01	40000440	17	16	SSD1	DUS 1	40000640	19	18	SSD1
BB 10	40000040	19	18	SSD0	TUC 0	40000300	01	00	SSD0
BB 11	40000440	19	18	SSD1	TUC 4	40000700	01	00	SSD1
MISC.PWR.0	40000100	15	14	SSD0	TUC 1	40000300	03	02	SSD0
MISC.PWR.1	40000500	15	14	SSD1	TUC 5	40000700	03	02	SSD1
IFB 0	40000140	01	00	SSD0	TUC 2	40000300	05	04	SSD0
IFB 1	40000540	01	00	SSD1	TUC 6	40000700	05	04	SSD1
IFB 2	40000140	03	02	SSD0	TUC 3	40000300	07	06	SSD0
IFB 3	40000540	03	02	SSD1	TUC 7	40000700	07	06	SSD1
IFB 4	40000140	05	04	SSD0	API 0	40000240	17	16	SSD0
IFB 5	40000540	05	04	SSD1	API 1	40000640	17	16	SSD1
IFB 6	40000140	07	06	SSD0	IOF0 PUB 0	40000300	09	08	SSD0
IFB 7	40000540	07	06	SSD1	IOF1 PUB 0	40000700	09	08	SSD1
IFB 8	40000140	09	08	SSD0	IOUS 0 IOF0A	40000300	11	10	SSD0
IFB 9	40000540	09	08	SSD1	IOUS 2 IOF1A	40000700	11	10	SSD1
IFB 10	40000140	11	10	SSD0	IOF0 PUB 1	40000300	13	12	SSD0
IFB 11	40000540	11	10	SSD1	IOF1 PUB 1	40000700	13	12	SSD1
IFB 12	40000140	13	12	SSD0	IOUS 1 IOF0B	40000300	15	14	SSD0
IFB 13	40000540	13	12	SSD1	IOUS 3 IOF1B	40000700	15	14	SSD1
IFB 14	40000140	15	14	SSD0	PD 0 PWR0	40000240	01	00	SSD0
IFB 15	40000540	15	14	SSD1	PD 1 PWR1	40000640	01	00	SSD1
IFB 16	40000140	17	16	SSD0	PD 0 CON0	40000240	03	02	SSD0
IFB 17	40000540	17	16	SSD1	PD 1 CON0	40000640	03	02	SSD1
IFB 18	40000140	19	18	SSD0	PD 0 CON1	40000240	05	04	SSD0
IFB 19	40000540	19	18	SSD1	PD 1 CON1	40000640	05	04	SSD1
IFB 20	40000140	21	20	SSD0	PD 0 CON2	40000240	07	06	SSD0
IFB 21	40000540	21	20	SSD1	PD 1 CON2	40000640	07	06	SSD1
IFB 22	40000540	23	22	SSD1/0					
IFB 23	40000140	23	22	SSD0/1					

**CLEAR 1B PROCESSOR COMMUNITY SCAN AND SIGNAL DISTRIBUTOR (SSD)
PROBLEM**

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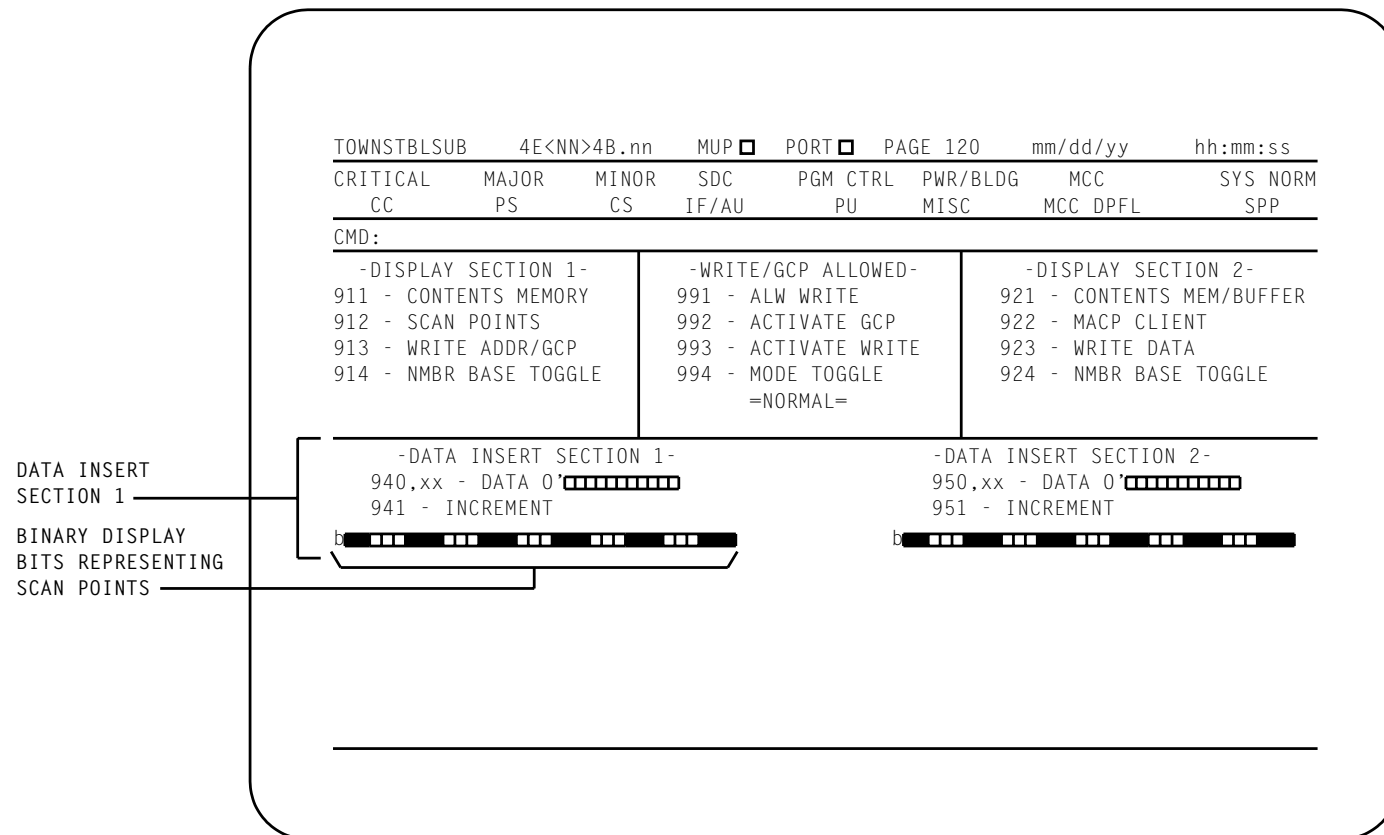
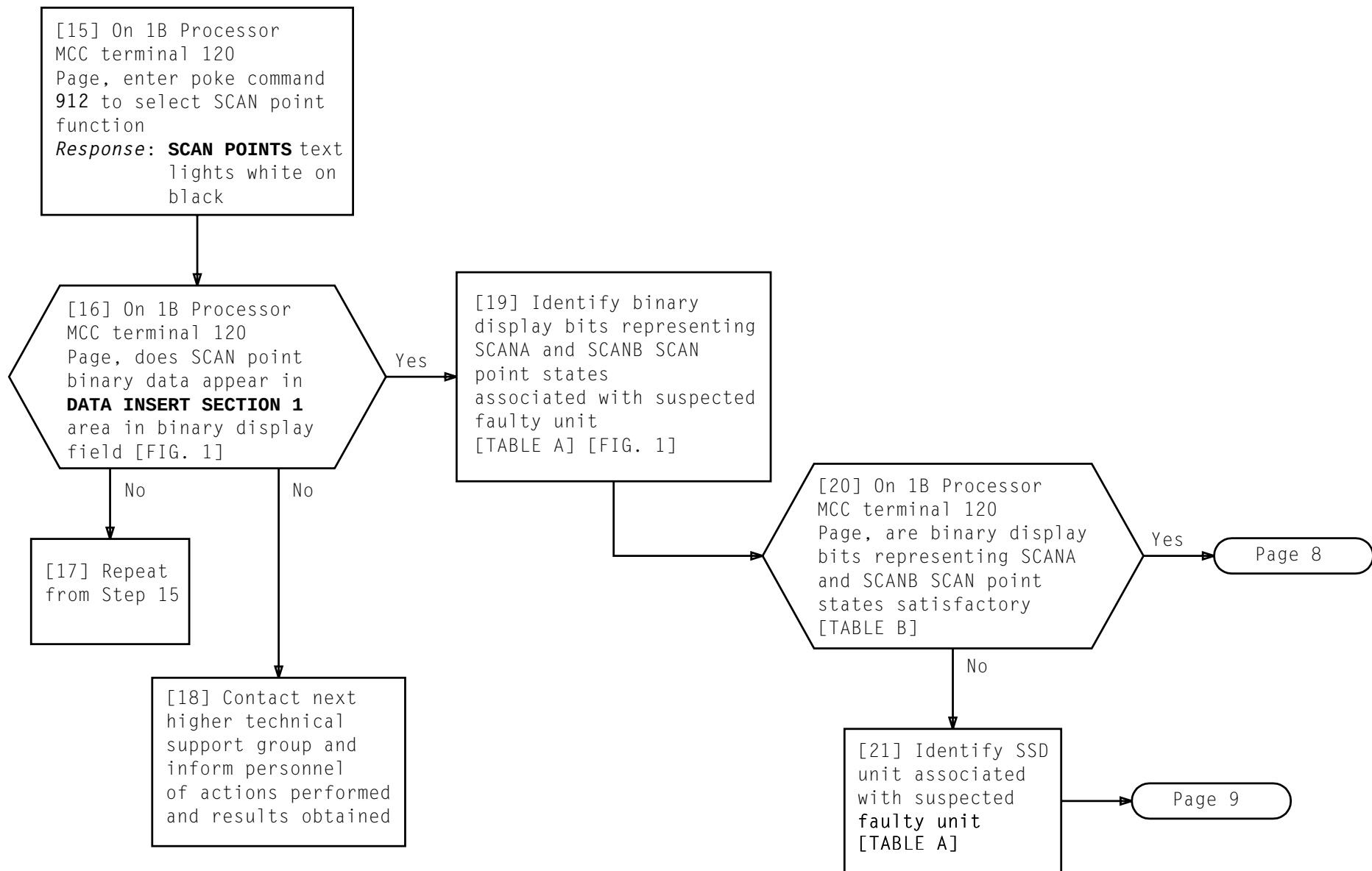


FIG. 1 - Sample Layout of 1B Processor MCC Terminal 120 Page



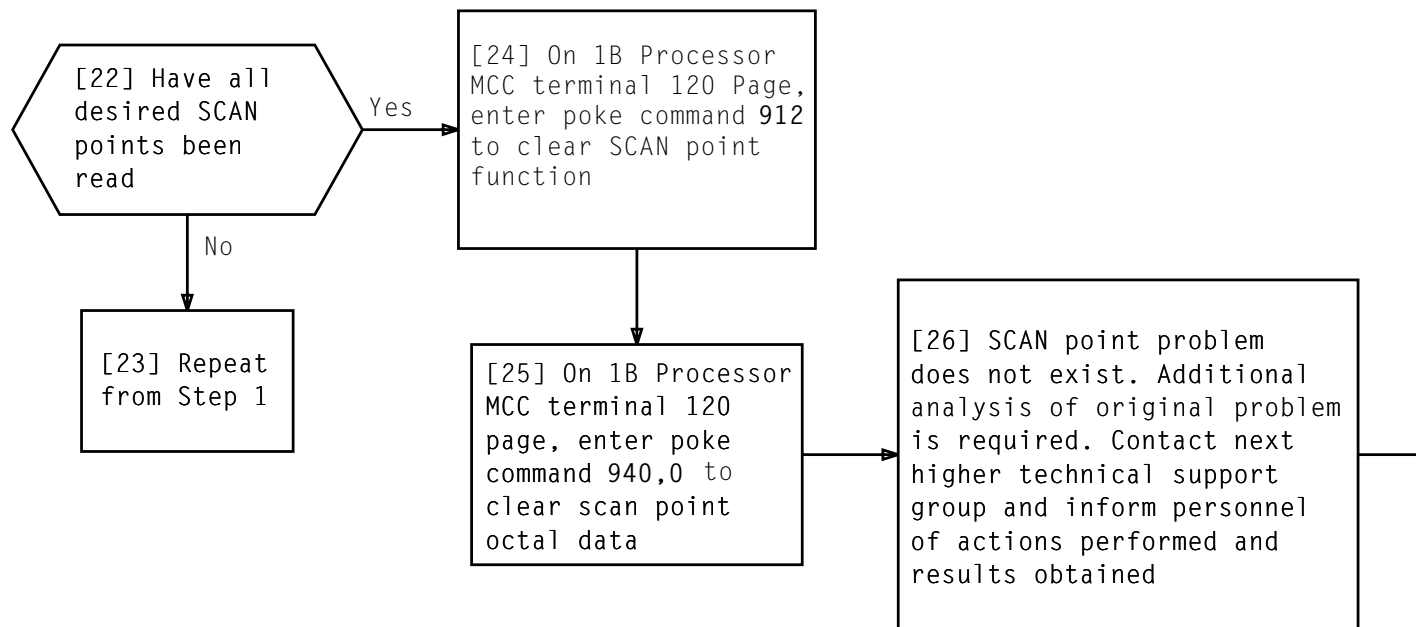
CLEAR 1B PROCESSOR COMMUNITY SCAN AND SIGNAL DISTRIBUTOR (SSD) PROBLEM

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TABLE B SCANA AND SCANB SCAN POINT STATES		
SCANA	SCANB	NORMAL MODE
0	0	ON NORMAL
0	1	OFF NORMAL (POWER DOWN)
		PACK REMOVED FROM FRAME or UNEQUIPPED PACK POSITION
1	0	REQUEST OUT OF SERVICE
1	1	POWER ALARM (POWER DOWN)

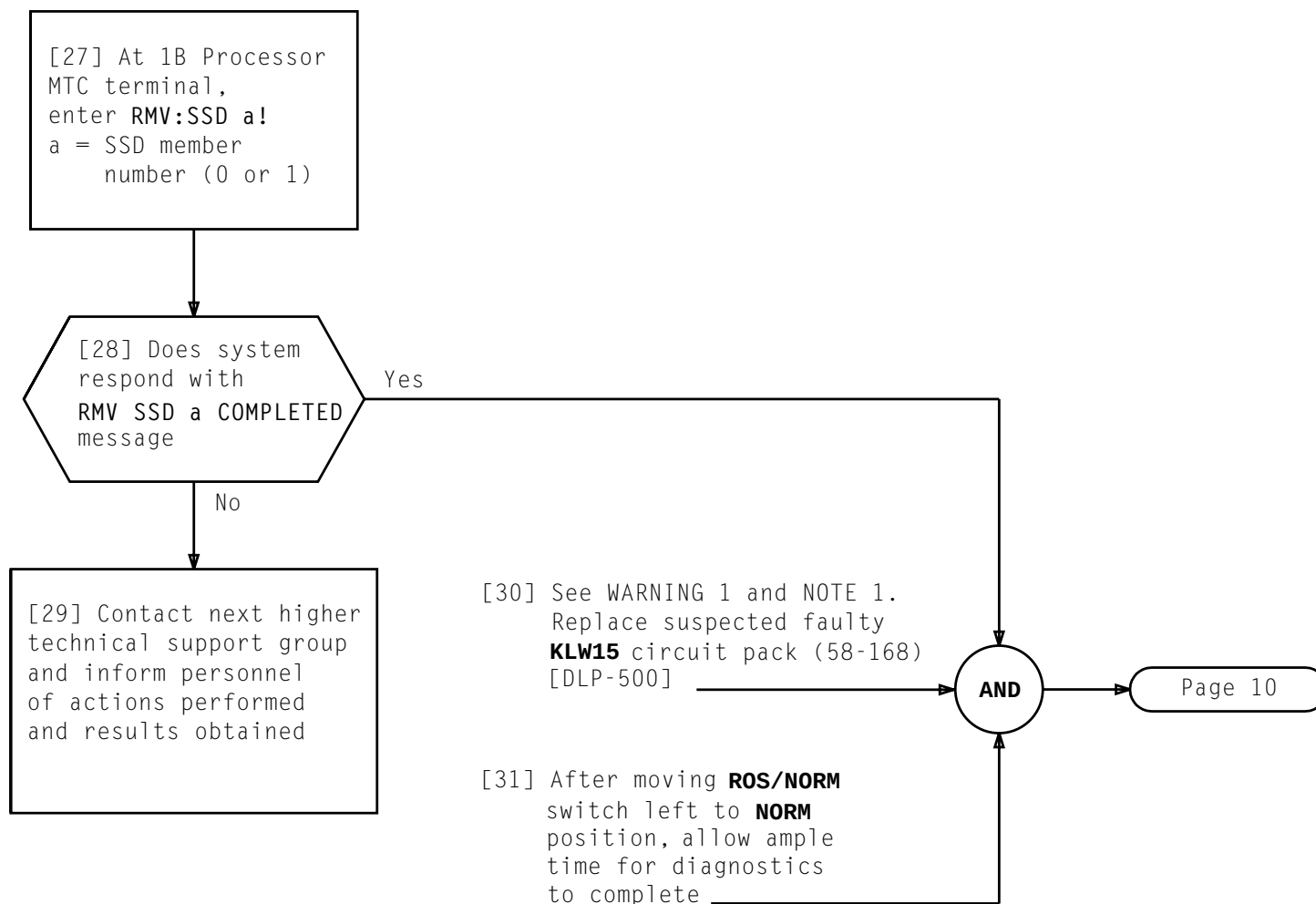
**CLEAR 1B PROCESSOR COMMUNITY SCAN AND SIGNAL DISTRIBUTOR (SSD)
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CLEAR 1B PROCESSOR COMMUNITY SCAN AND SIGNAL DISTRIBUTOR (SSD) PROBLEM

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NOTE 1

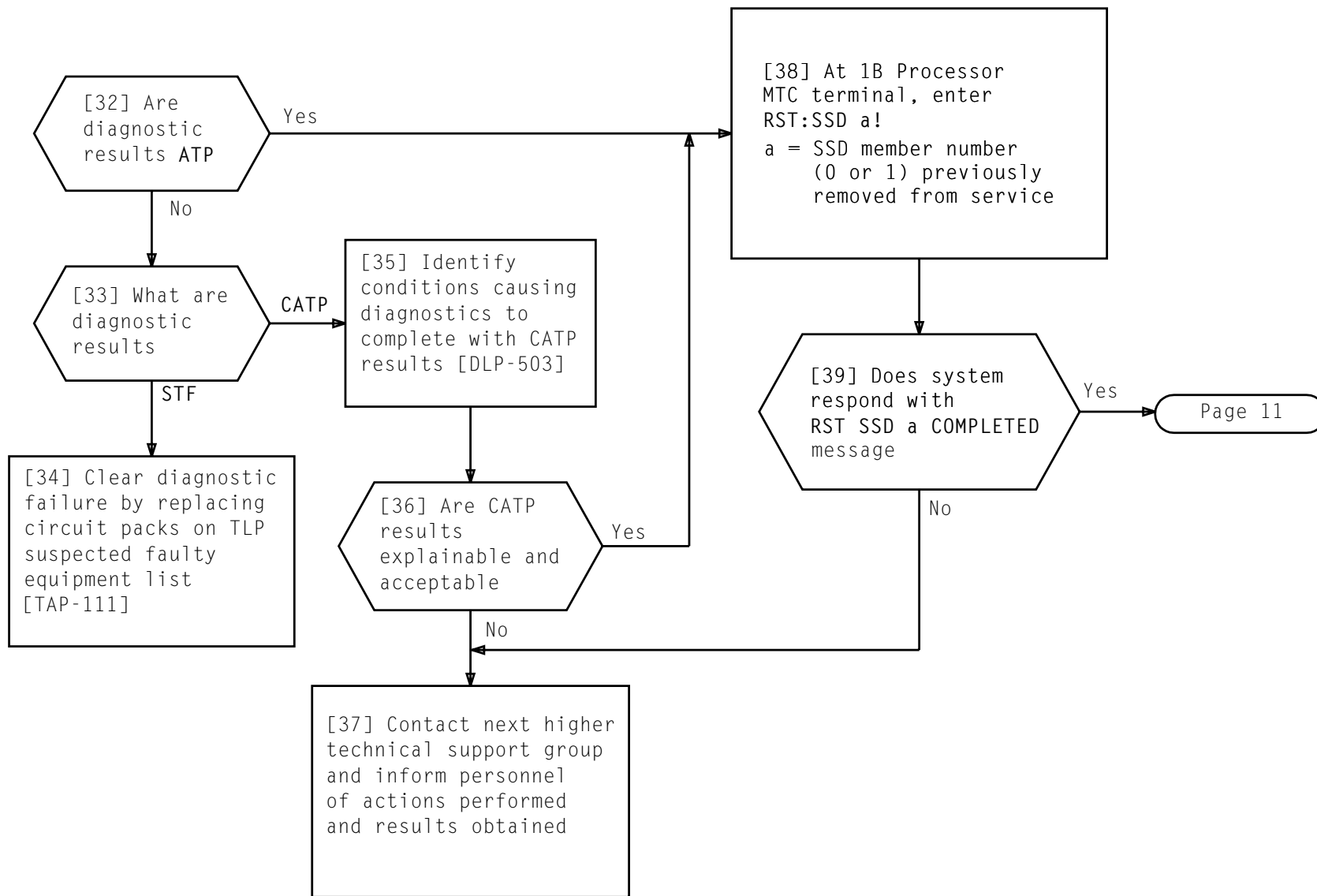
Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 1

A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

CLEAR 1B PROCESSOR COMMUNITY SCAN AND SIGNAL DISTRIBUTOR (SSD) PROBLEM

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[40] Identify and record scan point
octal addresses associated with
suspected faulty unit [TABLE A]

[41] At 1B Processor MCC
terminal, enter poke
command 120 to obtain
120 Page

[42] On 1B Processor MCC terminal
120 Page, enter poke
command 940, x
x = Scan point octal address
for suspected faulty unit

AND

[43] On 1B Processor
MCC terminal 120 Page,
does octal address
appear in **DATA INSERT
SECTION 1** area in
DATA 0'
field [FIG. 1]

Yes

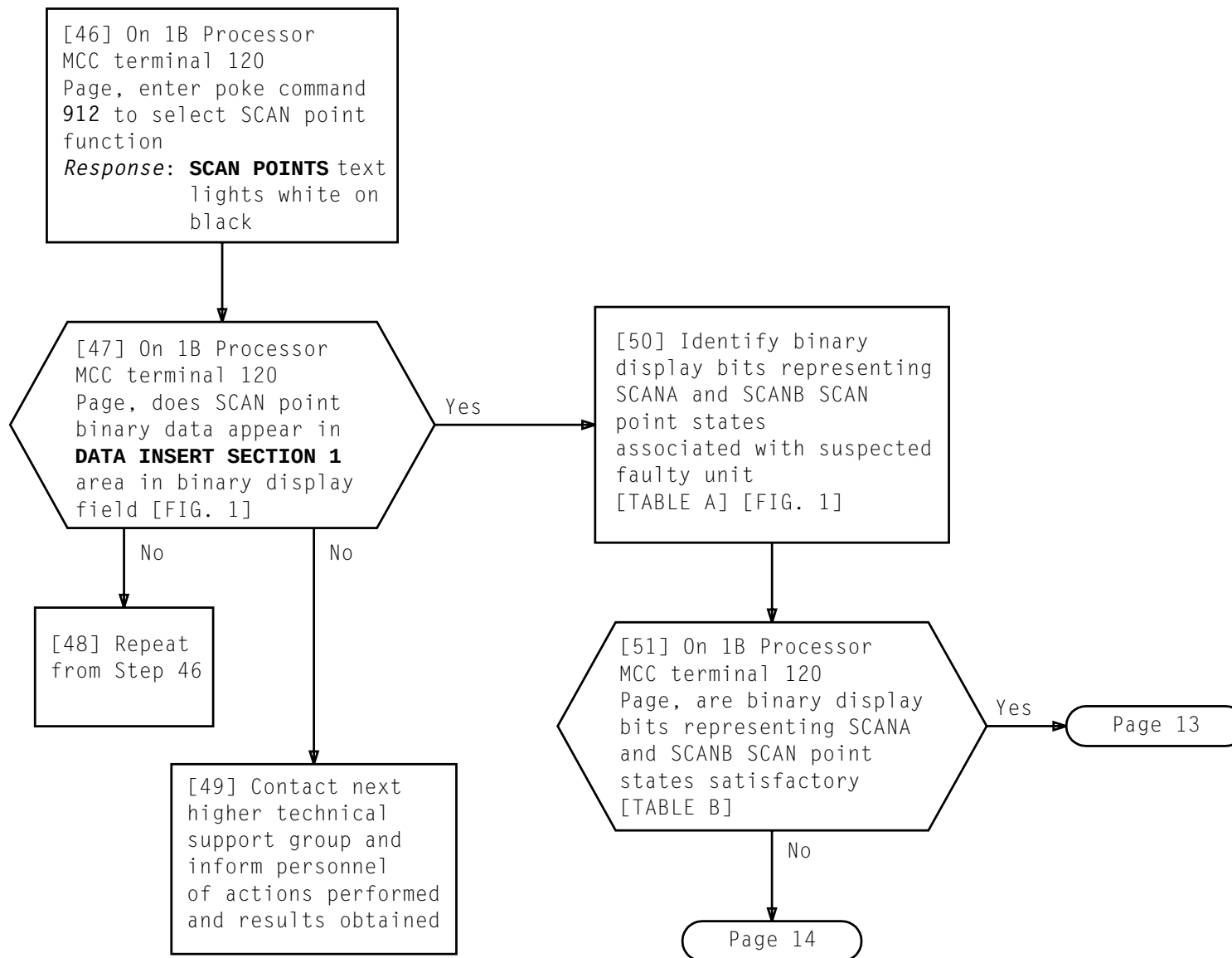
Page 12

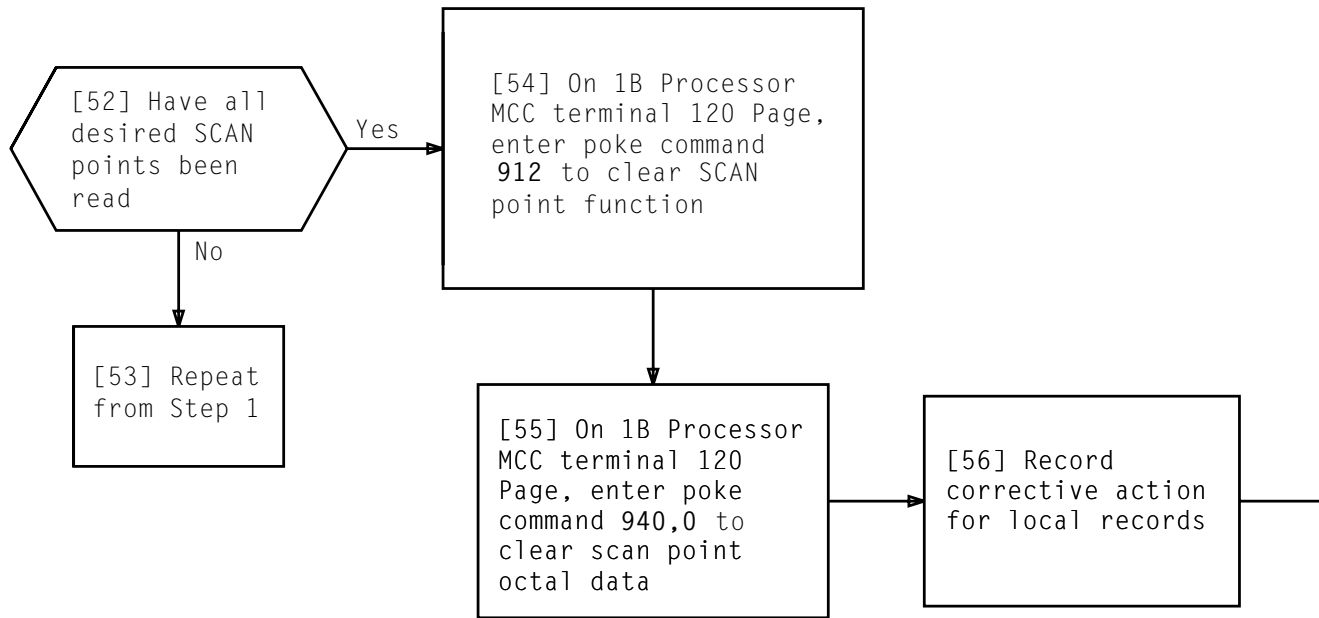
No

[44] Repeat
from Step 40

No

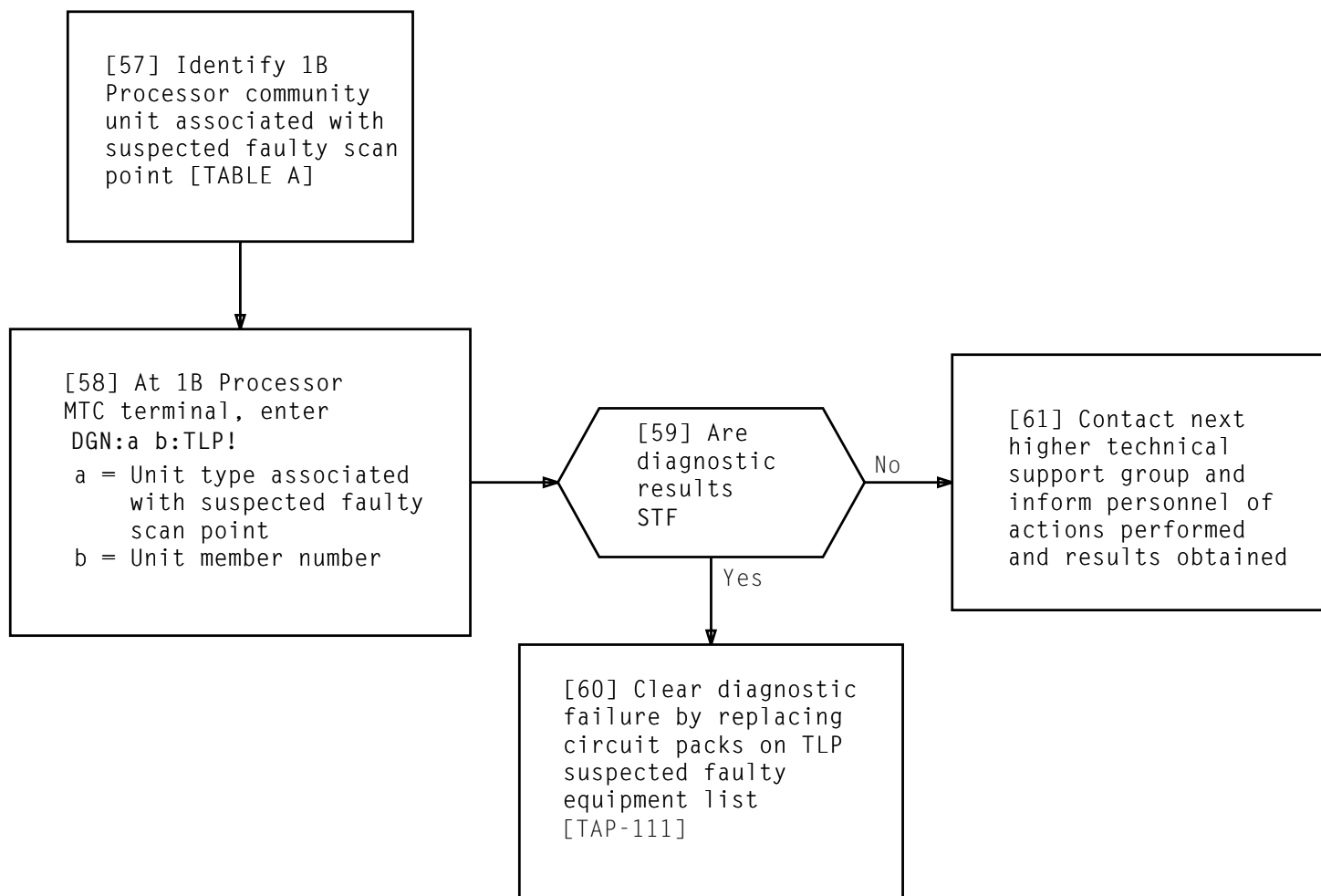
[45] Contact next
higher technical
support group and
inform personnel
of actions performed
and results obtained





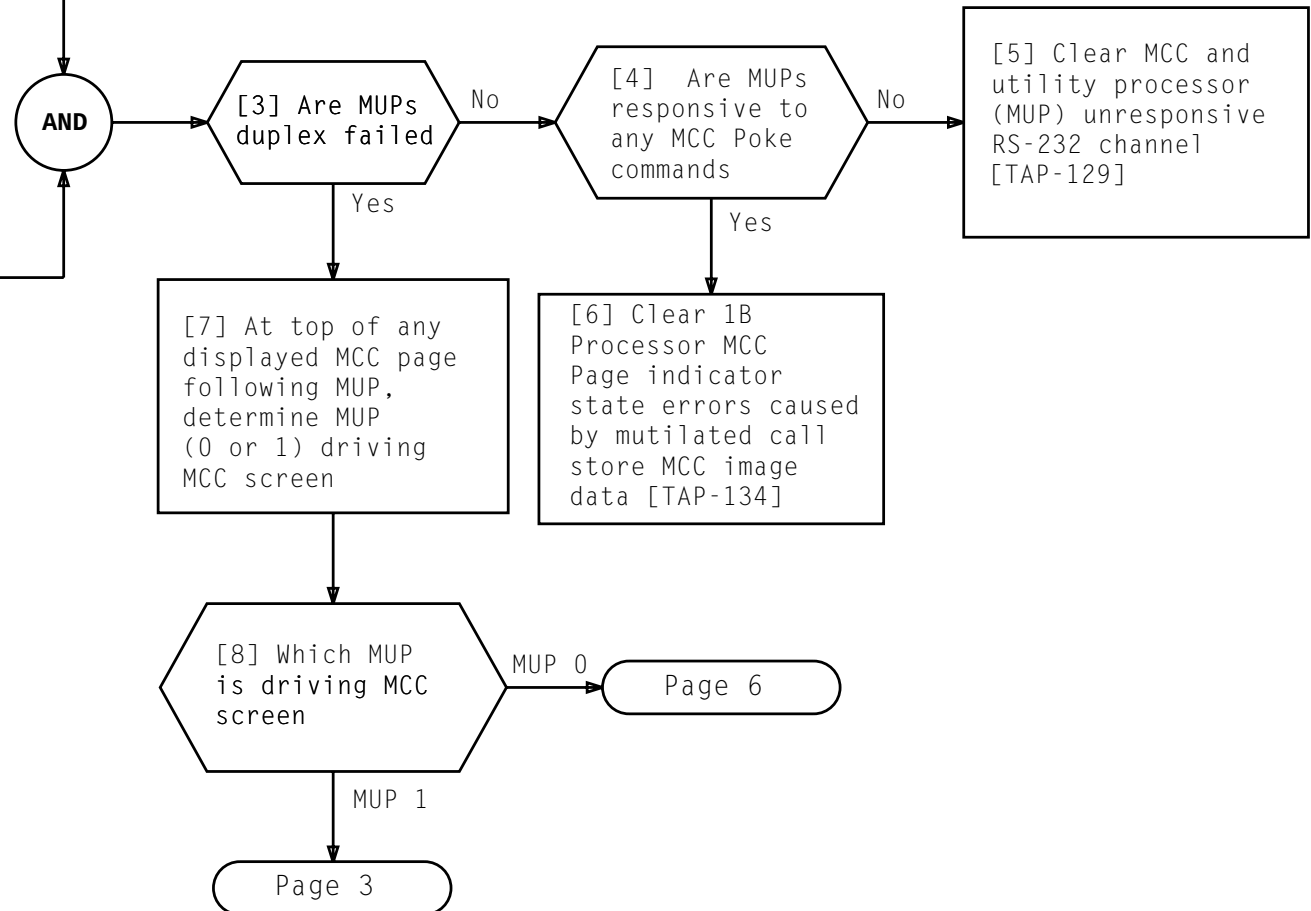
CLEAR 1B PROCESSOR COMMUNITY SCAN AND SIGNAL DISTRIBUTOR (SSD) PROBLEM

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[1] At 1B Processor MTC terminal, enter
OP:MUPSTAT! and obtain MUP
status printout

[2] Using MUP status printout
[FIG. 1] and duplex failed
MUP indicators [TABLE A],
identify if MUPs are
duplex failed



CLEAR DUPLEX FAILED MCC AND UTILITY PROCESSORS (MUPs)

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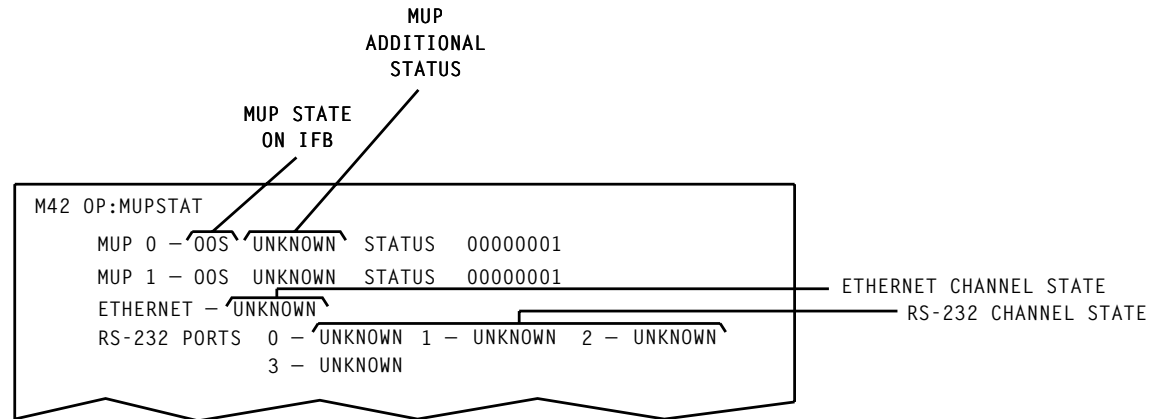


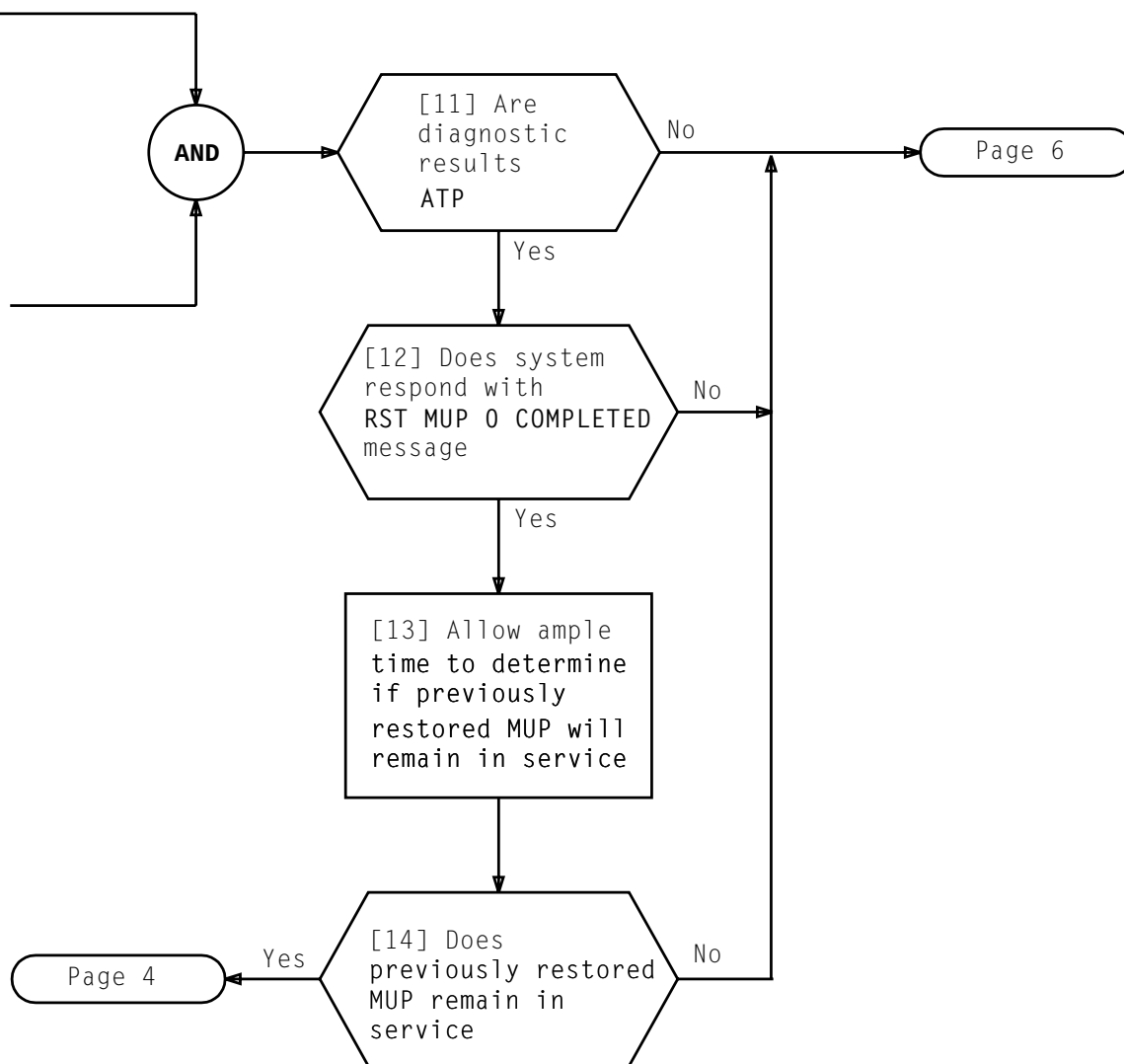
FIG. 1 – Sample Printout of MUP Status

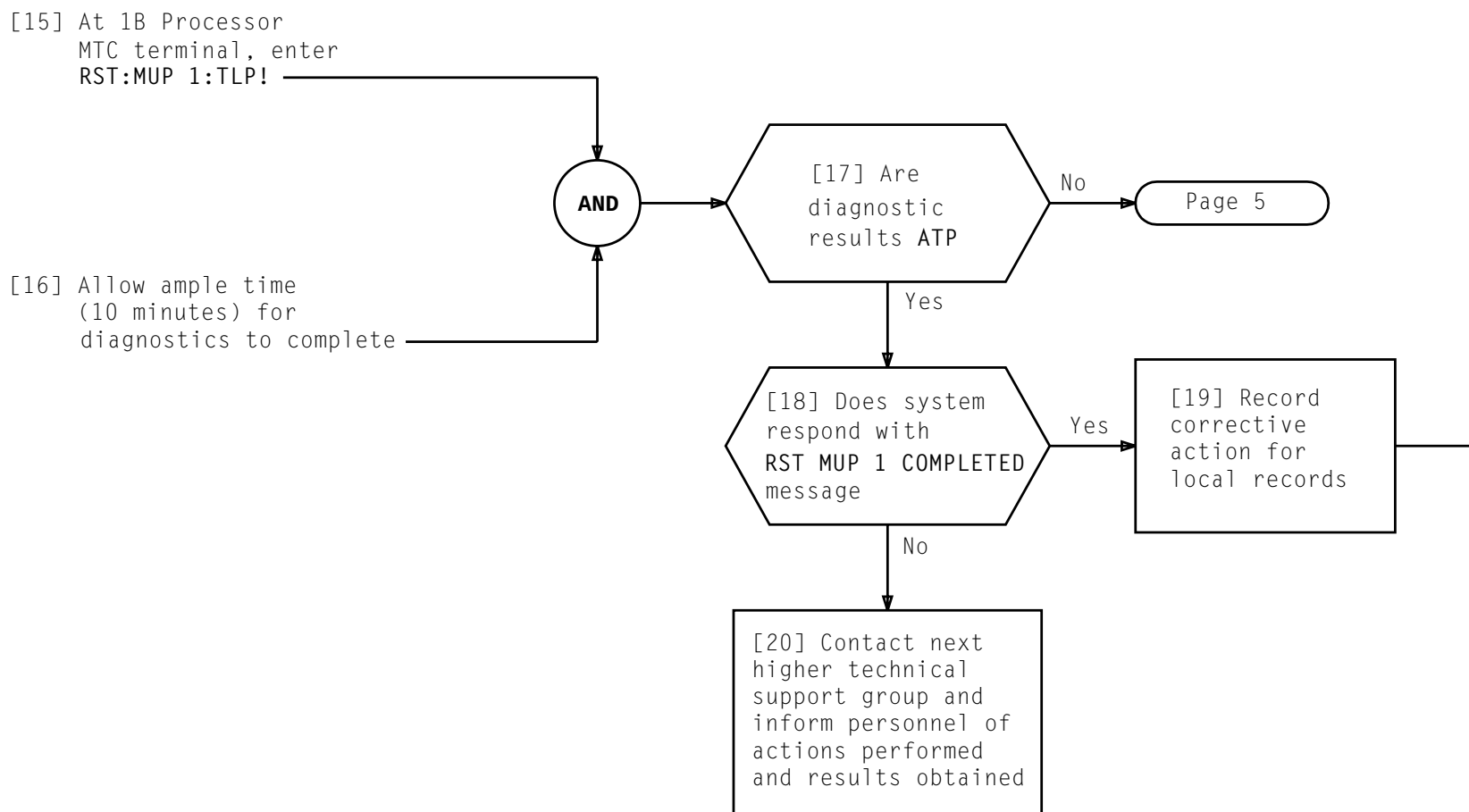
TABLE A DUPLEX FAILED MUP INDICATORS	
MUP STATUS INDICATOR	DUPLEX FAILED STATE
MUP STATE ON IFB	If Both MUP 0 And MUP 1 Are Out-of-Service (OOS)
MUP ADDITIONAL STATUS	If Status Is Unknown
ETHERNET CHANNEL STATE	If Status Is Unknown
RS-232 CHANNEL STATE	If Status Is Unknown

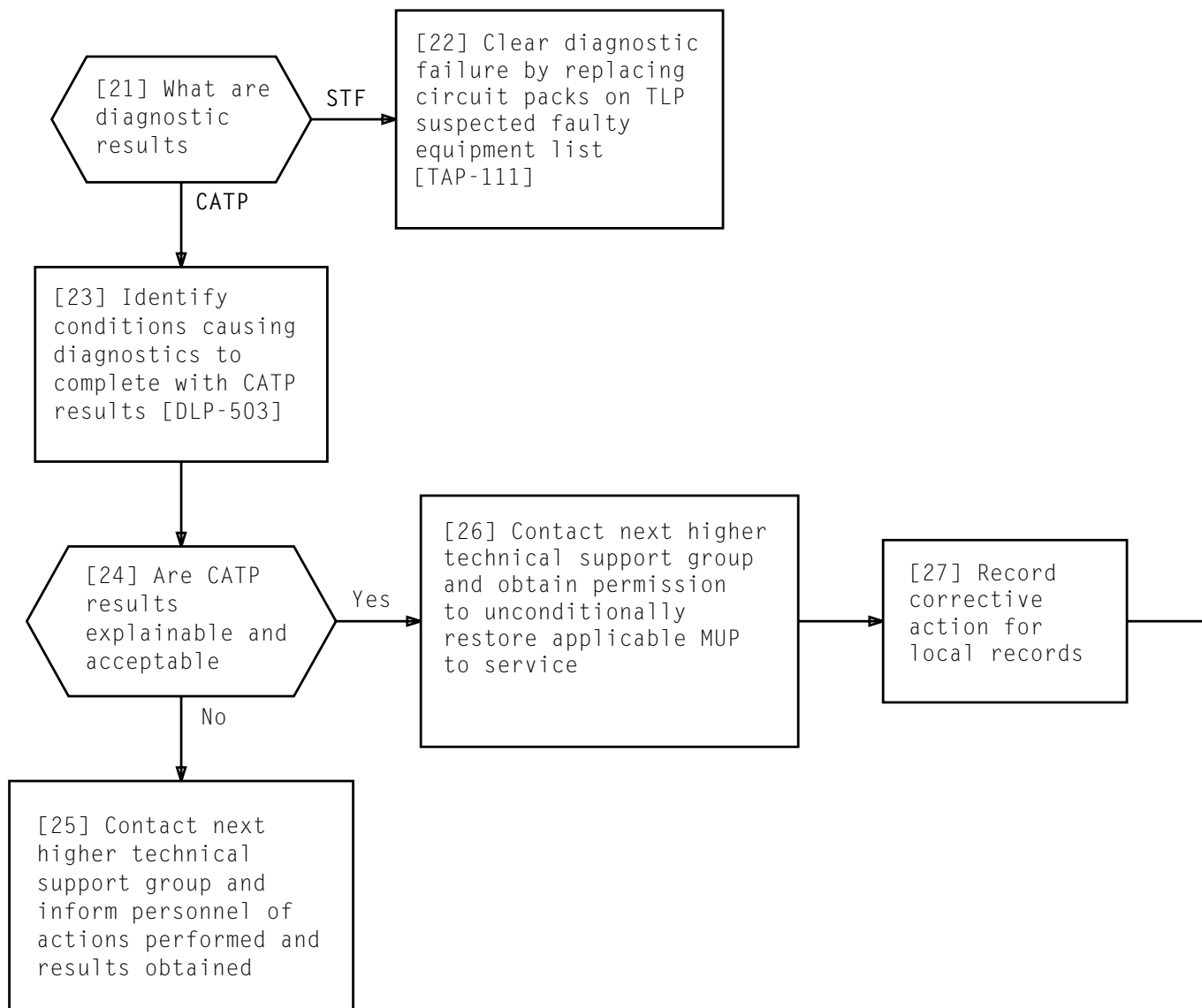
CLEAR DUPLEX FAILED MCC AND UTILITY PROCESSORS (MUPs)

[9] At 1B Processor
MTC terminal, enter
RST:MUP 0:TLP!

[10] Allow ample time
(10 minutes) for
diagnostics to complete





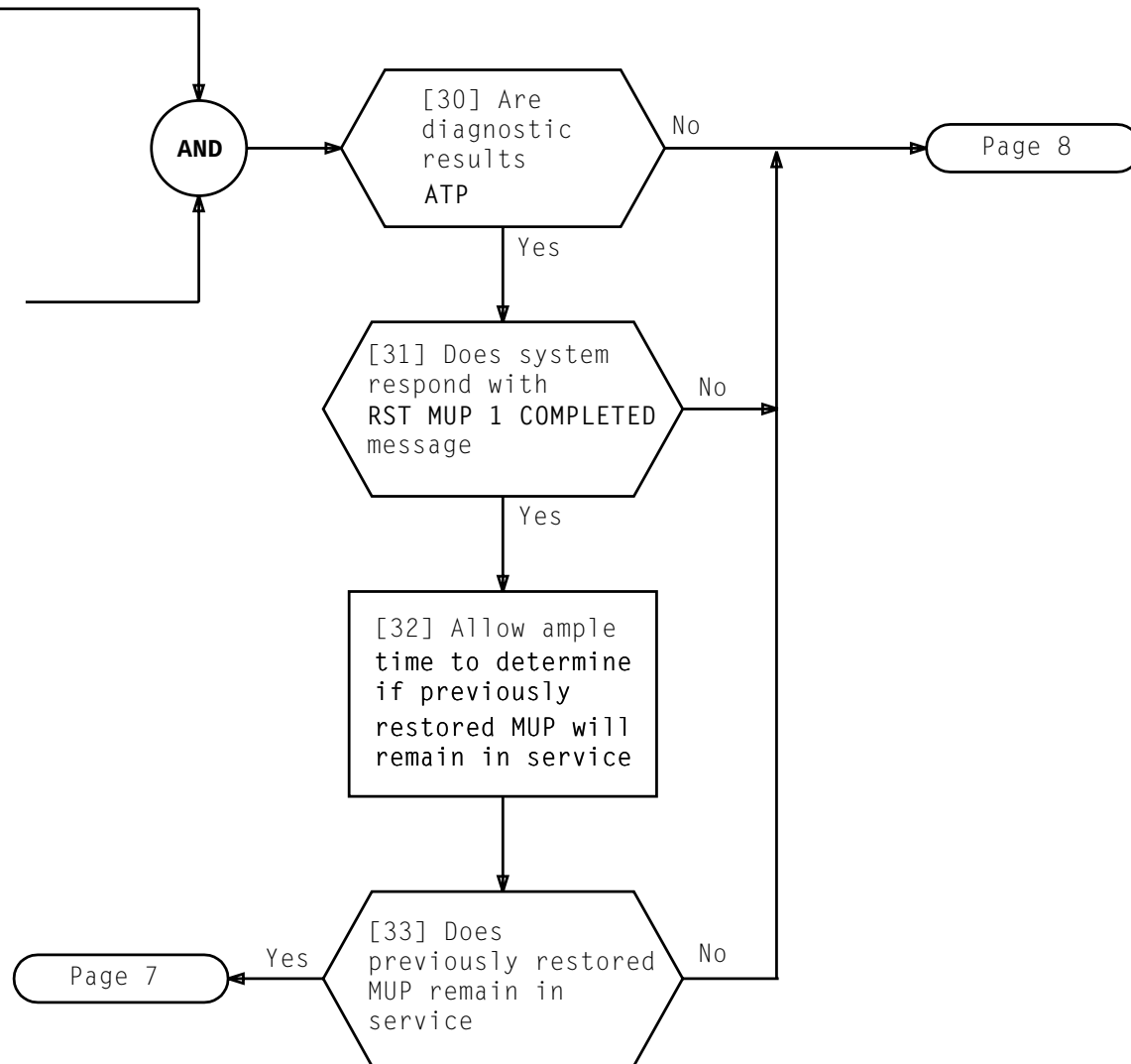


CLEAR DUPLEX FAILED MCC AND UTILITY PROCESSORS (MUPs)

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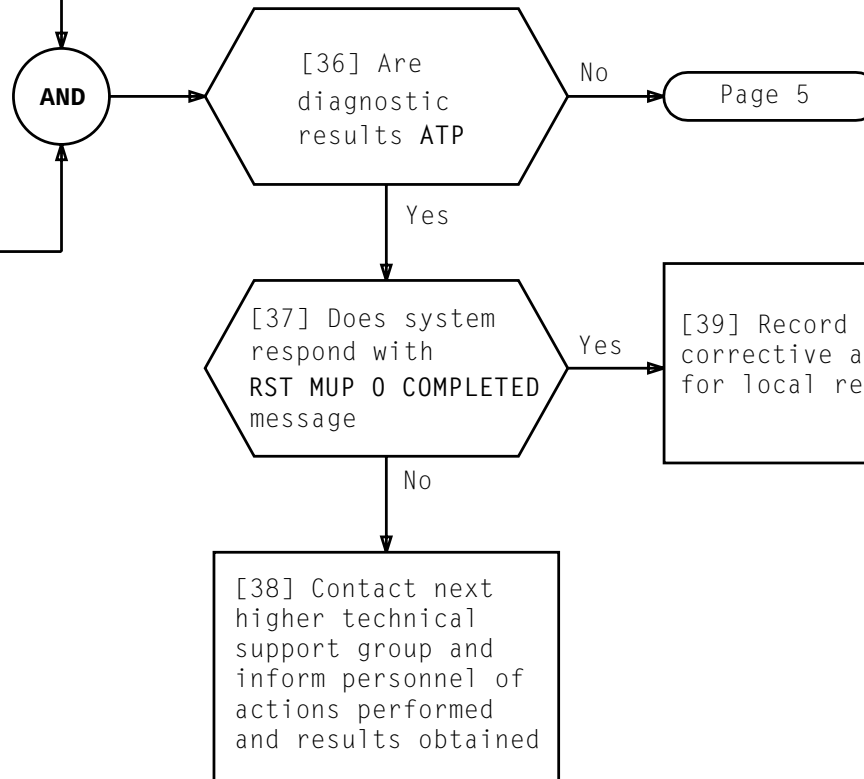
[28] At 1B Processor
MTC terminal, enter
RST:MUP 1:TLP!

[29] Allow ample time
(10 minutes) for
diagnostics to complete



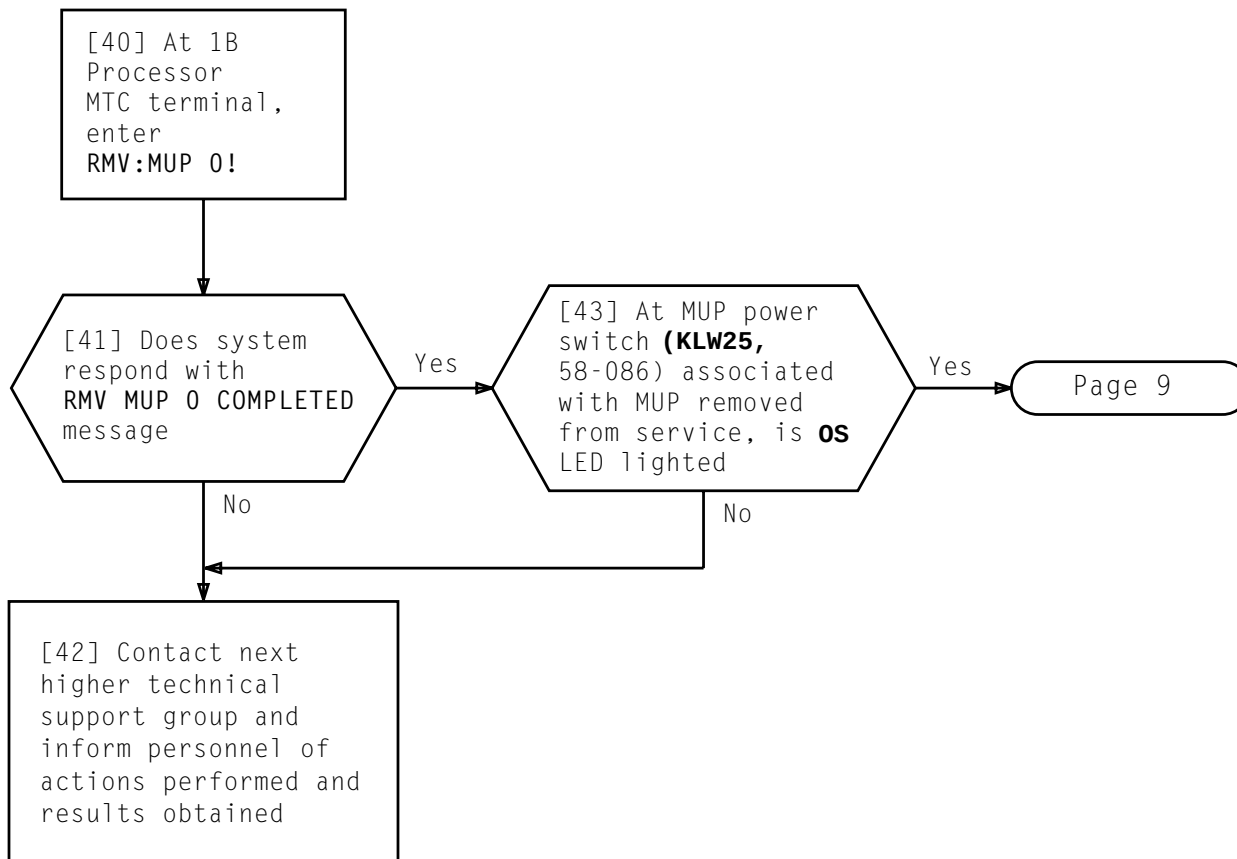
[34] At 1B Processor
MTC terminal, enter
RST:MUP 0:TLP!

[35] Allow ample time
(10 minutes) for
diagnostics to complete



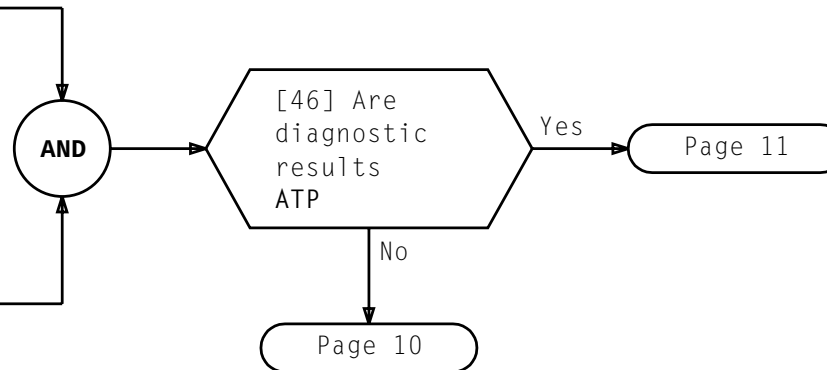
CLEAR DUPLEX FAILED MCC AND UTILITY PROCESSORS (MUPs)

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[44] See NOTE 1 and WARNING 1.
Replace **KLW16/KLW116/KLW216**
circuit pack (58-078)
associated with MUP removed
from service [DLP-500]

[45] After moving **ROS/NORM**
switch left to **NORM**
position, allow ample
time (10 minutes) for
diagnostics to complete

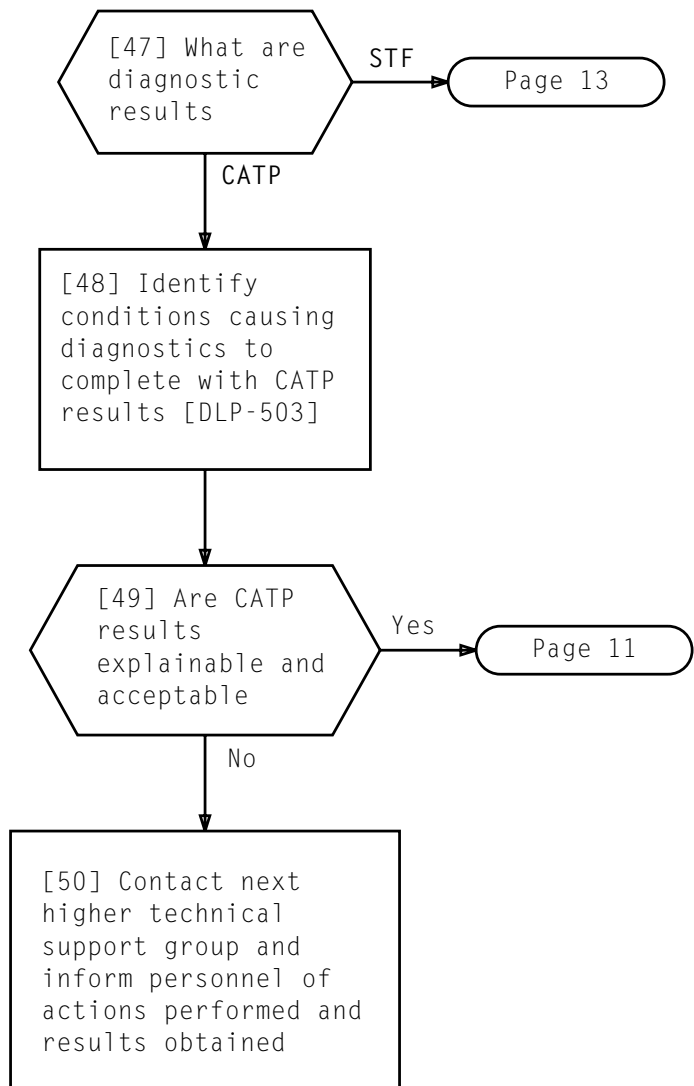


NOTE 1

Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

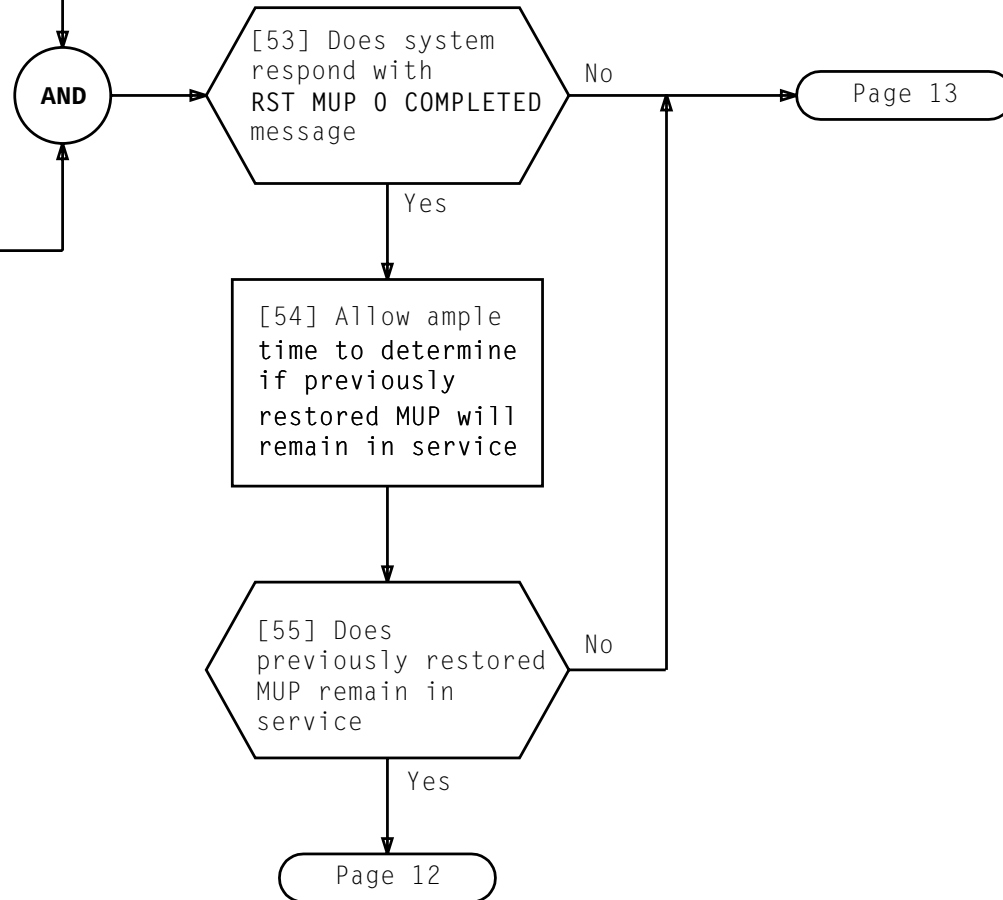
WARNING 1

A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any mannner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins



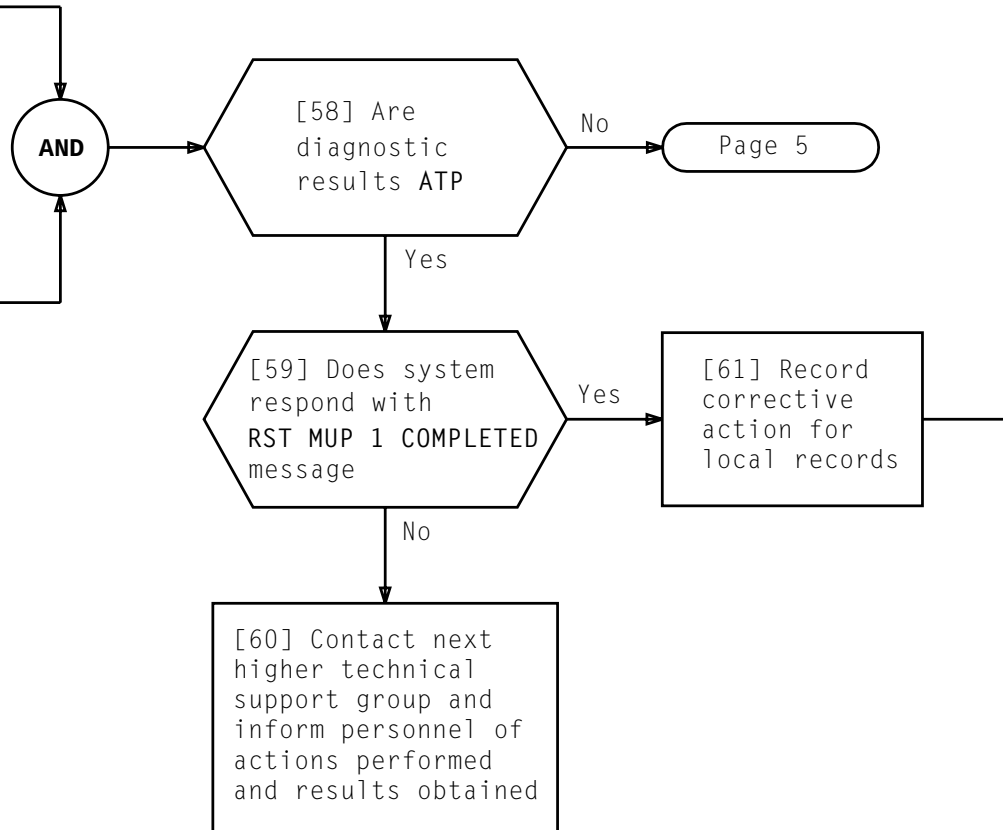
[51] At 1B Processor
MTC terminal, enter
RST:MUP 0!

[52] Allow ample time
(10 minutes) for
diagnostics to complete



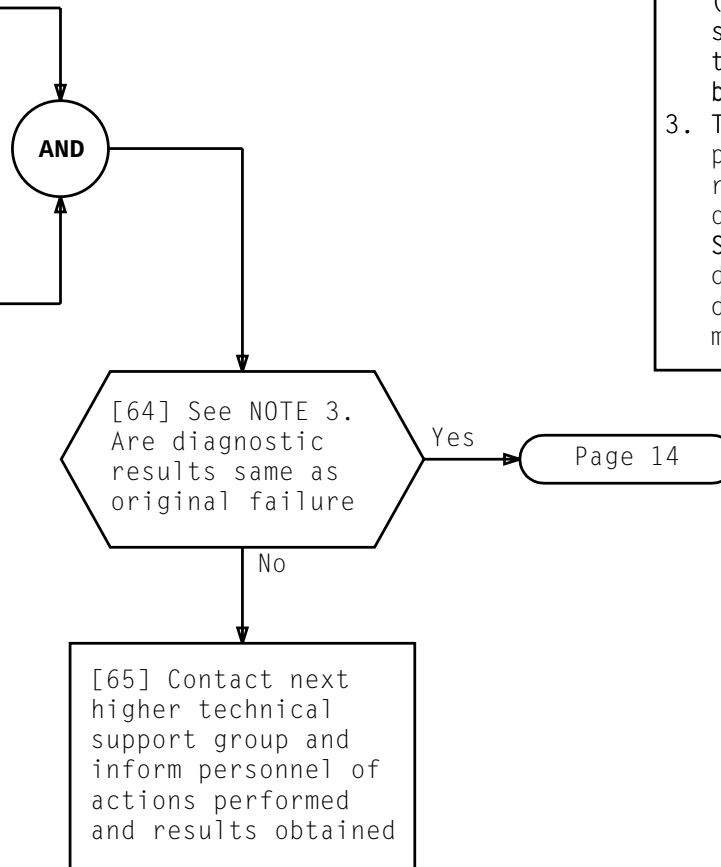
[56] At 1B Processor
MTC terminal, enter
RST:MUP 1:TLP!

[57] Allow ample time
(10 minutes) for
diagnostics to complete



[62] See NOTE 2 and WARNING 2.
Replace **KLW16/KLW116/KLW216**
circuit pack (58-078)
previously replaced with
original pack [DLP-500]

[63] After moving **ROS/NORM**
switch left to **NORM**
position, allow ample
time (10 minutes) for
diagnostics to complete



NOTES

- Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding
- The **STF SCRAMBLED NUMBER** on diagnostic printout indicates if all the diagnostic raw data (test and mismatch) is identical or different for two diagnostic runs. If **STF SCRAMBLED NUMBER** value is same, diagnostic raw data is identical. Otherwise, diagnostic raw data has changed in some manner

WARNING 2

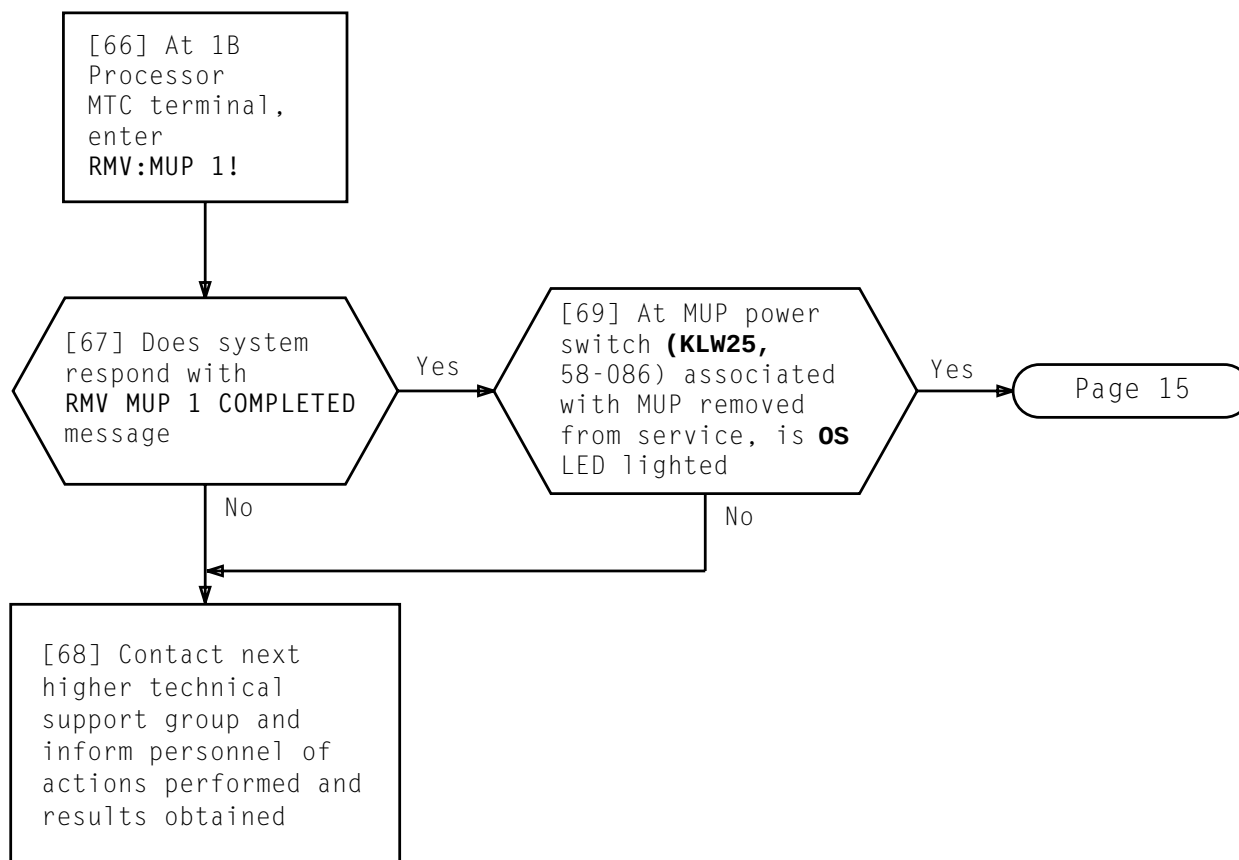
A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling

wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any mannner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

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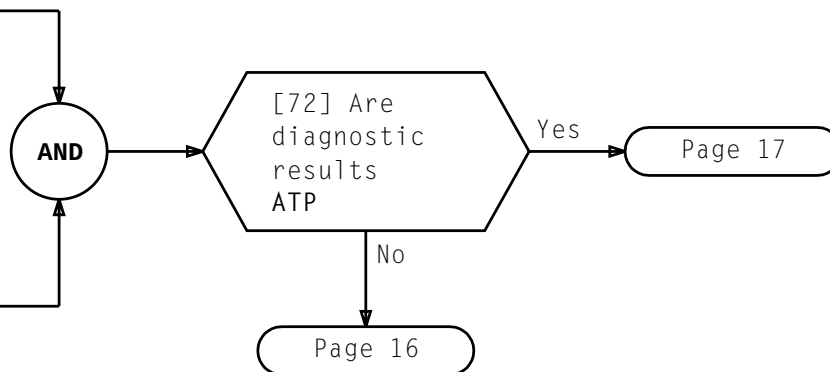
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[70] See NOTE 4 and WARNING 3.
 Replace **KLW16/KLW116/KLW216**
 circuit pack (58-078)
 associated with MUP removed
 from service [DLP-500]

[71] After moving **ROS/NORM**
 switch left to **NORM**
 position, allow ample
 time (10 minutes) for
 diagnostics to complete

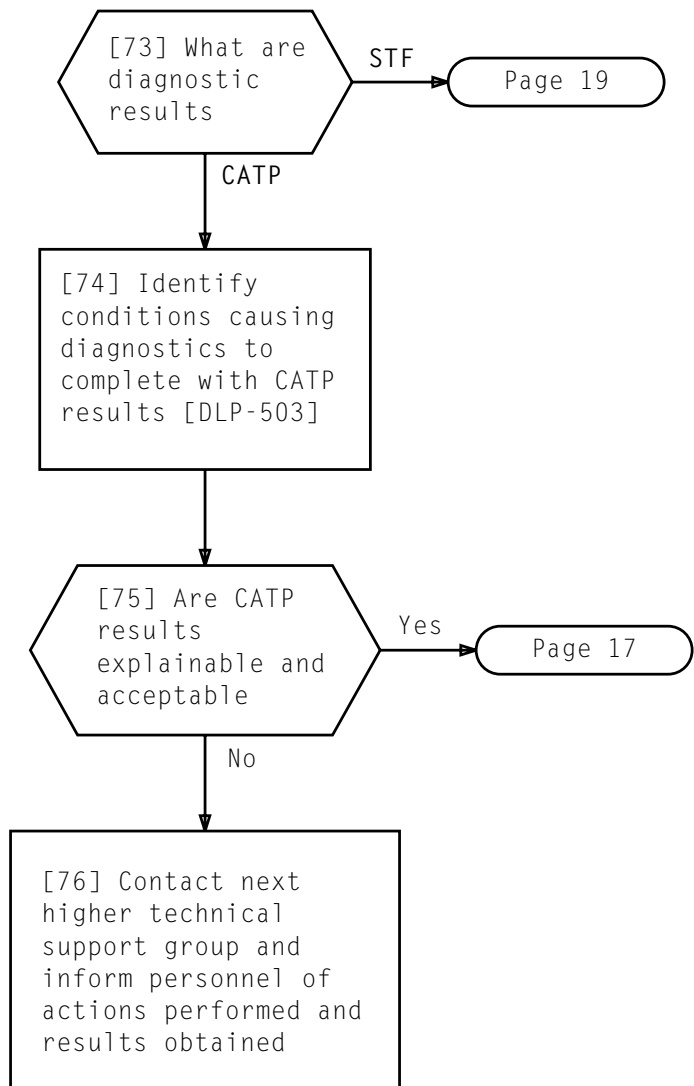


NOTE 4

Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

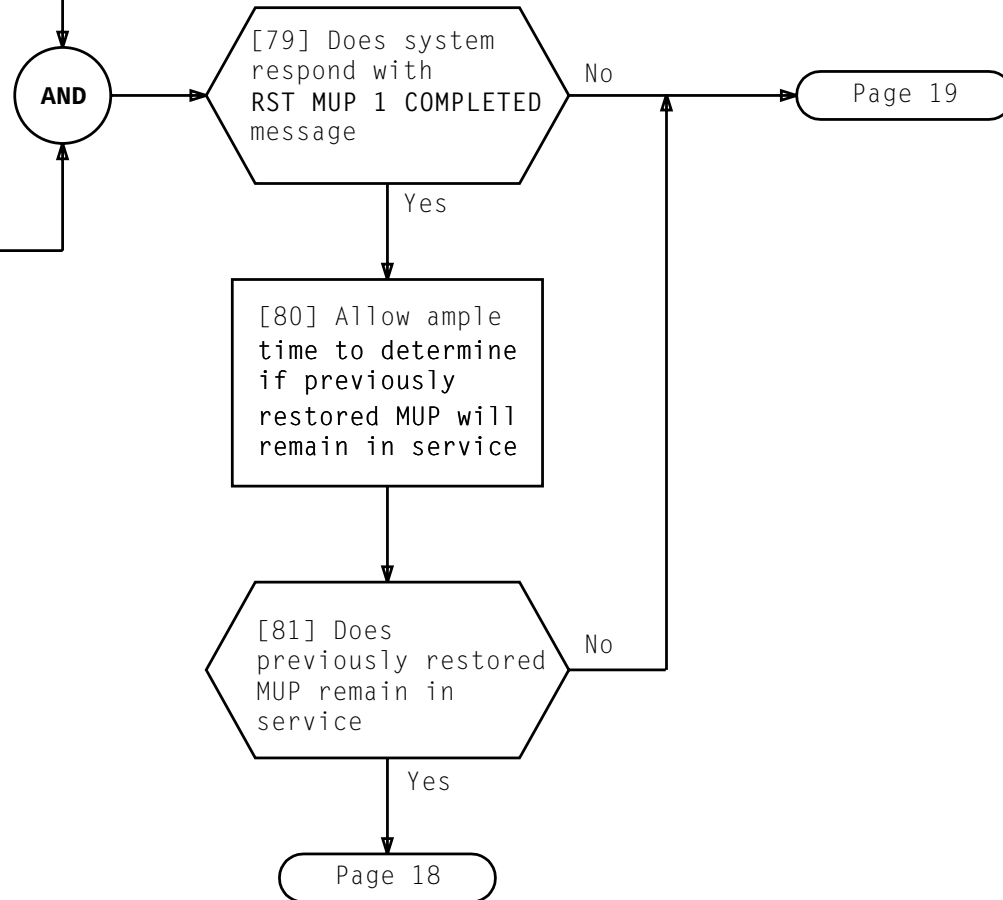
WARNING 3

A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any mannner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins



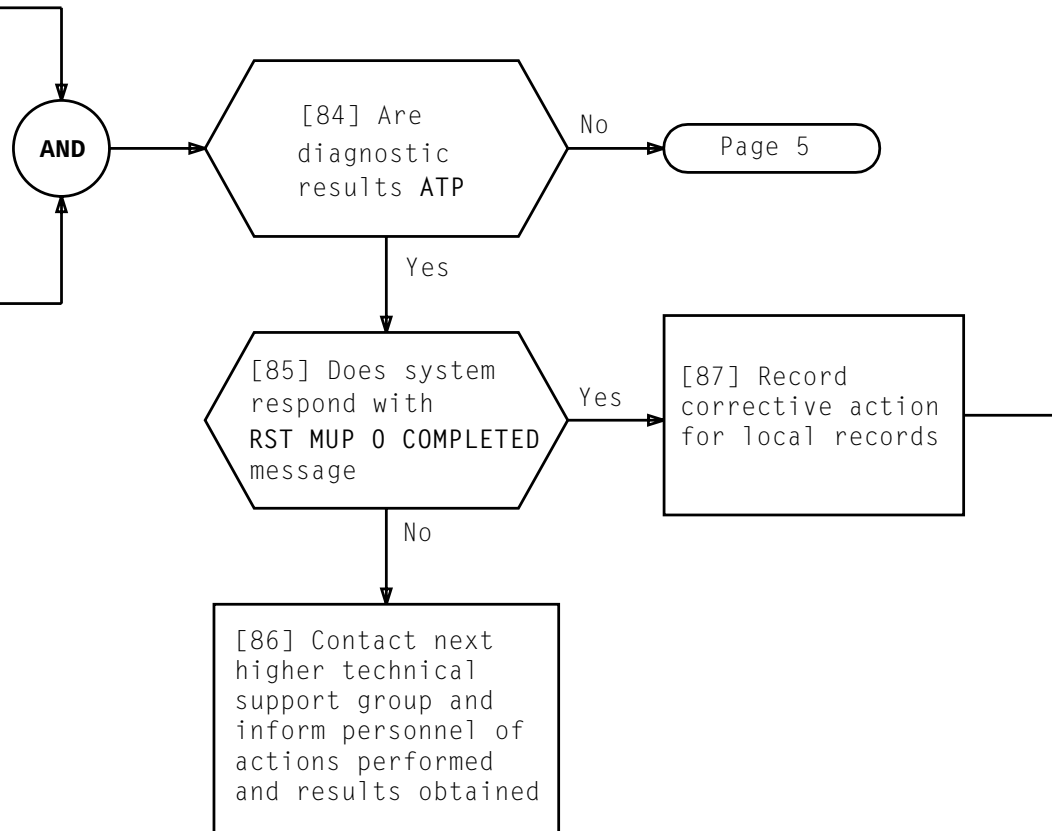
[77] At 1B Processor
MTC terminal, enter
RST:MUP 1!

[78] Allow ample time
(10 minutes) for
diagnostics to complete



[82] At 1B Processor
MTC terminal, enter
RST:MUP 0:TLP!

[83] Allow ample time
(10 minutes) for
diagnostics to complete

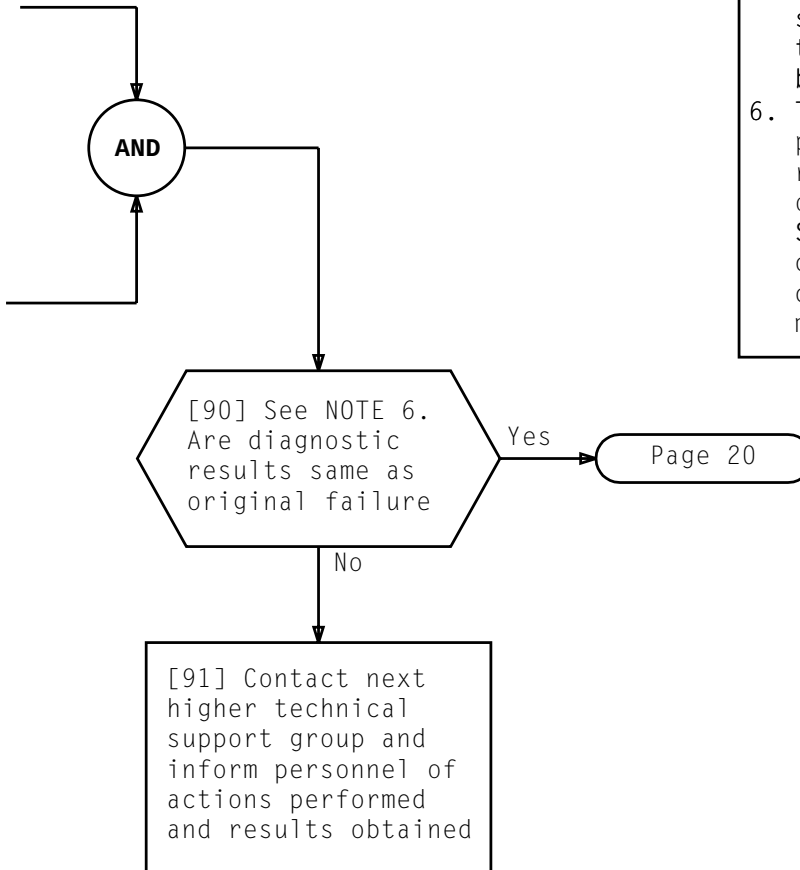


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[88] See NOTE 5 and WARNING 4.
Replace **KLW16/KLW116/KLW216**
circuit pack (58-078)
previously replaced with
original pack [DLP-500]

[89] After moving **ROS/NORM**
switch left to **NORM**
position, allow ample
time (10 minutes) for
diagnostics to complete



NOTES

5. Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding
6. The **STF SCRAMBLED NUMBER** on diagnostic printout indicates if all the diagnostic raw data (test and mismatch) is identical or different for two diagnostic runs. If **STF SCRAMBLED NUMBER** value is same, diagnostic raw data is identical. Otherwise, diagnostic raw data has changed in some manner

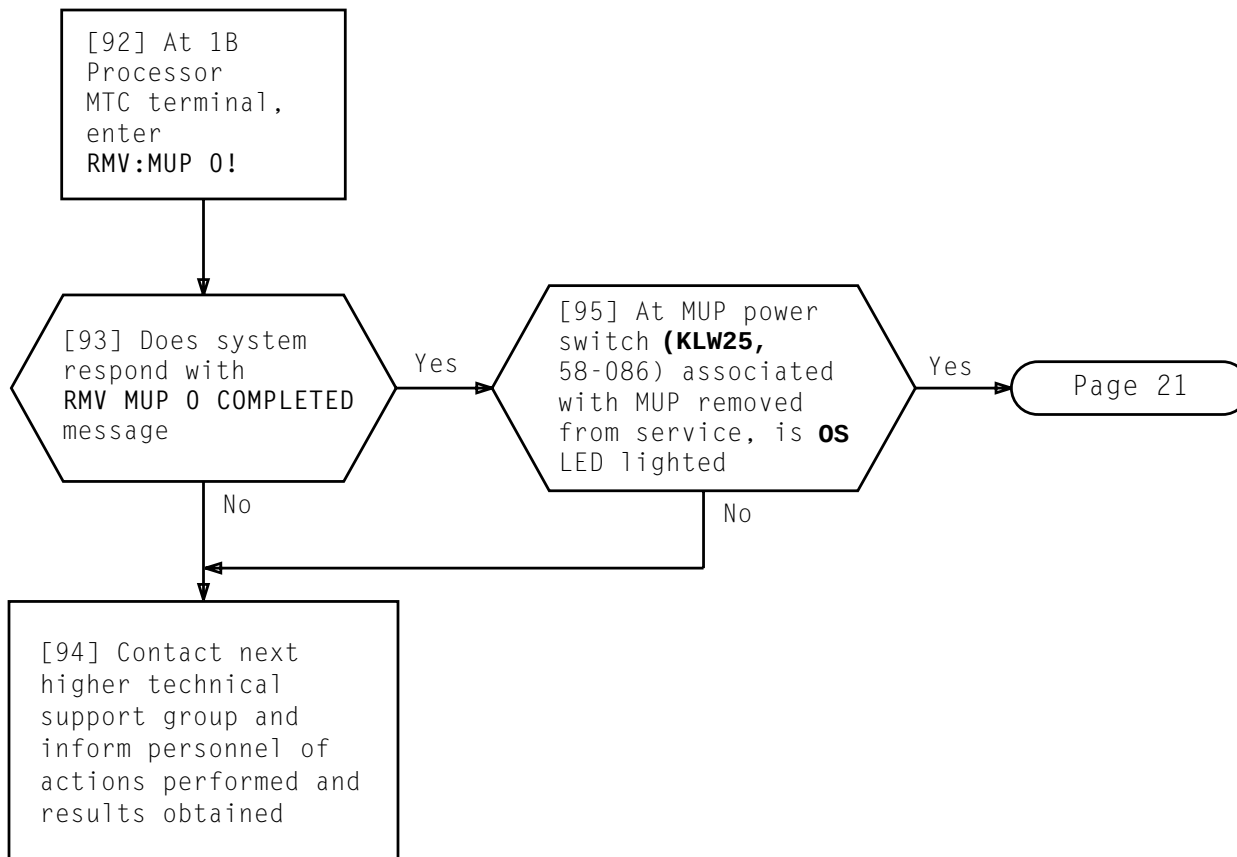
WARNING 4

A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any mannner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

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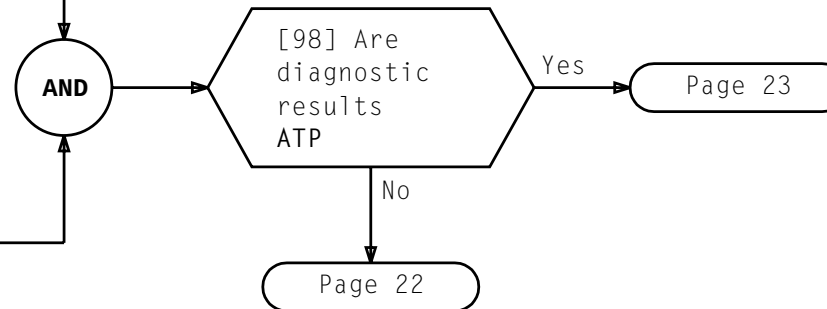
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[96] See NOTE 7 and WARNING 5.
Replace **KLW25** circuit
pack (58-086) associated
with MUP removed from
service [DLP-500]

[97] After moving **ROS/NORM**
switch left to **NORM**
position, allow ample
time (10 minutes) for
diagnostics to complete

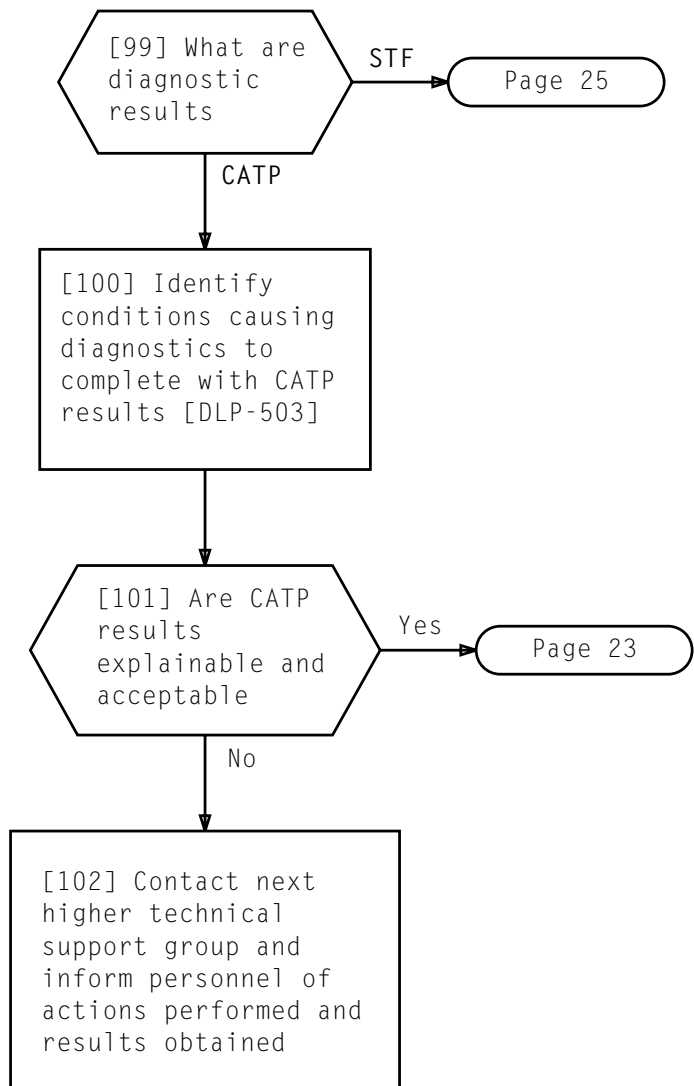


NOTE 7

Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

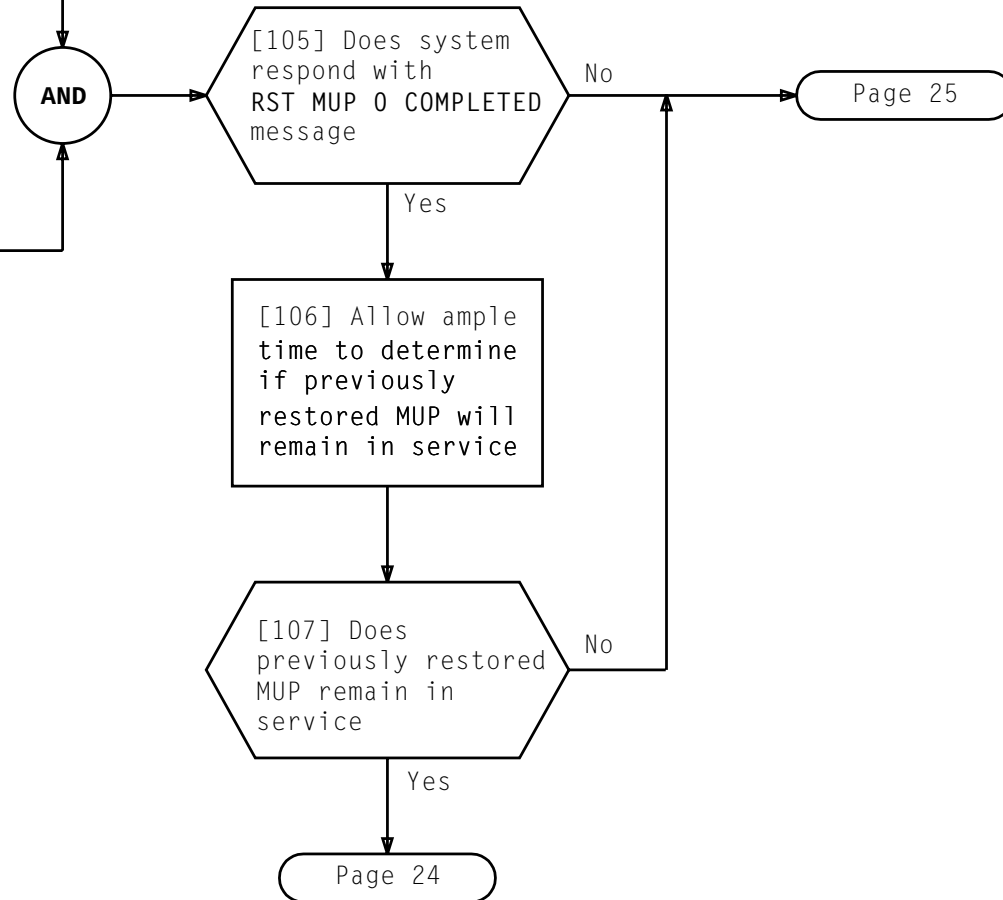
WARNING 5

A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any mannner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins



[103] At 1B Processor
MTC terminal, enter
RST:MUP 0!

[104] Allow ample time
(10 minutes) for
diagnostics to complete

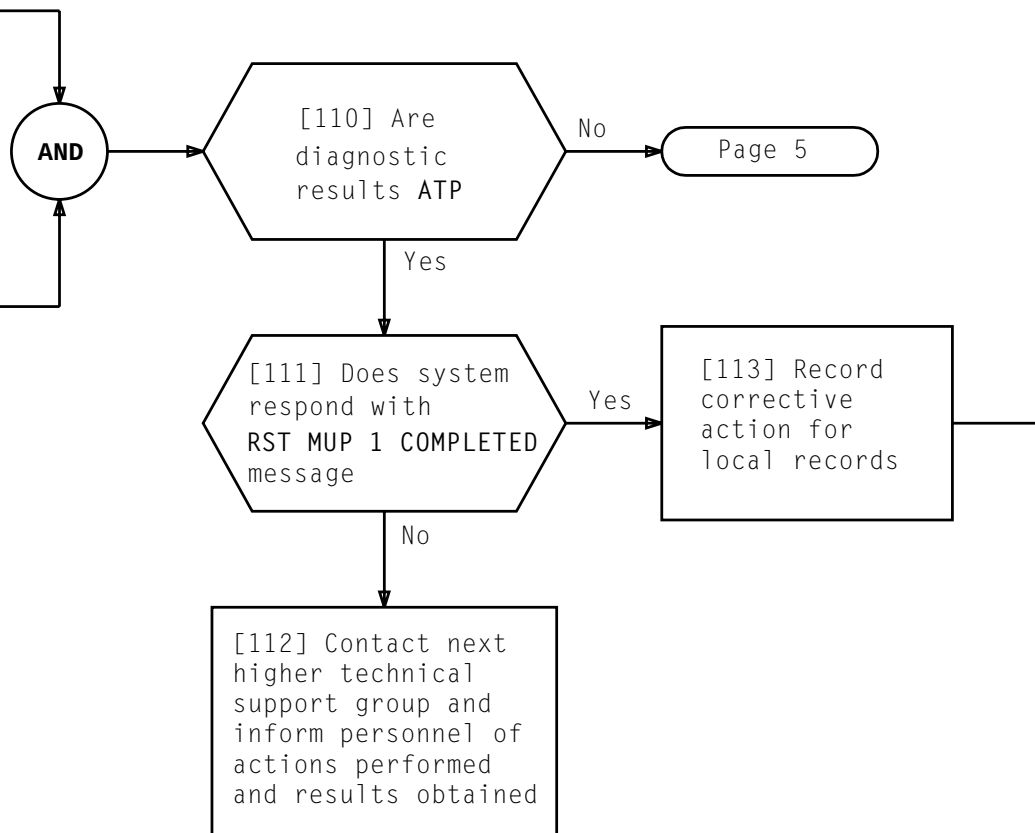


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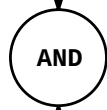
[108] At 1B Processor
MTC terminal, enter
RST:MUP 1:TLP!

[109] Allow ample time
(10 minutes) for
diagnostics to complete



[114] See NOTE 8 and WARNING 6. Replace **KLW25** circuit pack (58-086) previously replaced with original pack [DLP-500]

[115] After moving **ROS/NORM** switch left to **NORM** position, allow ample time (10 minutes) for diagnostics to complete



[116] See NOTE 9. Are diagnostic results same as original failure

Yes

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No

[117] Contact next higher technical support group and inform personnel of actions performed and results obtained

NOTES

8. Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding
9. The **STF SCRAMBLED NUMBER** on diagnostic printout indicates if all the diagnostic raw data (test and mismatch) is identical or different for two diagnostic runs. If **STF SCRAMBLED NUMBER** value is same, diagnostic raw data is identical. Otherwise, diagnostic raw data has changed in some manner

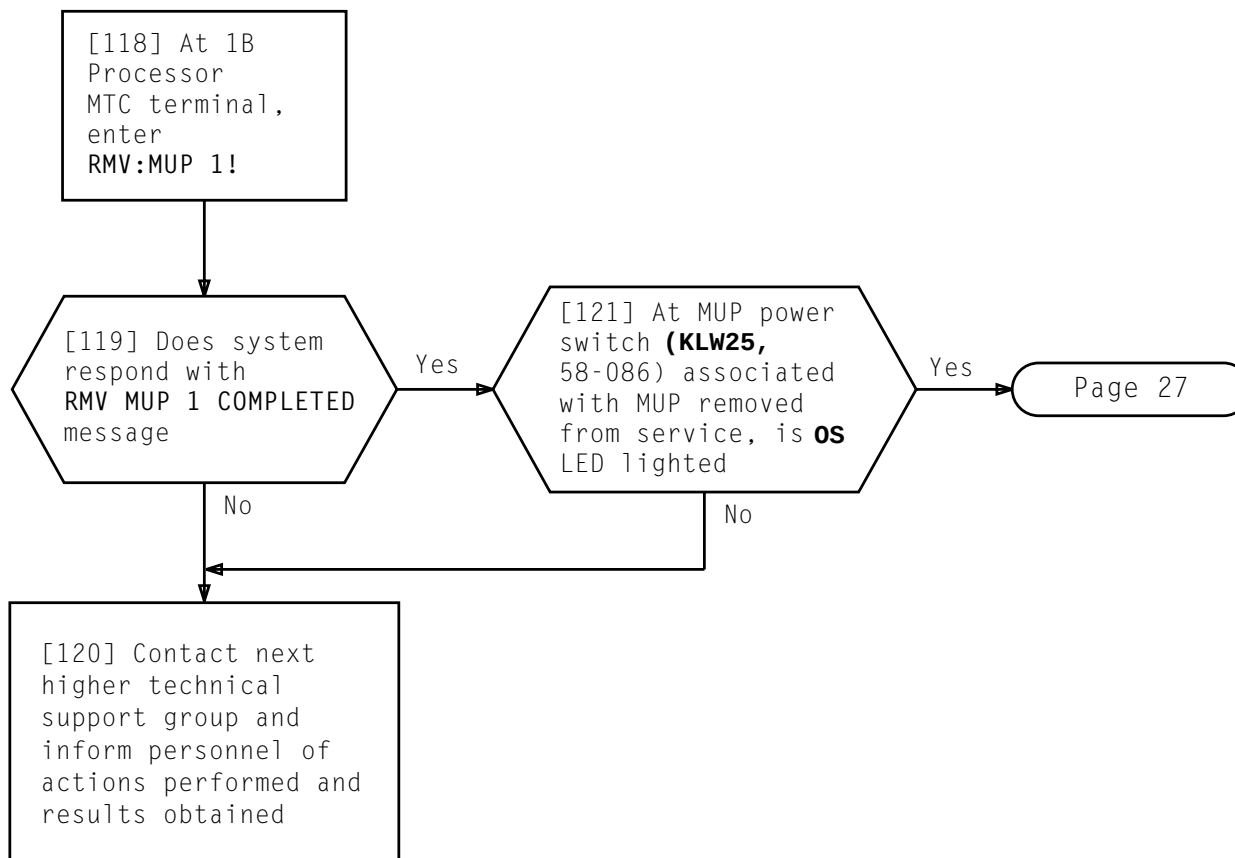
WARNING 6

A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any mannner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

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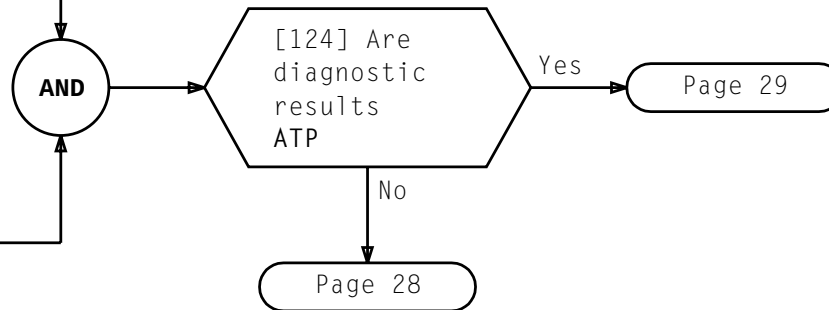
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[122] See NOTE 10 and WARNING 7.
Replace **KLW25** circuit
pack (58-086) associated
with MUP removed from
service [DLP-500]

[123] After moving **ROS/NORM**
switch left to **NORM**
position, allow ample
time (10 minutes) for
diagnostics to complete

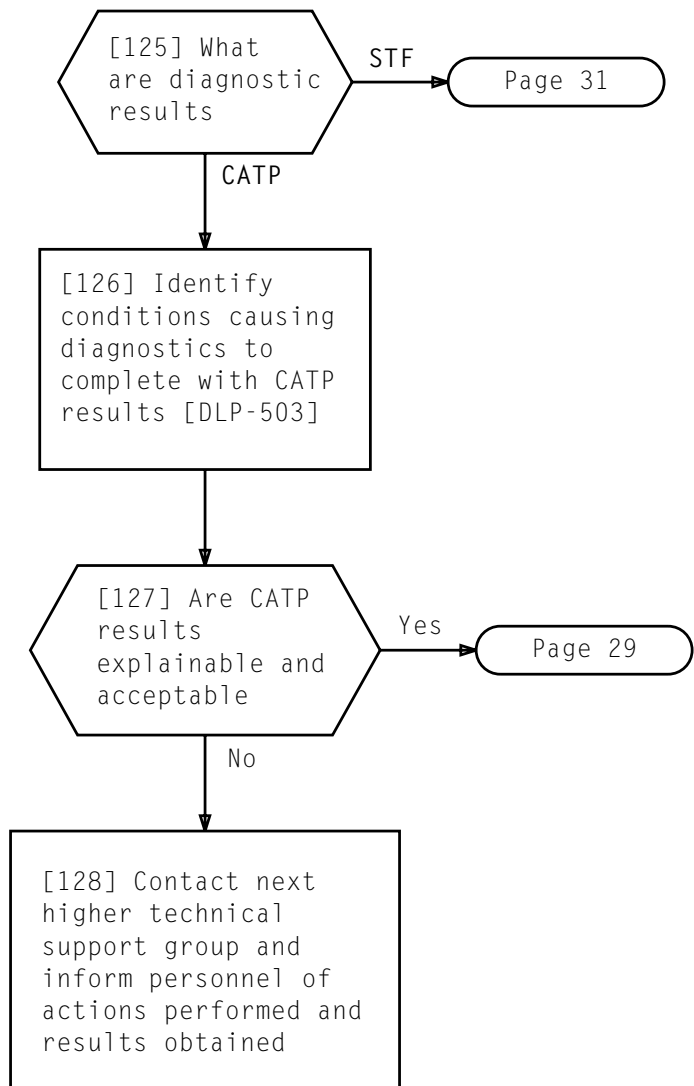


NOTE 10

Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

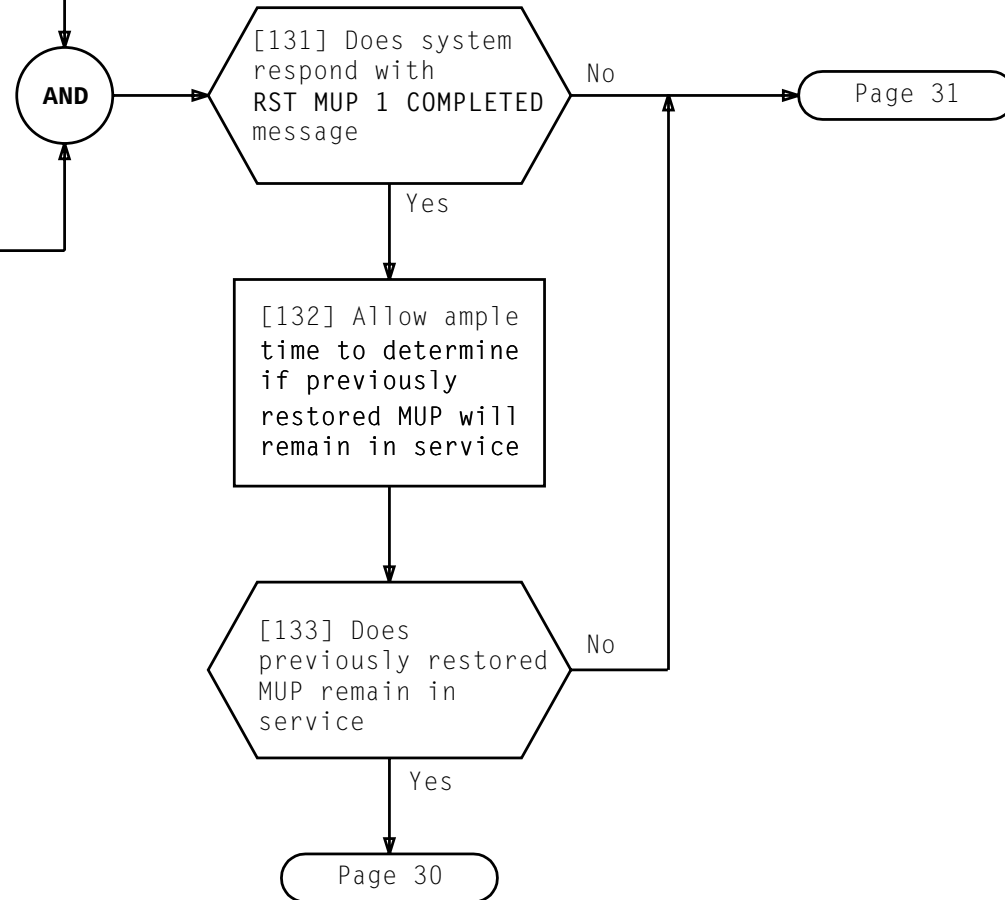
WARNING 7

A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any mannner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins



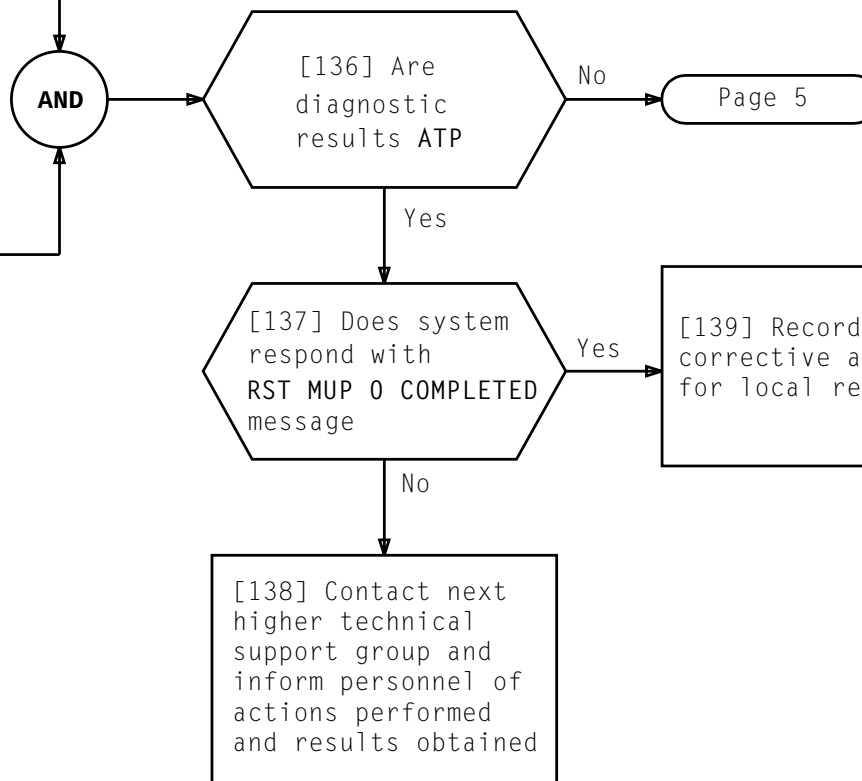
[129] At 1B Processor
MTC terminal, enter
RST:MUP 1!

[130] Allow ample time
(10 minutes) for
diagnostics to complete



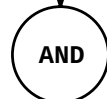
[134] At 1B Processor
MTC terminal, enter
RST:MUP 0:TLP!

[135] Allow ample time
(10 minutes) for
diagnostics to complete



[140] See NOTE 11 and WARNING 8. Replace **KLW25** circuit pack (58-086) previously replaced with original pack [DLP-500]

[141] After moving **ROS/NORM** switch left to **NORM** position, allow ample time (10 minutes) for diagnostics to complete



[142] See NOTE 12. Are diagnostic results same as original failure

Yes

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No

[143] Contact next higher technical support group and inform personnel of actions performed and results obtained

NOTES

11. Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding
12. The **STF SCRAMBLED NUMBER** on diagnostic printout indicates if all the diagnostic raw data (test and mismatch) is identical or different for two diagnostic runs. If **STF SCRAMBLED NUMBER** value is same, diagnostic raw data is identical. Otherwise, diagnostic raw data has changed in some manner

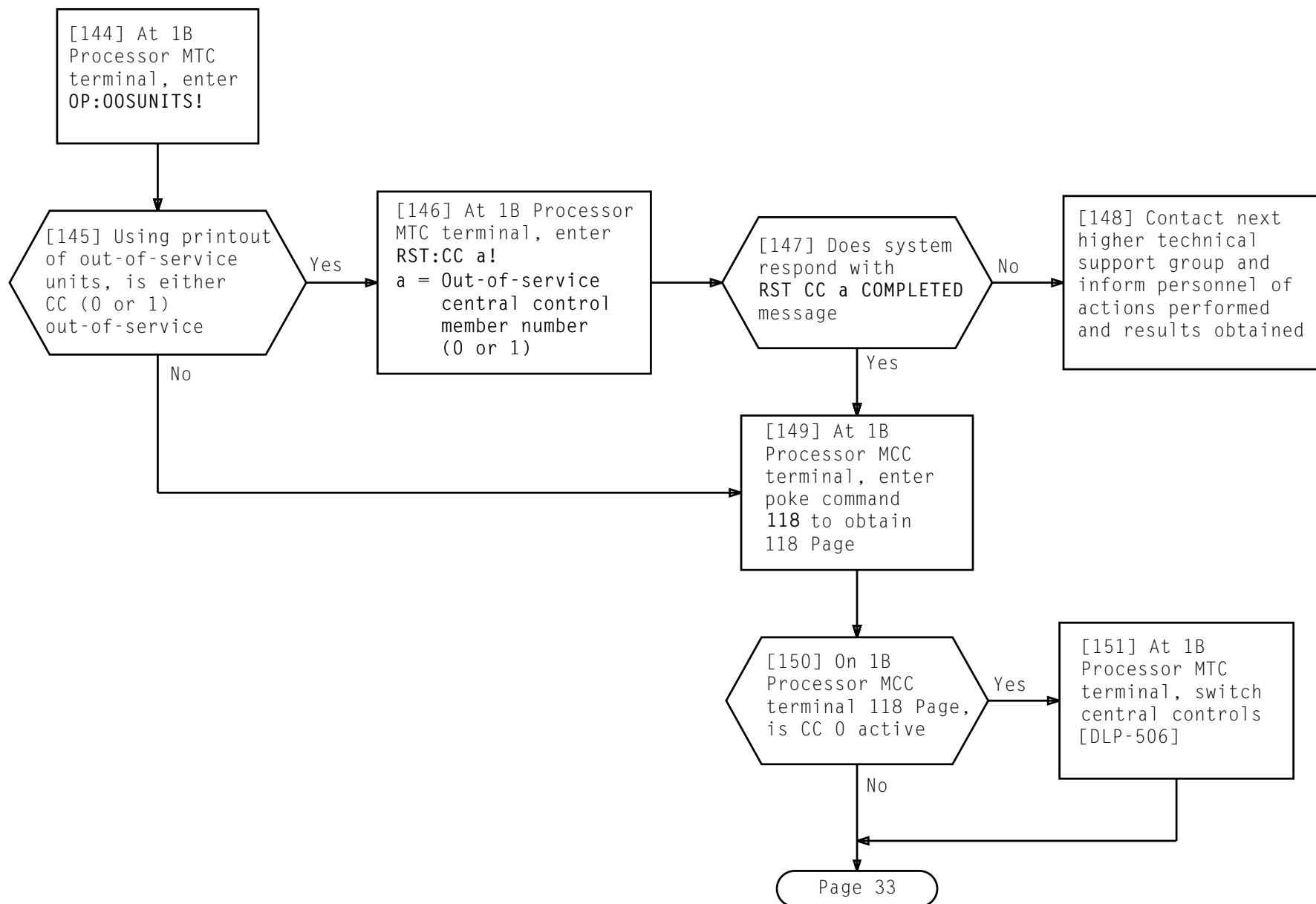
WARNING 8

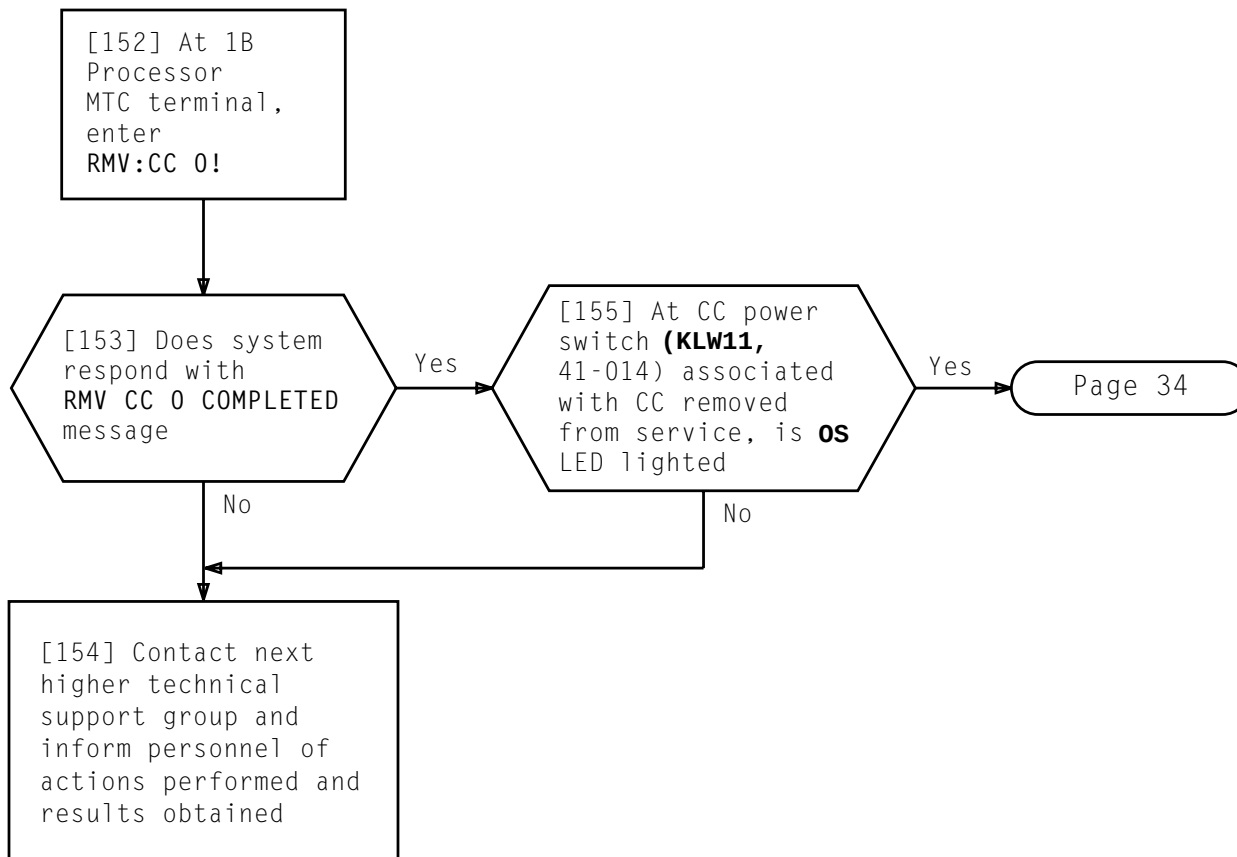
A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any mannner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

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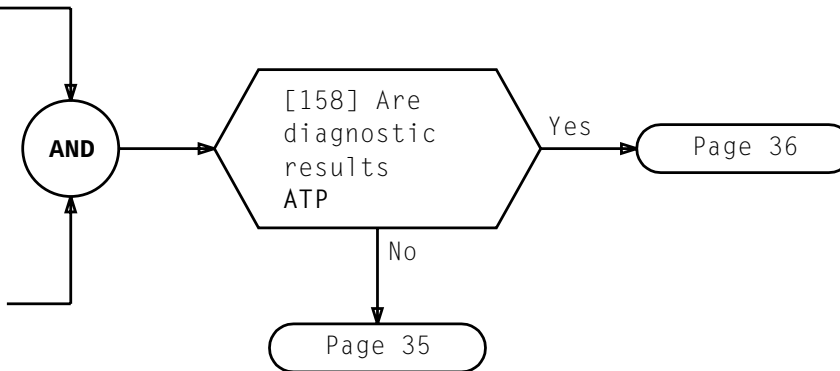
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[156] See NOTE 13 and WARNING 9.
Replace **KLW21** circuit
pack (58-046) associated
with CC removed from
service [DLP-500]

[157] After moving **ROS/NORM**
switch left to **NORM**
position, allow ample
time (10 minutes) for
diagnostics to complete



NOTE 13

Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 9

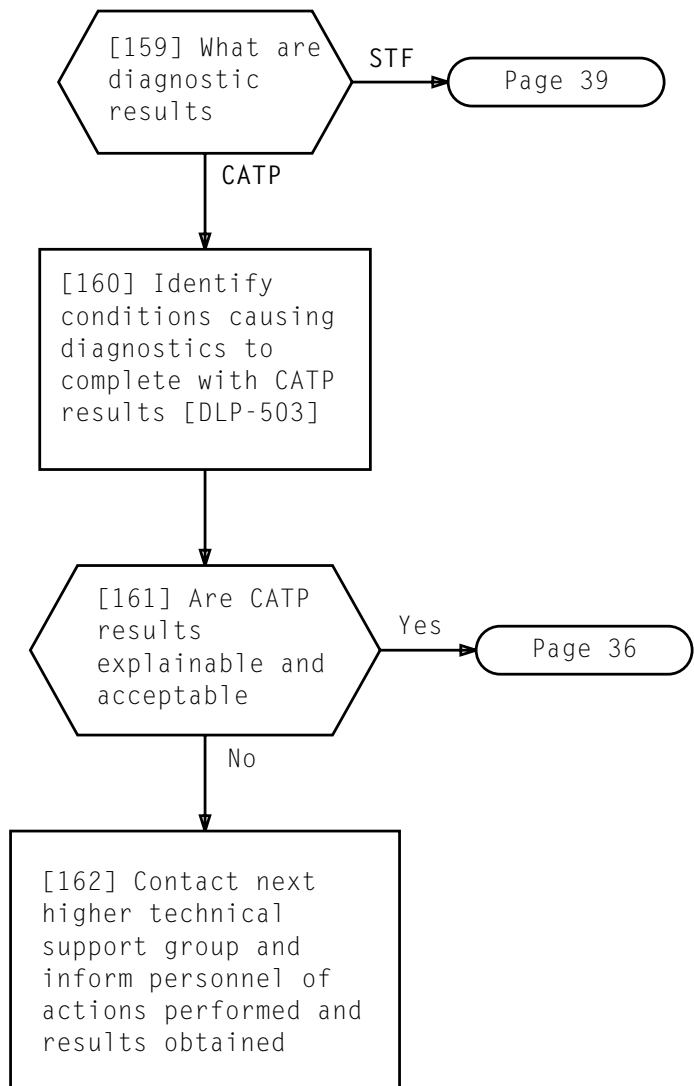
A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any mannner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

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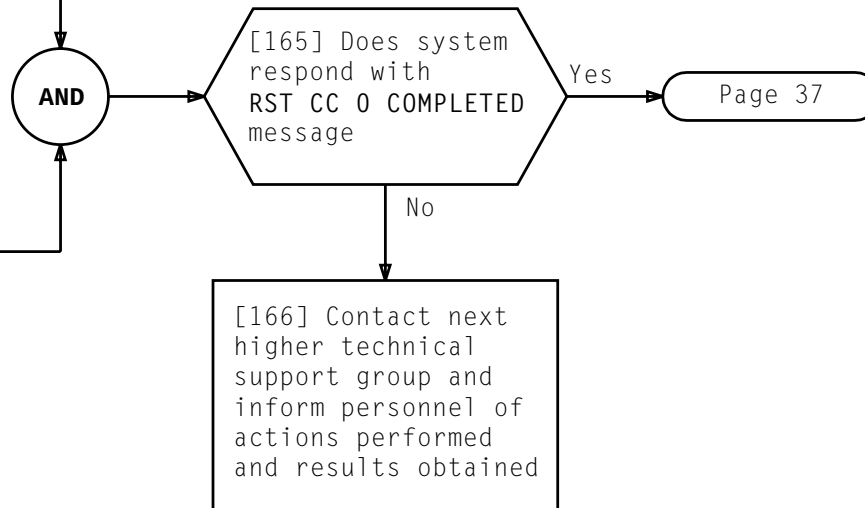
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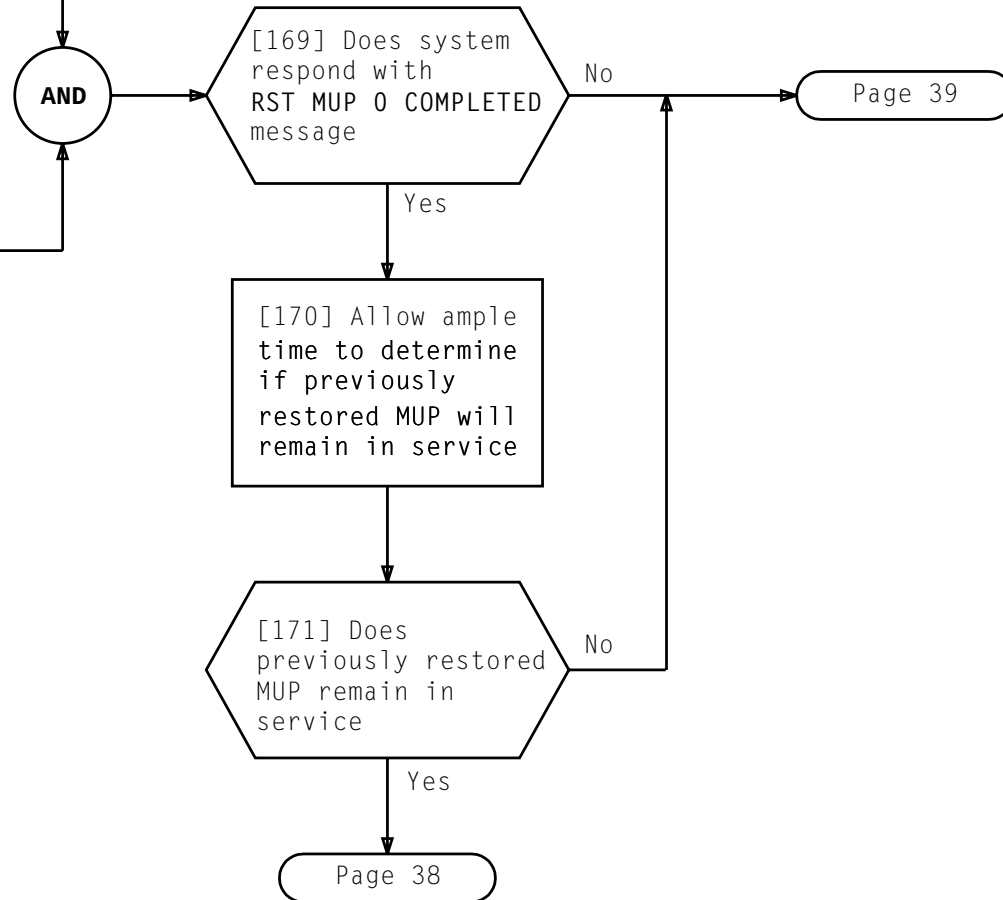
[163] At 1B Processor
MTC terminal, enter
RST:CC 0:TLP!

[164] Allow ample time
for diagnostics to
complete



[167] At 1B Processor
MTC terminal, enter
RST:MUP 0!

[168] Allow ample time
(10 minutes) for
diagnostics to complete

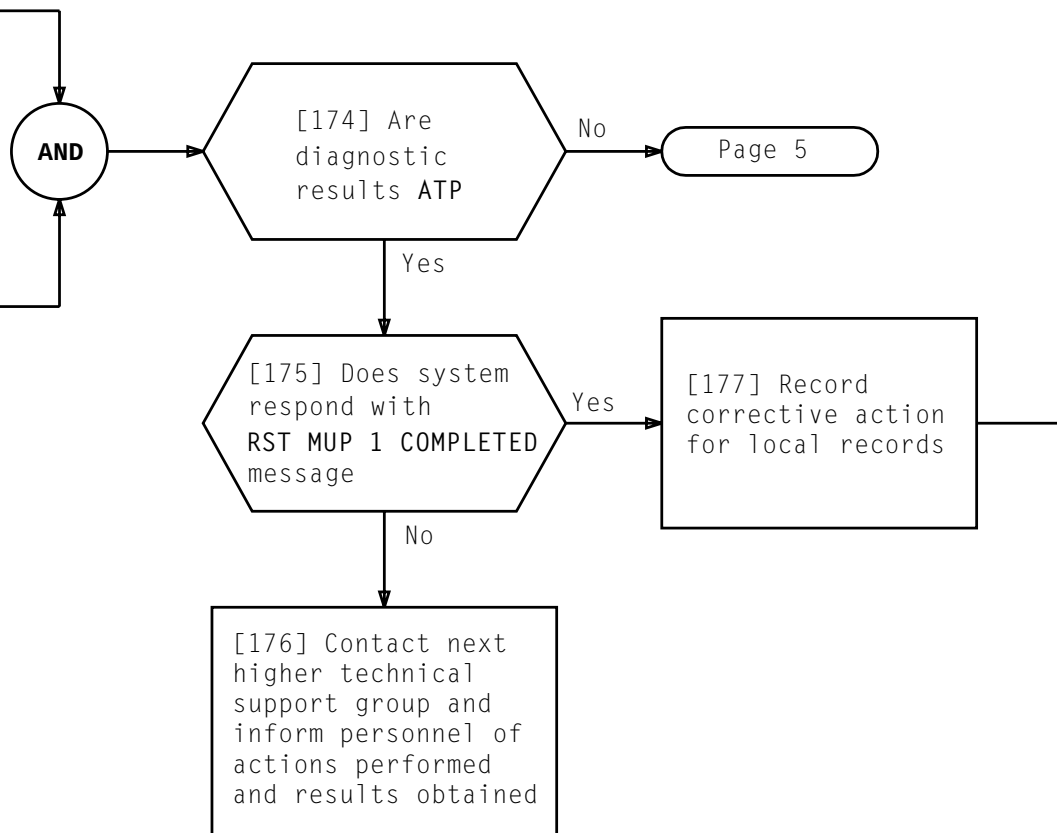


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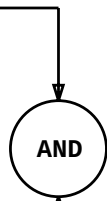
[172] At 1B Processor
MTC terminal, enter
RST:MUP 1:TLP!

[173] Allow ample time
(10 minutes) for
diagnostics to complete



[178] See NOTE 14 and WARNING 10. Replace **KLW21** circuit pack (58-046) previously replaced with original pack [DLP-500]

[179] After moving **ROS/NORM** switch left to **NORM** position, allow ample time (10 minutes) for diagnostics to complete



[180] See NOTE 15. Are diagnostic results same as original failure

Yes

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No

[181] Contact next higher technical support group and inform personnel of actions performed and results obtained

NOTES

14. Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding
15. The **STF SCRAMBLED NUMBER** on diagnostic printout indicates if all the diagnostic raw data (test and mismatch) is identical or different for two diagnostic runs. If **STF SCRAMBLED NUMBER** value is same, diagnostic raw data is identical. Otherwise, diagnostic raw data has changed in some manner

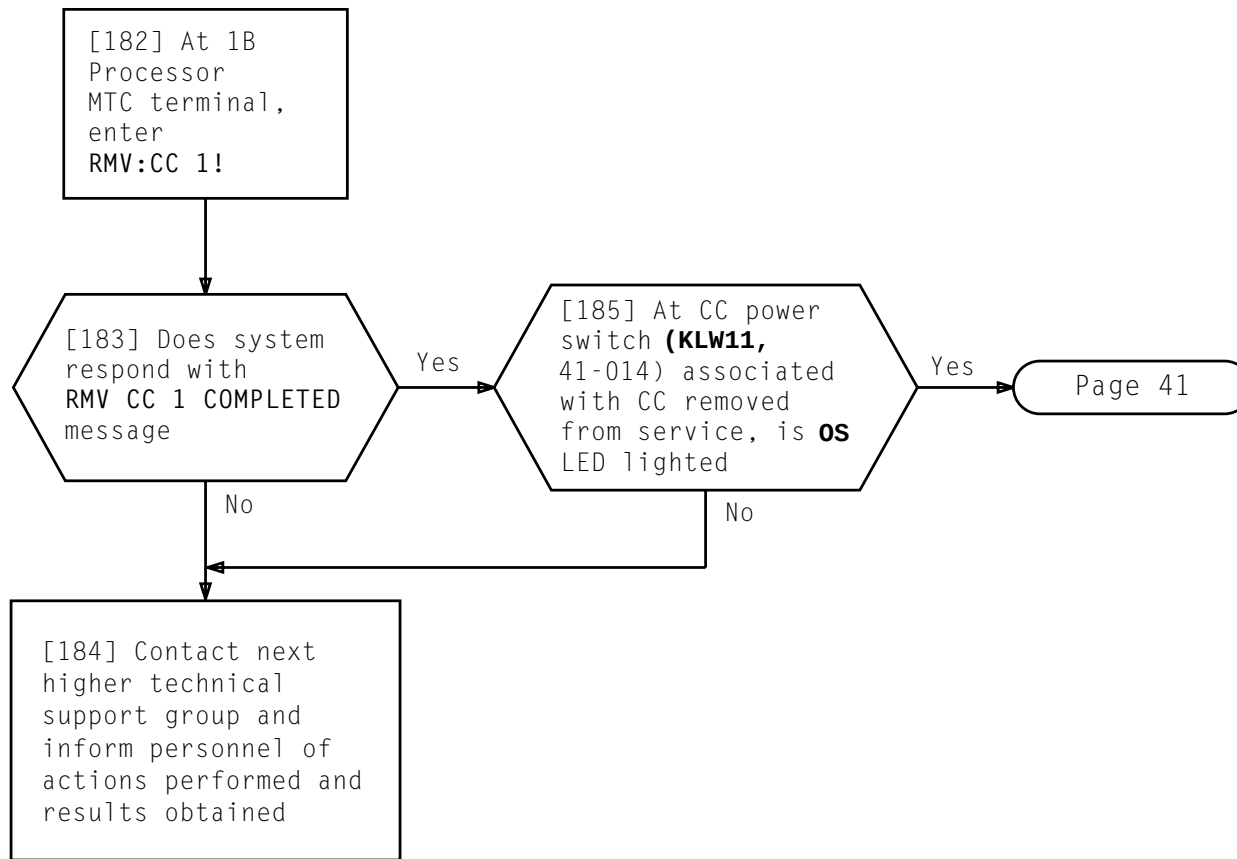
WARNING 10

A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any mannner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

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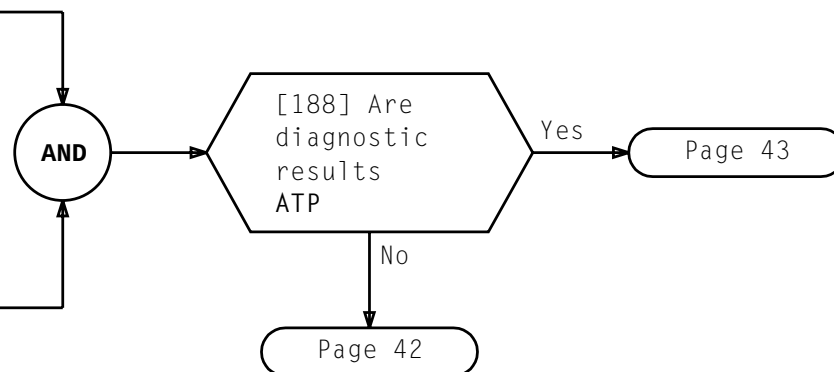
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[186] See NOTE 16 and WARNING 11.
Replace **KLW21** circuit
pack (58-046) associated
with CC removed from
service [DLP-500]

[187] After moving **ROS/NORM**
switch left to **NORM**
position, allow ample
time (10 minutes) for
diagnostics to complete

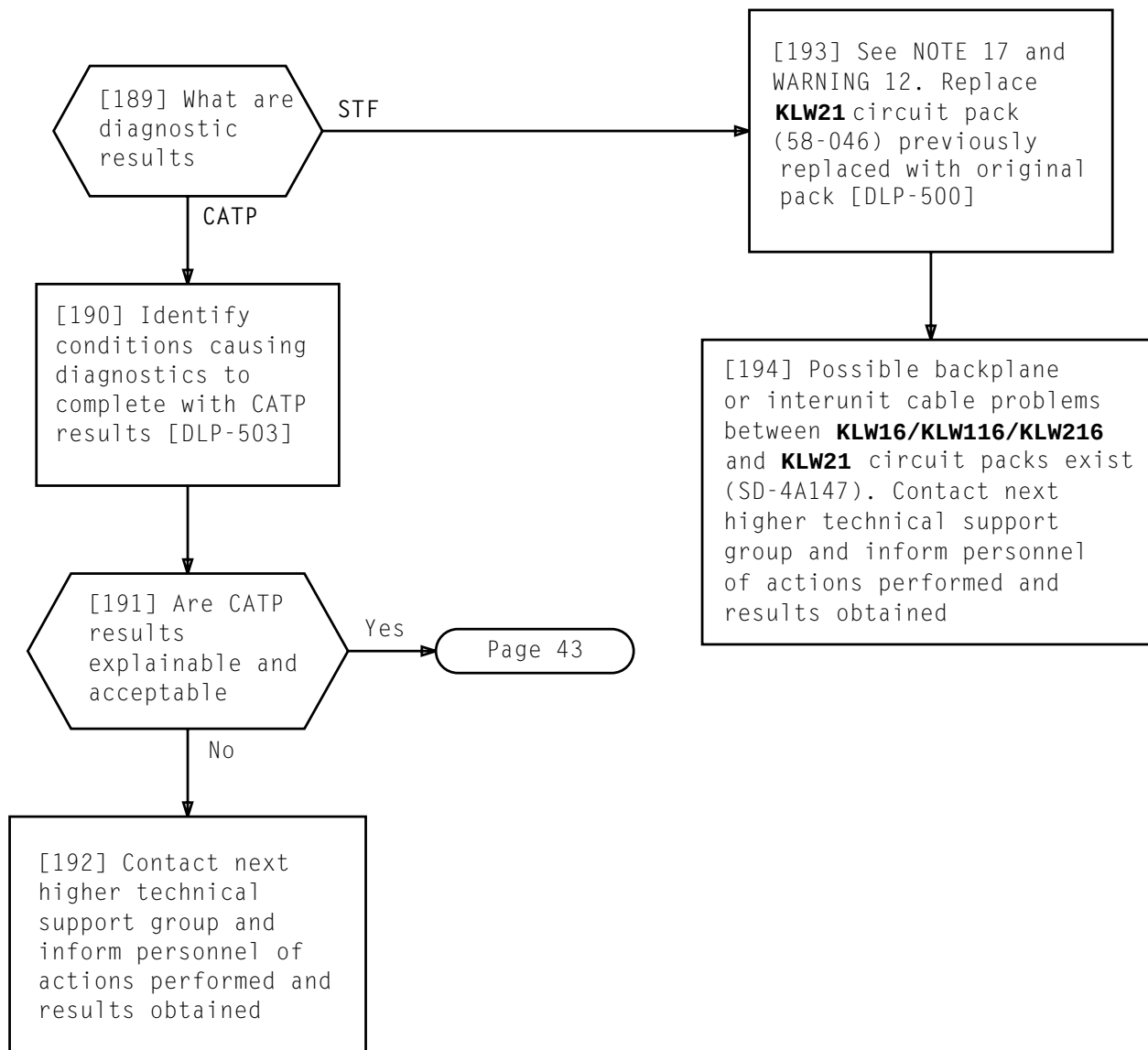


NOTE 16

Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 11

A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any mannner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins



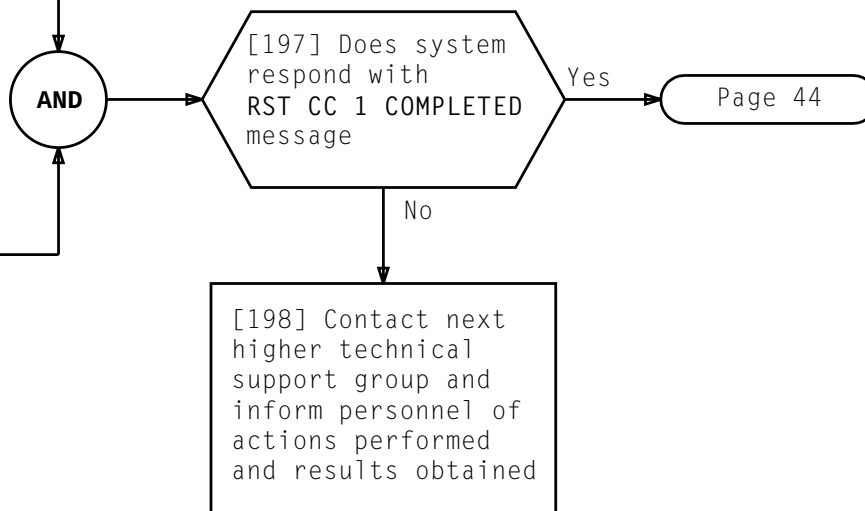
NOTE 17
Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

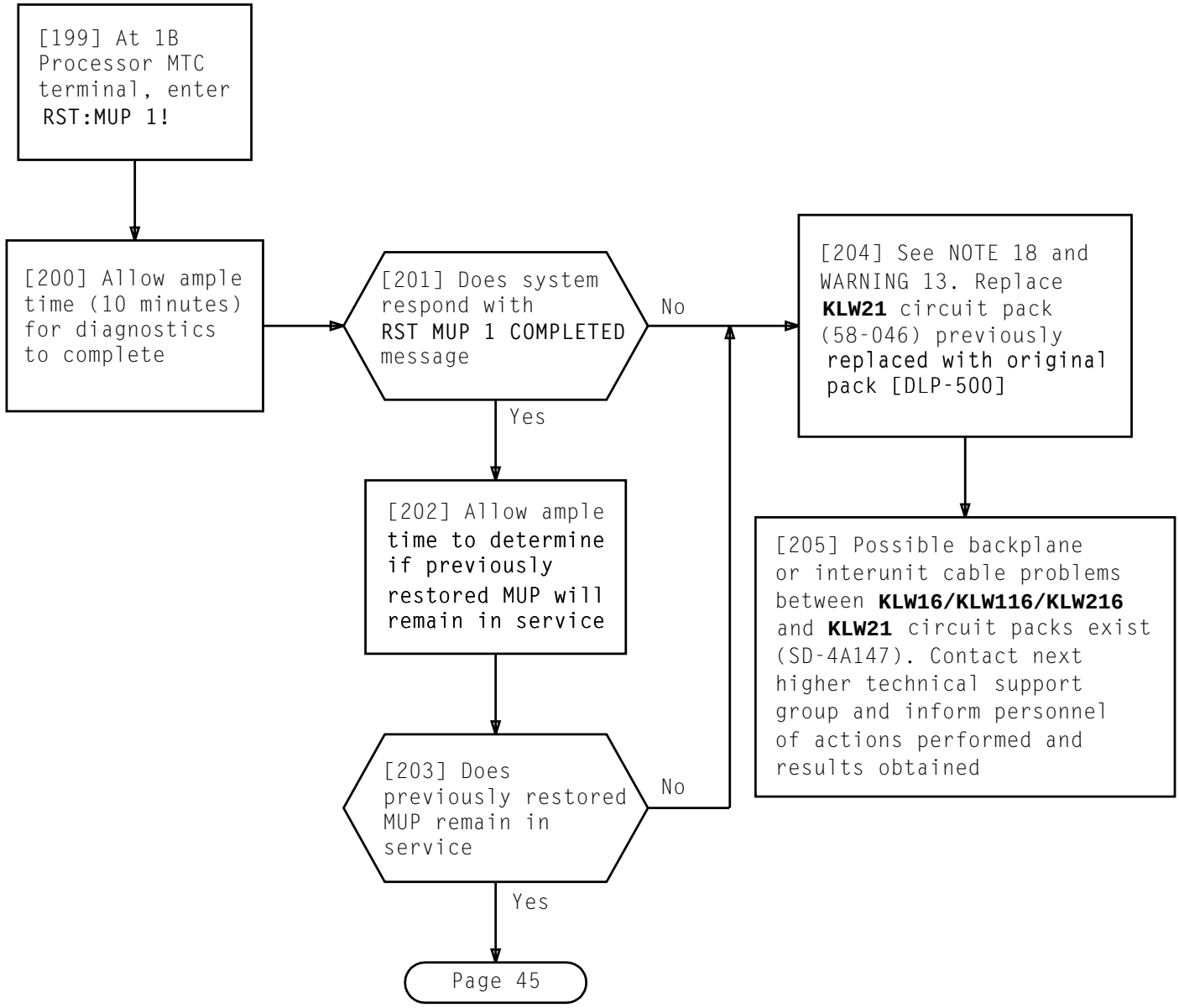
WARNING 12
A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any mannner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

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[195] At 1B Processor
MTC terminal, enter
RST:CC 1:TLP!

[196] Allow ample time
for diagnostics to
complete





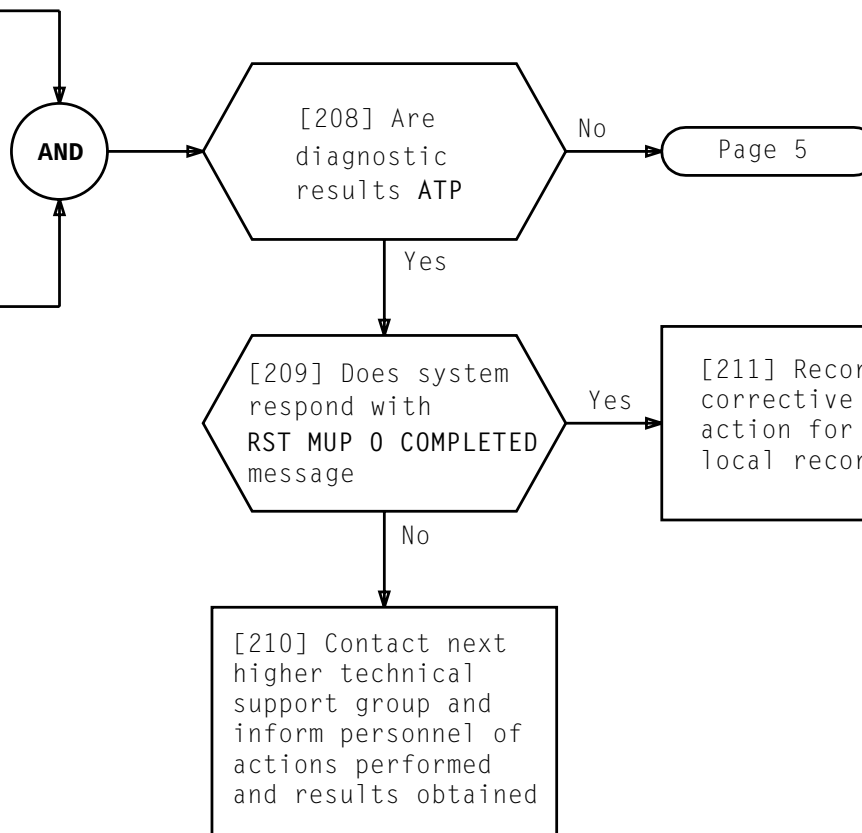
NOTE 18
Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 13
A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any mannner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

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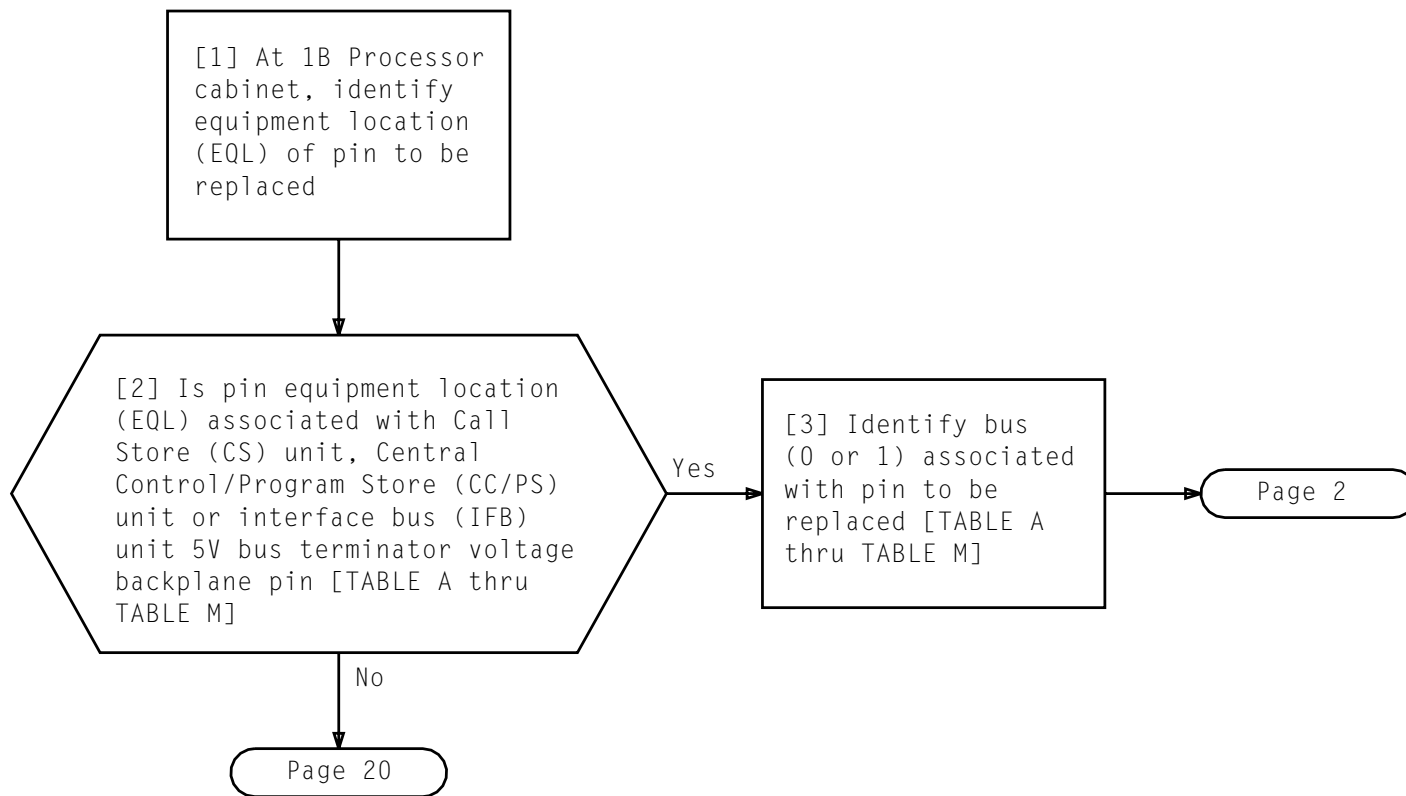
[206] At 1B Processor
MTC terminal, enter
RST:MUP 0:TLP!

[207] Allow ample time
(10 minutes) for
diagnostics to complete



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[4] At 1B Processor MTC

terminal, enter

RMV:CSB a!

a = Identified bus member

number (0 or 1) associated

with pin to be replaced

[5] At 1B Processor MTC

terminal, enter

RMV:PSB a!

a = Identified bus member

number (0 or 1) associated

with pin to be replaced

[6] At 1B Processor MTC

terminal, enter

RMV:IFB a!

a = Identified bus member

number (0 or 1) associated

with pin to be replaced

AND

[7] Is pin to be replaced
located within pin field
of circuit pack slot
associated with 5V bus
terminator voltage
backplane pins [TABLE A
thru TABLE M]

No

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Yes

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TABLE A 1B PROCESSOR CABINET 0 OR 1 CALL STORE (CS) UNIT KLV1 CIRCUIT PACK SLOT 5V BUS TERMINATOR VOLTAGE BACKPLANE PINS											
PIN EQUIPMENT LOCATION*	FRAME NET NAME	UNIT NET NAME	ASSOCIATED BUS	ASSOCIATED FUSE		PIN EQUIPMENT LOCATION*	FRAME NET NAME	UNIT NET NAME	ASSOCIATED BUS	ASSOCIATED FUSE	
				1B PROCESSOR CABINET 0	1B PROCESSOR CABINET 1					1B PROCESSOR CABINET 0	1B PROCESSOR CABINET 1
24-XXX-024T 24-XXX-124T 24-XXX-224T 24-XXX-324T 24-XXX-424T 24-XXX-524T	1CS5VT	1CS5VT	CS Bus 1	XP3	XP1	24-XXX-043B 24-XXX-143B 24-XXX-243B 24-XXX-343B 24-XXX-443B 24-XXX-543B	0CS5VT	0CS5VT	CS Bus 0	XP1	XP3
24-XXX-011T 24-XXX-111T 24-XXX-211T 24-XXX-311T 24-XXX-411T 24-XXX-511T	0CS5VT	0CS5VT	CS Bus 0	XP1	XP3	24-XXX-024B 24-XXX-124B 24-XXX-224B 24-XXX-324B 24-XXX-424B 24-XXX-524B	1CS5VT	1CS5VT	CS Bus 1	XP3	XP1
24-XXX-056B 24-XXX-156B 24-XXX-256B 24-XXX-356B 24-XXX-456B 24-XXX-556B	1CS5VT	1CS5VT	CS Bus 1	XP3	XP1	24-XXX-011B 24-XXX-111B 24-XXX-211B 24-XXX-311B 24-XXX-411B 24-XXX-511B	0CS5VT	0CS5VT	CS Bus 0	XP1	XP3
* XXX Is Equivalent To KLW1 Circuit Pack Horizontal Locations (006, 014, 022, 030, 038, 046, 054, 062, 070, 078, 104, 112, 120, 128, 136, 144, 152, 160, 168 and 176)											

REPLACE BACKPLANE PIN – 1B PROCESSOR CABINET

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TABLE B 1B PROCESSOR CABINET 0 OR 1 CALL STORE (CS) UNIT TERMINAL STRIP 5V BUS TERMINATOR VOLTAGE BACKPLANE PINS					
PIN EQUIPMENT LOCATION	FRAME NET NAME	UNIT NET NAME	ASSOCIATED BUS	ASSOCIATED FUSE	
				1B PROCESSOR CABINET 0	1B PROCESSOR CABINET 1
24-085-024T 24-085-056B 24-085-024B	0CS5VT	0CS5VT	CS Bus 0	XP1	XP3
24-092-024T 24-092-056B 24-092-024B	0CS5VT	0CS5VT	CS Bus 0	XP1	XP3
24-095-011T 24-095-043B 24-095-011B	1CS5VT	1CS5VT	CS Bus 0	XP1	XP3
24-102-011T 24-102-043B 24-102-011B	1CS5VT	1CS5VT	CS Bus 1	XP3	XP1
24-111-023B 24-111-017B	1CS5VT	1CS5VT	CS Bus 1	XP3	XP1
24-111-022B 24-111-016B	0CS5VT	0CS5VT	CS Bus 0	XP1	XP3

TABLE C 1B PROCESSOR CABINET 0 OR 1 CALL STORE (CS) UNIT KLV26 CIRCUIT PACK SLOT 5V BUS TERMINATOR VOLTAGE BACKPLANE PINS					
PIN EQUIPMENT LOCATION	FRAME NET NAME	UNIT NET NAME	ASSOCIATED BUS	ASSOCIATED FUSE	
				1B PROCESSOR CABINET 0	1B PROCESSOR CABINET 1
24-086-024T 24-086-124T 24-086-224T 24-086-324T 24-086-424T 24-086-524T	0CS5VT	0CS5VT	CS Bus 0	XP1	XP3
24-086-056B 24-086-156B 24-086-256B 24-086-356B 24-086-456B 24-086-556B	0CS5VT	0CS5VT	CS Bus 0	XP1	XP3
24-086-043B 24-086-143B 24-086-243B 24-086-343B 24-086-443B 24-086-543B	0CS5VT	0CS5VT	CS Bus 0	XP1	XP3
24-086-024B 24-086-124B 24-086-224B 24-086-324B 24-086-424B 24-086-524B	0CS5VT	0CS5VT	CS Bus 0	XP1	XP3
24-086-011B 24-086-111B 24-086-211B 24-086-311B 24-086-411B 24-086-511B	0CS5VT	0CS5VT	CS Bus 0	XP1	XP3

REPLACE BACKPLANE PIN – 1B PROCESSOR CABINET

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TABLE D 1B PROCESSOR CABINET 0 OR 1 CALL STORE (CS) UNIT KLV27 CIRCUIT PACK SLOT 5V BUS TERMINATOR VOLTAGE BACKPLANE PINS					
PIN EQUIPMENT LOCATION	FRAME NET NAME	UNIT NET NAME	ASSOCIATED BUS	ASSOCIATED FUSE	
				1B PROCESSOR CABINET 0	1B PROCESSOR CABINET 1
24-096-011T 24-096-111T 24-096-211T 24-096-311T 24-096-411T 24-096-511T	1CS5VT	1CS5VT	CS Bus 1	XP3	XP1
24-096-056B 24-096-156B 24-096-256B 24-096-356B 24-096-456B 24-096-556B	1CS5VT	1CS5VT	CS Bus 1	XP3	XP1
24-096-043B 24-096-143B 24-096-243B 24-096-343B 24-096-443B 24-096-543B	1CS5VT	1CS5VT	CS Bus 1	XP3	XP1
24-096-024B 24-096-124B 24-096-224B 24-096-324B 24-096-424B 24-096-524B	1CS5VT	1CS5VT	CS Bus 1	XP3	XP1
24-086-011B 24-096-111B 24-096-211B 24-096-311B 24-096-411B 24-096-511B	1CS5VT	1CS5VT	CS Bus 1	XP3	XP1

REPLACE BACKPLANE PIN – 1B PROCESSOR CABINET

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TABLE E 1B PROCESSOR CABINET 0 OR 1 CENTRAL CONTROL/PROGRAM STORE (CC/PS) UNIT KLV2 CIRCUIT PACK SLOT 5V BUS TERMINATOR VOLTAGE BACKPLANE PINS											
PIN EQUIPMENT LOCATION*	FRAME NET NAME	UNIT NET NAME	ASSOCIATED BUS	ASSOCIATED FUSE		PIN EQUIPMENT LOCATION*	FRAME NET NAME	UNIT NET NAME	ASSOCIATED BUS	ASSOCIATED FUSE	
				1B PROCESSOR CABINET 0	1B PROCESSOR CABINET 1					1B PROCESSOR CABINET 0	1B PROCESSOR CABINET 1
41-XXX-050T 41-XXX-150T 41-XXX-250T 41-XXX-350T 41-XXX-450T 41-XXX-550T	1PS5VT	1PS5VT	PS Bus 1	XP3	XP1	41-XXX-056B 41-XXX-156B 41-XXX-256B 41-XXX-356B 41-XXX-456B 41-XXX-556B	1PS5VT	1PS5VT	PS Bus 1	XP3	XP1
41-XXX-040T 41-XXX-140T 41-XXX-240T 41-XXX-340T 41-XXX-440T 41-XXX-540T	0PS5VT	0PS5VT	PS Bus 0	XP1	XP3	41-XXX-043B 41-XXX-143B 41-XXX-243B 41-XXX-343B 41-XXX-443B 41-XXX-543B	0PS5VT	0PS5VT	PS Bus 0	XP1	XP3
41-XXX-024T 41-XXX-124T 41-XXX-224T 41-XXX-324T 41-XXX-424T 41-XXX-524T	1PS5VT	1PS5VT	PS Bus 1	XP3	XP1	41-XXX-024B 41-XXX-124B 41-XXX-224B 41-XXX-324B 41-XXX-424B 41-XXX-524B	1PS5VT	1PS5VT	PS Bus 1	XP3	XP1
41-XXX-011T 41-XXX-111T 41-XXX-211T 41-XXX-311T 41-XXX-411T 41-XXX-511T	0PS5VT	0PS5VT	PS Bus 0	XP1	XP3	41-XXX-011B 41-XXX-111B 41-XXX-211B 41-XXX-311B 41-XXX-411B 41-XXX-511B	0PS5VT	0PS5VT	PS Bus 0	XP1	XP3
* XXX Is Equivalent To KLW2 Circuit Pack Horizontal Locations (128, 136, 144, 152, 160, 168 and 176)											

REPLACE BACKPLANE PIN – 1B PROCESSOR CABINET

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TABLE F
1B PROCESSOR CABINET 0 OR 1 CENTRAL CONTROL/PROGRAM STORE (CC/PS) UNIT KLV3 AND KLV4 CIRCUIT PACK SLOT
5V BUS TERMINATOR VOLTAGE BACKPLANE PINS

PIN EQUIPMENT LOCATION*	FRAME NET NAME	UNIT NET NAME	ASSOCIATED BUS	ASSOCIATED FUSE		PIN EQUIPMENT LOCATION*	FRAME NET NAME	UNIT NET NAME	ASSOCIATED BUS	ASSOCIATED FUSE	
				1B PROCESSOR CABINET 0	1B PROCESSOR CABINET 1					1B PROCESSOR CABINET 0	1B PROCESSOR CABINET 1
41-XXX-024T 41-XXX-124T 41-XXX-224T	1CS5VT	1CS5VT	CS Bus 1	XP3	XP1	41-XXX-043B 41-XXX-143B 41-XXX-243B	0PS5VT	0PS5VT	PS Bus 0	XP1	XP3
41-XXX-318T 41-XXX-418T 41-XXX-518T	1PS5VT	1PS5VT	PS Bus 1	XP3	XP1	41-XXX-343B 41-XXX-443B 41-XXX-543B					
41-XXX-011T 41-XXX-111T 41-XXX-211T	0CS5VT	0CS5VT	CS Bus 0	XP1	XP3	41-XXX-024B 41-XXX-124B 41-XXX-224B	1CS5VT	1CS5VT	CS Bus 1	XP3	XP1
41-XXX-308T 41-XXX-408T 41-XXX-508T	0PS5VT	0PS5VT	PS Bus 0	XP1	XP3	41-XXX-011B 41-XXX-111B 41-XXX-211B	0CS5VT	0CS5VT	CS Bus 0	XP1	XP3
41-XXX-056B 41-XXX-156B 41-XXX-256B 41-XXX-356B 41-XXX-456B 41-XXX-556B	1PS5VT	1PS5VT	PS Bus 1	XP3	XP1						

* XXX Is Equivalent To **KLV3** And **KLV4** Circuit Pack Horizontal Locations (104 and 112)

TABLE 6
1B PROCESSOR CABINET 0 OR 1 CENTRAL CONTROL/PROGRAM STORE (CC/PS) UNIT TERMINAL STRIP
5V BUS TERMINATOR VOLTAGE BACKPLANE PINS

PIN EQUIPMENT LOCATION	FRAME NET NAME	UNIT NET NAME	ASSOCIATED BUS	ASSOCIATED FUSE		PIN EQUIPMENT LOCATION	FRAME NET NAME	UNIT NET NAME	ASSOCIATED BUS	ASSOCIATED FUSE	
				1B PROCESSOR CABINET 0	1B PROCESSOR CABINET 1					1B PROCESSOR CABINET 0	1B PROCESSOR CABINET 1
41-103-024T	1CS5VT	1CS5VT	CS Bus 1	XP3	XP1	41-127-024B	1PS5VT	1PS5VT	PS Bus 1	XP3	XP1
41-103-011T	0CS5VT	0CS5VT	CS Bus 0	XP1	XP3	41-127-011B	0PS5VT	0PS5VT	PS Bus 0	XP1	XP3
41-103-056B	1PS5VT	1PS5VT	PS Bus 1	XP3	XP1	41-135-055B	1PS5VT	1PS5VT	PS Bus 1	XP3	XP1
41-103-043B	0CS5VT	0CS5VT	CS Bus 0	XP1	XP3	41-135-054B	0PS5VT	0PS5VT	PS Bus 0	XP1	XP3
41-103-024B	1CS5VT	1CS5VT	CS Bus 1	XP3	XP1	41-159-055B	1PS5VT	1PS5VT	PS Bus 1	XP3	XP1
41-103-011B	1CS5VT	0CS5VT	CS Bus 0	XP1	XP3	41-159-054B	0PS5VT	0PS5VT	PS Bus 0	XP1	XP3
41-118-018T	1PS5VT	1PS5VT	PS Bus 1	XP3	XP1	41-174-050T	1PS5VT	1PS5VT	PS Bus 1	XP3	XP1
41-118-008T	0PS5VT	0PS5VT	PS Bus 0	XP1	XP3	41-174-040T	0PS5VT	0PS5VT	PS Bus 0	XP1	XP3
41-118-056B	1PS5VT	1PS5VT	PS Bus 1	XP3	XP1	41-174-024T	1PS5VT	1PS5VT	PS Bus 1	XP3	XP1
41-118-043B	0PS5VT	0PS5VT	PS Bus 0	XP1	XP3	41-174-011T	0PS5VT	0PS5VT	PS Bus 0	XP1	XP3
41-119-056B	1CS5VT	1CS5VT	CS Bus 1	XP3	XP1	41-174-056B	1PS5VT	1PS5VT	PS Bus 1	XP3	XP1
41-119-043B	0CS5VT	0CS5VT	CS Bus 0	XP1	XP3	41-174-043B	0PS5VT	0PS5VT	PS Bus 0	XP1	XP3
41-126-056B	1CS5VT	1CS5VT	CS Bus 1	XP3	XP1	41-174-024B	1PS5VT	1PS5VT	PS Bus 1	XP3	XP1
41-126-043B	0CS5VT	0CS5VT	CS Bus 0	XP1	XP3	41-174-011B	0PS5VT	0PS5VT	PS Bus 0	XP1	XP3

REPLACE BACKPLANE PIN – 1B PROCESSOR CABINET

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TABLE H 1B PROCESSOR CABINET 0 OR 1 CENTRAL CONTROL/ PROGRAM STORE (CC/PS) UNIT KLV22/KLV122 CIRCUIT PACK SLOT 5V BUS TERMINATOR VOLTAGE BACKPLANE PINS					
PIN EQUIPMENT LOCATION	FRAME NET NAME	UNIT NET NAME	ASSOCIATED BUS	ASSOCIATED FUSE	
				1B PROCESSOR CABINET 0	1B PROCESSOR CABINET 1
41-120-056B 41-120-156B 41-120-256B 41-120-356B 41-120-456B 41-120-556B	1CS5VT	1CS5VT	CS Bus 1	XP3	XP1
41-120-043B 41-120-143B 41-120-243B 41-120-343B 41-120-443B 41-120-543B	0CS5VT	0CS5VT	CS Bus 0	XP1	XP3
41-120-024B 41-120-124B 41-120-224B 41-120-324B 41-120-424B 41-120-524B	1PS5VT	1PS5VT	PS Bus 1	XP3	XP1
41-120-011B 41-120-111B 41-120-211B 41-120-311B 41-120-411B 41-120-511B	0PS5VT	0PS5VT	PS Bus 0	XP1	XP3

REPLACE BACKPLANE PIN – 1B PROCESSOR CABINET

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TABLE I
1B PROCESSOR CABINET 0 AND 1 CENTRAL CONTROL AND INTERFACE BUS (CC/IFB) UNIT CLIENT CIRCUIT PACK SLOT
5V BUS TERMINATOR VOLTAGE BACKPLANE PINS

1B PROCESSOR CABINET 0						1B PROCESSOR CABINET 1					
PIN EQUIPMENT LOCATION*	FRAME NET NAME	UNIT NET NAME	ASSOCIATED BUS	ASSOCIATED FUSE		PIN EQUIPMENT LOCATION*	FRAME NET NAME	UNIT NET NAME	ASSOCIATED BUS	ASSOCIATED FUSE	
				1B PROCESSOR CABINET 0	1B PROCESSOR CABINET 1					1B PROCESSOR CABINET 0	1B PROCESSOR CABINET 1
58-XXX-556B 58-XXX-456B 58-XXX-356B 58-XXX-256B	0IF5VT	NIF5VT	IFB 0	XP1	XP3	58-XXX-556B 58-XXX-456B 58-XXX-356B 58-XXX-256B	1IF5VT	NIF5VT	IFB 1	XP1	XP3
58-XXX-543B 58-XXX-443B 58-XXX-343B 58-XXX-243B	0IF5VT	NIF5VT	IFB 0	XP1	XP3	58-XXX-543B 58-XXX-443B 58-XXX-343B 58-XXX-243B	1IF5VT	NIF5VT	IFB 1	XP1	XP3
58-XXX-524B 58-XXX-424B 58-XXX-324B 58-XXX-224B	0IF5VT	NIF5VT	IFB 0	XP1	XP3	58-XXX-524B 58-XXX-424B 58-XXX-324B 58-XXX-224B	1IF5VT	NIF5VT	IFB 1	XP1	XP3
58-XXX-511B 58-XXX-411B 58-XXX-311B 58-XXX-211B	0IF5VT	NIF5VT	IFB 0	XP1	XP3	58-XXX-511B 58-XXX-411B 58-XXX-311B 58-XXX-211B	1IF5VT	NIF5VT	IFB 1	XP1	XP3

* XXX Is Equivalent To IFB Client Circuit Pack Horizontal Locations (078, 086, 096, 104, 112, 120, 128, 136, 144, 152, 160, And 168)

TABLE J 1B PROCESSOR CABINET 0 AND 1 CENTRAL CONTROL AND INTERFACE BUS (CC/IFB) UNIT KWL13 AND KWL20 CIRCUIT PACK SLOT 5V BUS TERMINATOR VOLTAGE BACKPLANE PINS											
1B PROCESSOR CABINET 0						1B PROCESSOR CABINET 1					
PIN EQUIPMENT LOCATION*	FRAME NET NAME	UNIT NET NAME	ASSOCIATED BUS	ASSOCIATED FUSE		PIN EQUIPMENT LOCATION*	FRAME NET NAME	UNIT NET NAME	ASSOCIATED BUS	ASSOCIATED FUSE	
				1B PROCESSOR CABINET 0	1B PROCESSOR CABINET 1					1B PROCESSOR CABINET 0	1B PROCESSOR CABINET 1
58-XXX-255T	0IF5VT	NIF5VT	IFB 0	XP1	XP3	58-XXX-255T	1IF5VT	NIF5VT	IFB 1	XP3	XP1
58-XXX-253T	1IF5VT	FIF5VT	IFB 1	XP3	XP1	58-XXX-253T	0IF5VT	FIF5VT	IFB 0	XP1	XP3
58-XXX-556B 58-XXX-543B 58-XXX-524B 58-XXX-511B 58-XXX-456B 58-XXX-443B 58-XXX-424B 58-XXX-411B 58-XXX-356B 58-XXX-343B 58-XXX-324B 58-XXX-311B	0IF5VT	NIF5VT	IFB 0	XP1	XP3	58-XXX-556B 58-XXX-543B 58-XXX-524B 58-XXX-511B 58-XXX-456B 58-XXX-443B 58-XXX-424B 58-XXX-411B 58-XXX-356B 58-XXX-343B 58-XXX-324B 58-XXX-311B	1IF5VT	NIF5VT	IFB 1	XP3	XP1
58-XXX-256B 58-XXX-243B 58-XXX-224B 58-XXX-211B 58-XXX-156B 58-XXX-143B 58-XXX-124B 58-XXX-111B 58-XXX-056B 58-XXX-043B 58-XXX-024B 58-XXX-011B	1IF5VT	FIF5VT	IFB 1	XP3	XP1	58-XXX-256B 58-XXX-243B 58-XXX-224B 58-XXX-211B 58-XXX-156B 58-XXX-143B 58-XXX-124B 58-XXX-111B 58-XXX-056B 58-XXX-043B 58-XXX-024B 58-XXX-011B	0IF5VT	FIF5VT	IFB 0	XP1	XP3
* XXX Is Equivalent To KWL13 And KWL20 Circuit Pack Horizontal Locations (070 And 062)											

REPLACE BACKPLANE PIN – 1B PROCESSOR CABINET

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TABLE K
1B PROCESSOR CABINET 0 AND 1 CENTRAL CONTROL AND INTERFACE BUS (CC/IFB) UNIT TERMINAL STRIP
5V BUS TERMINATOR VOLTAGE BACKPLANE PINS

1B PROCESSOR CABINET 0						1B PROCESSOR CABINET 1					
PIN EQUIPMENT LOCATION	FRAME NET NAME	UNIT NET NAME	ASSOCIATED BUS	ASSOCIATED FUSE		PIN EQUIPMENT LOCATION	FRAME NET NAME	UNIT NET NAME	ASSOCIATED BUS	ASSOCIATED FUSE	
				1B PROCESSOR CABINET 0	1B PROCESSOR CABINET 1					1B PROCESSOR CABINET 0	1B PROCESSOR CABINET 1
58-053-056B 58-053-043B 58-053-024B 58-053-011B	1IF5VT	FIF5VT	IFB 1	XP3	XP1	58-053-056B 58-053-043B 58-053-024B 58-053-011B	1IF5VT	FIF5VT	IFB 1	XP3	XP1
58-055-056B 58-055-043B 58-055-024B 58-055-011B	1IF5VT	FIF5VT	IFB 1	XP3	XP1	58-055-056B 58-055-043B 58-055-024B 58-055-011B	1IF5VT	FIF5VT	IFB 1	XP3	XP1
58-056-056B 58-056-043B 58-056-024B 58-056-011B	1IF5VT	FIF5VT	IFB 1	XP3	XP1	58-056-056B 58-056-043B 58-056-024B 58-056-011B	1IF5VT	FIF5VT	IFB 1	XP3	XP1
58-057-056B 58-057-043B 58-057-024B 58-057-011B	1IF5VT	FIF5VT	IFB 1	XP3	XP1	58-057-056B 58-057-043B 58-057-024B 58-057-011B	1IF5VT	FIF5VT	IFB 1	XP3	XP1
58-058-056B 58-058-043B 58-058-024B 58-058-011B	1IF5VT	FIF5VT	IFB 1	XP3	XP1	58-058-056B 58-058-043B 58-058-024B 58-058-011B	1IF5VT	FIF5VT	IFB 1	XP3	XP1
58-059-056B 58-059-043B 58-059-024B 58-059-011B	1IF5VT	FIF5VT	IFB 1	XP3	XP1	58-059-056B 58-059-043B 58-059-024B 58-059-011B	1IF5VT	FIF5VT	IFB 1	XP3	XP1

REPLACE BACKPLANE PIN – 1B PROCESSOR CABINET

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TABLE K (Contd) 1B PROCESSOR CABINET 0 AND 1 CENTRAL CONTROL AND INTERFACE BUS (CC/IFB) UNIT TERMINAL STRIP 5V BUS TERMINATOR VOLTAGE BACKPLANE PINS											
1B PROCESSOR CABINET 0						1B PROCESSOR CABINET 1					
PIN EQUIPMENT LOCATION	FRAME NET NAME	UNIT NET NAME	ASSOCIATED BUS	ASSOCIATED FUSE		PIN EQUIPMENT LOCATION	FRAME NET NAME	UNIT NET NAME	ASSOCIATED BUS	ASSOCIATED FUSE	
				1B PROCESSOR CABINET 0	1B PROCESSOR CABINET 1					1B PROCESSOR CABINET 0	1B PROCESSOR CABINET 1
58-068-056B 58-068-043B 58-068-024B 58-068-011B	0IF5VT	NIF5VT	IFB 0	XP1	XP3	58-068-056B 58-068-043B 58-068-024B 58-068-011B	0IF5VT	FIF5VT	IFB 0	XP1	XP3
58-069-056B 58-069-043B 58-069-024B 58-069-011B	1IF5VT	FIF5VT	IFB 1	XP3	XP1	58-069-056B 58-069-043B 58-069-024B 58-069-011B	1IF5VT	FIF5VT	IFB 1	XP3	XP1
58-076-056B 58-076-043B 58-076-024B 58-076-011B	0IF5VT	NIF5VT	IFB 0	XP1	XP3	58-076-056B 58-076-043B 58-076-024B 58-076-011B	0IF5VT	NIF5VT	IFB 0	XP1	XP3
58-103-023B 58-103-022B	1IF5VT	FIF5VT	IFB 1	XP3	XP1	58-103-023B 58-103-022B	1IF5VT	FIF5VT	IFB 1	XP3	XP1
58-103-021B 58-103-020B	0IF5VT	NIF5VT	IFB 0	XP1	XP3	58-103-021B 58-103-020B	0IF5VT	NIF5VT	IFB 0	XP1	XP3

REPLACE BACKPLANE PIN – 1B PROCESSOR CABINET

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TABLE L 1B PROCESSOR CABINET 0 AND 1 CENTRAL CONTROL AND INTERFACE BUS (CC/IFB) UNIT K14 CIRCUIT PACK SLOT 5V BUS TERMINATOR VOLTAGE BACKPLANE PINS											
1B PROCESSOR CABINET 0						1B PROCESSOR CABINET 1					
PIN EQUIPMENT LOCATION	FRAME NET NAME	UNIT NET NAME	ASSOCIATED BUS	ASSOCIATED FUSE		PIN EQUIPMENT LOCATION	FRAME NET NAME	UNIT NET NAME	ASSOCIATED BUS	ASSOCIATED FUSE	
				1B PROCESSOR CABINET 0	1B PROCESSOR CABINET 1					1B PROCESSOR CABINET 0	1B PROCESSOR CABINET 1
58-038-153B	1IF5VT	FIF5VT	IFB 1	XP3	XP1	58-038-153B	0IF5VT	FIF5VT	IFB 0	XP1	XP3
58-038-148B	0IF5VT	NIF5VT	IFB 0	XP1	XP3	58-038-148B	1IF5VT	NIF5VT	IFB 1	XP3	XP1

REPLACE BACKPLANE PIN – 1B PROCESSOR CABINET

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TABLE M 1B PROCESSOR CABINET 0 AND 1 CENTRAL CONTROL AND INTERFACE BUS (CC/IFB) UNIT KLV23 CIRCUIT PACK SLOT 5V BUS TERMINATOR VOLTAGE BACKPLANE PINS											
1B PROCESSOR CABINET 0						1B PROCESSOR CABINET 1					
PIN EQUIPMENT LOCATION	FRAME NET NAME	UNIT NET NAME	ASSOCIATED BUS	ASSOCIATED FUSE		PIN EQUIPMENT LOCATION	FRAME NET NAME	UNIT NET NAME	ASSOCIATED BUS	ASSOCIATED FUSE	
				1B PROCESSOR CABINET 0	1B PROCESSOR CABINET 1					1B PROCESSOR CABINET 0	1B PROCESSOR CABINET 1
58-030-044B	1IF5VT	FIFVT	IFB 1	XP3	XP1	58-030-044B	1IF5VT	FIFVT	IFB 1	XP1	XP3
58-030-043B						58-030-043B					
58-030-043B						58-030-043B					
58-030-042B						58-030-042B					
58-030-041B						58-030-041B					
58-030-040B						58-030-040B					
58-030-039B						58-030-039B					
58-030-144B						58-030-144B					
58-030-143B						58-030-143B					
58-030-142B						58-030-142B					
58-030-141B						58-030-141B					
58-030-140B						58-030-140B					
58-030-139B						58-030-139B					
58-030-244B						58-030-244B					
58-030-243B						58-030-243B					
58-030-242B						58-030-242B					
58-030-241B						58-030-241B					
58-030-240B						58-030-240B					
58-030-239B						58-030-239B					
58-030-037B	0IF5VT	NIF5VT	IFB 0	XP1	XP3	58-030-037B	0IF5VT	NIF5VT	IFB 0	XP3	XP1
58-030-036B						58-030-036B					
58-030-035B						58-030-035B					
58-030-034B						58-030-034B					
58-030-033B						58-030-033B					
58-030-032B						58-030-032B					
58-030-137B						58-030-137B					
58-030-136B						58-030-136B					
58-030-135B						58-030-135B					

REPLACE BACKPLANE PIN – 1B PROCESSOR CABINET

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TABLE M (Contd)
1B PROCESSOR CABINET 0 AND 1 CENTRAL CONTROL AND INTERFACE BUS (CC/IFB) UNIT KLV23 CIRCUIT PACK SLOT
5V BUS TERMINATOR VOLTAGE BACKPLANE PINS

1B PROCESSOR CABINET 0						1B PROCESSOR CABINET 1					
PIN EQUIPMENT LOCATION	FRAME NET NAME	UNIT NET NAME	ASSOCIATED BUS	ASSOCIATED FUSE		PIN EQUIPMENT LOCATION	FRAME NET NAME	UNIT NET NAME	ASSOCIATED BUS	ASSOCIATED FUSE	
				1B PROCESSOR CABINET 0	1B PROCESSOR CABINET 1					1B PROCESSOR CABINET 0	1B PROCESSOR CABINET 1
58-030-134B 58-030-133B 58-030-132B 58-030-237B 58-030-236B 58-030-235B 58-030-234B 58-030-233B 58-030-232B	0IF5VT	NIF5VT	IFB 0	XP1	XP3	58-030-134B 58-030-133B 58-030-132B 58-030-237B 58-030-236B 58-030-235B 58-030-234B 58-030-233B 58-030-232B	0IF5VT	NIF5VT	IFB 0	XP3	XP1
58-030-010B 58-030-009B 58-030-008B 58-030-007B 58-030-006B 58-030-009B 58-030-109B 58-030-108B 58-030-107B 58-030-106B 58-030-209B 58-030-209B 58-030-208B 58-030-207B 58-030-206B	1CS5VT	CS5VTA	CS Bus 1	XP3	XP1	58-030-010B 58-030-009B 58-030-008B 58-030-007B 58-030-006B 58-030-009B 58-030-109B 58-030-108B 58-030-107B 58-030-106B 58-030-209B 58-030-209B 58-030-208B 58-030-207B 58-030-206B	1CS5VT	CS5VTA	CS Bus 1	XP1	XP3
58-030-004B 58-030-003B 58-030-002B 58-030-001B	0CS5VT	CS5VTB	CS Bus 0	XP1	XP3	58-030-004B 58-030-003B 58-030-002B 58-030-001B	1CS5VT	CS5VTB	CS Bus 0	XP3	XP1

REPLACE BACKPLANE PIN – 1B PROCESSOR CABINET

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TABLE M (Contd) 1B PROCESSOR CABINET 0 AND 1 CENTRAL CONTROL AND INTERFACE BUS (CC/IFB) UNIT KLV23 CIRCUIT PACK SLOT 5V BUS TERMINATOR VOLTAGE BACKPLANE PINS											
1B PROCESSOR CABINET 0						1B PROCESSOR CABINET 1					
PIN EQUIPMENT LOCATION	FRAME NET NAME	UNIT NET NAME	ASSOCIATED BUS	ASSOCIATED FUSE		PIN EQUIPMENT LOCATION	FRAME NET NAME	UNIT NET NAME	ASSOCIATED BUS	ASSOCIATED FUSE	
				1B PROCESSOR CABINET 0	1B PROCESSOR CABINET 1					1B PROCESSOR CABINET 0	1B PROCESSOR CABINET 1
58-030-104B 58-030-103B 58-030-102B 58-030-101B 58-030-204B 58-030-203B 58-030-202B 58-030-201B	0CS5VT	CS5VTB	CS Bus 0	XP1	XP3	58-030-104B 58-030-103B 58-030-102B 58-030-101B 58-030-204B 58-030-203B 58-030-202B 58-030-201B	1CS5VT	CS5VTB	CS Bus 0	XP3	XP1
58-030-024B 58-030-023B 58-030-022B 58-030-021B 58-030-020B 58-030-124B 58-030-123B 58-030-122B 58-030-121B 58-030-120B 58-030-224B 58-030-223B 58-030-222B 58-030-221B 58-030-220B	1PS5VT	PS5VTA	PS Bus 1	XP3	XP1	58-030-024B 58-030-023B 58-030-022B 58-030-021B 58-030-020B 58-030-124B 58-030-123B 58-030-122B 58-030-121B 58-030-120B 58-030-224B 58-030-223B 58-030-222B 58-030-221B 58-030-220B	1PS5VT	PS5VTA	PS Bus 1	XP1	XP3
58-030-018B 58-030-017B 58-030-016B 58-030-015B 58-030-014B	0PS5VT	PS5VTB	PS Bus 0	XP1	XP3	58-030-018B 58-030-017B 58-030-016B 58-030-015B 58-030-014B	0PS5VT	PS5VTB	PS Bus 0	XP3	XP1

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REPLACE BACKPLANE PIN – 1B PROCESSOR CABINET

TABLE M (Contd) 1B PROCESSOR CABINET 0 AND 1 CENTRAL CONTROL AND INTERFACE BUS (CC/IFB) UNIT KIW23 CIRCUIT PACK SLOT 5V BUS TERMINATOR VOLTAGE BACKPLANE PINS											
1B PROCESSOR CABINET 0						1B PROCESSOR CABINET 1					
PIN EQUIPMENT LOCATION	FRAME NET NAME	UNIT NET NAME	ASSOCIATED BUS	ASSOCIATED FUSE		PIN EQUIPMENT LOCATION	FRAME NET NAME	UNIT NET NAME	ASSOCIATED BUS	ASSOCIATED FUSE	
				1B PROCESSOR CABINET 0	1B PROCESSOR CABINET 1					1B PROCESSOR CABINET 0	1B PROCESSOR CABINET 1
58-030-118B	OPS5VT	PS5VTB	PS Bus 0	XP1	XP3	58-030-118B	OPS5VT	PS5VTB	PS Bus 0	XP3	XP1
58-030-117B						58-030-117B					
58-030-116B						58-030-116B					
58-030-115B						58-030-115B					
58-030-114B						58-030-114B					
58-030-218B						58-030-218B					
58-030-217B						58-030-217B					
58-030-216B						58-030-216B					
58-030-215B						58-030-215B					
58-030-214B						58-030-214B					

REPLACE BACKPLANE PIN – 1B PROCESSOR CABINET

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[8] See WARNING 1. Remove circuit pack associated with backplane pin to be replaced [DLP-538]

[9] Identify 1B Processor cabinet 0 and 1 fuses associated with pin to be replaced [TABLE A thru TABLE M]

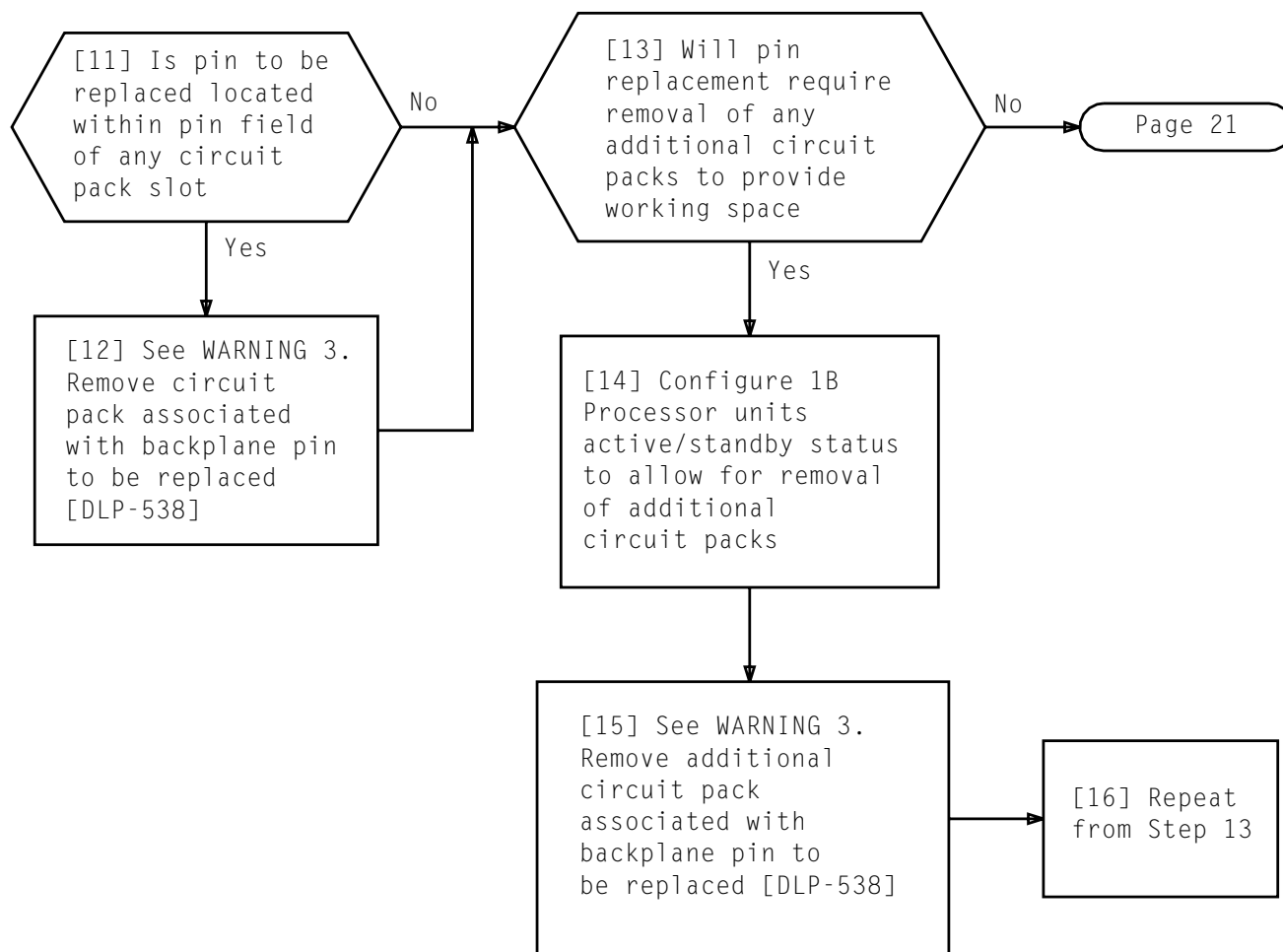
[10] See WARNING 2. Remove identified fuses from 1B Processor cabinet 0 and 1

AND

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Step 13

WARNINGS

1. A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins
2. When inserting and removing fuses, care must be taken to ensure fuses are pushed in and pulled out straight. Failure to push/pull fuses straight can exert excessive pressure on fuse assembly causing fuse assembly to crack or completely break off and lodge in fuse circuit card



WARNING 3
A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

[17] Obtain backplane pin repair kit (KS-22876,L5) containing replacement pins and pin installation/removal tool

[18] Using piece of cloth or antistatic plastic, cover area below pin to be replaced to prevent debris from falling into other circuitry

[19] Using pin installation/removal tool, remove pin from backplane

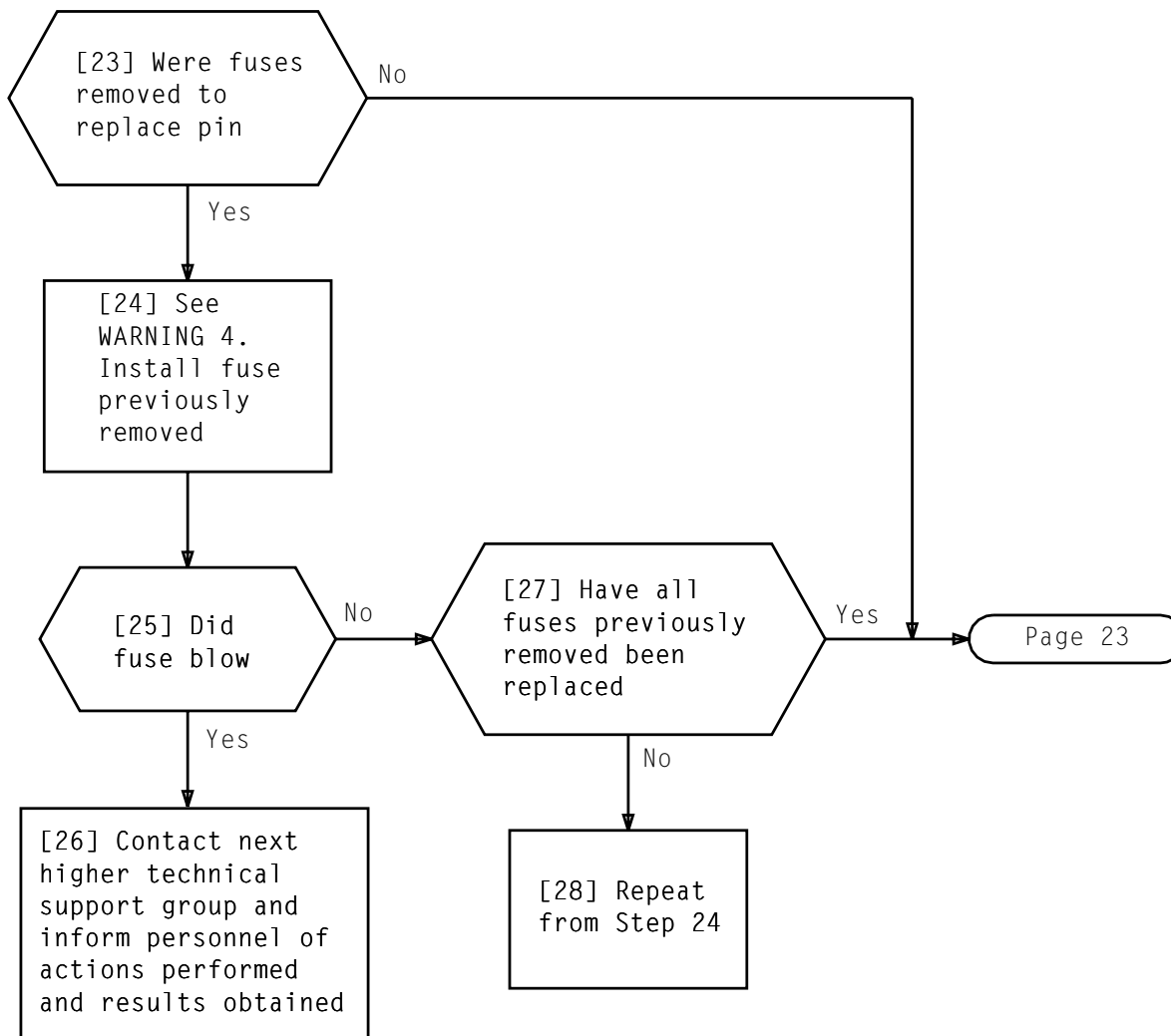
[20] Obtain replacement pin and ensure replacement pin is same as pin removed

[21] Using pin installation/removal tool, insert replacement pin into backplane

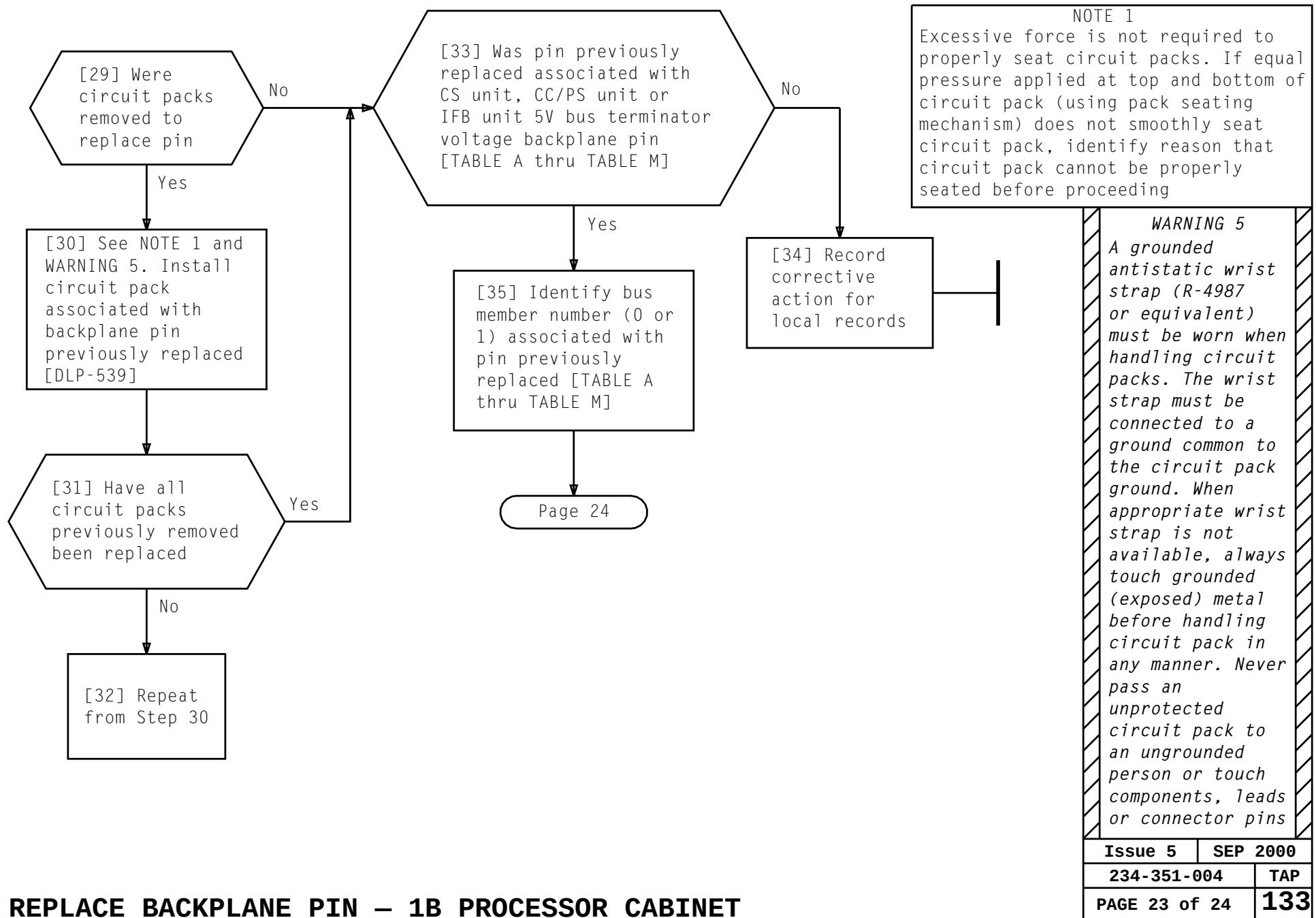
[22] Carefully remove cloth or antistatic plastic used to prevent debris from falling into other circuitry

AND

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WARNING 4
When inserting and removing fuses, care must be taken to ensure fuses are pushed in and pulled out straight. Failure to push/pull fuses straight can exert excessive pressure on fuse assembly causing fuse assembly to crack or completely break off and lodge in fuse circuit card



[36] At 1B Processor MTC
terminal, enter
RST:CSB a!

a = Identified bus member
number (0 or 1) associated
with pin previously replaced

[37] At 1B Processor MTC
terminal, enter
RST:PSB a!

a = Identified bus member number
(0 or 1) associated with
pin previously replaced

[38] At 1B Processor MTC
terminal, enter
RST:IFB a!

a = Identified bus member number
(0 or 1) associated with
pin previously replaced

AND

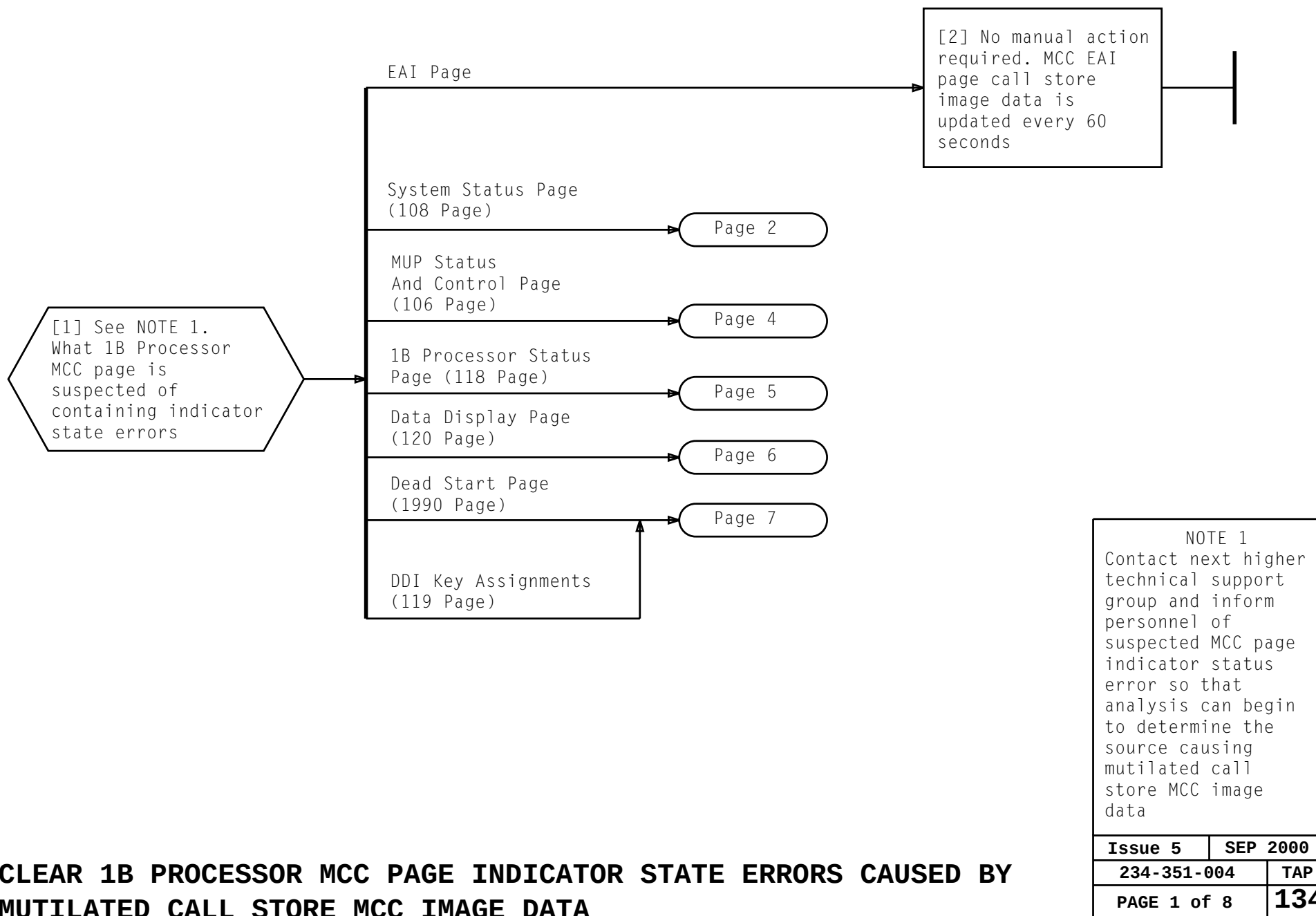
[39] Did system
respond with
RST a b COMPLETED
message for all
buses previously
restored

No

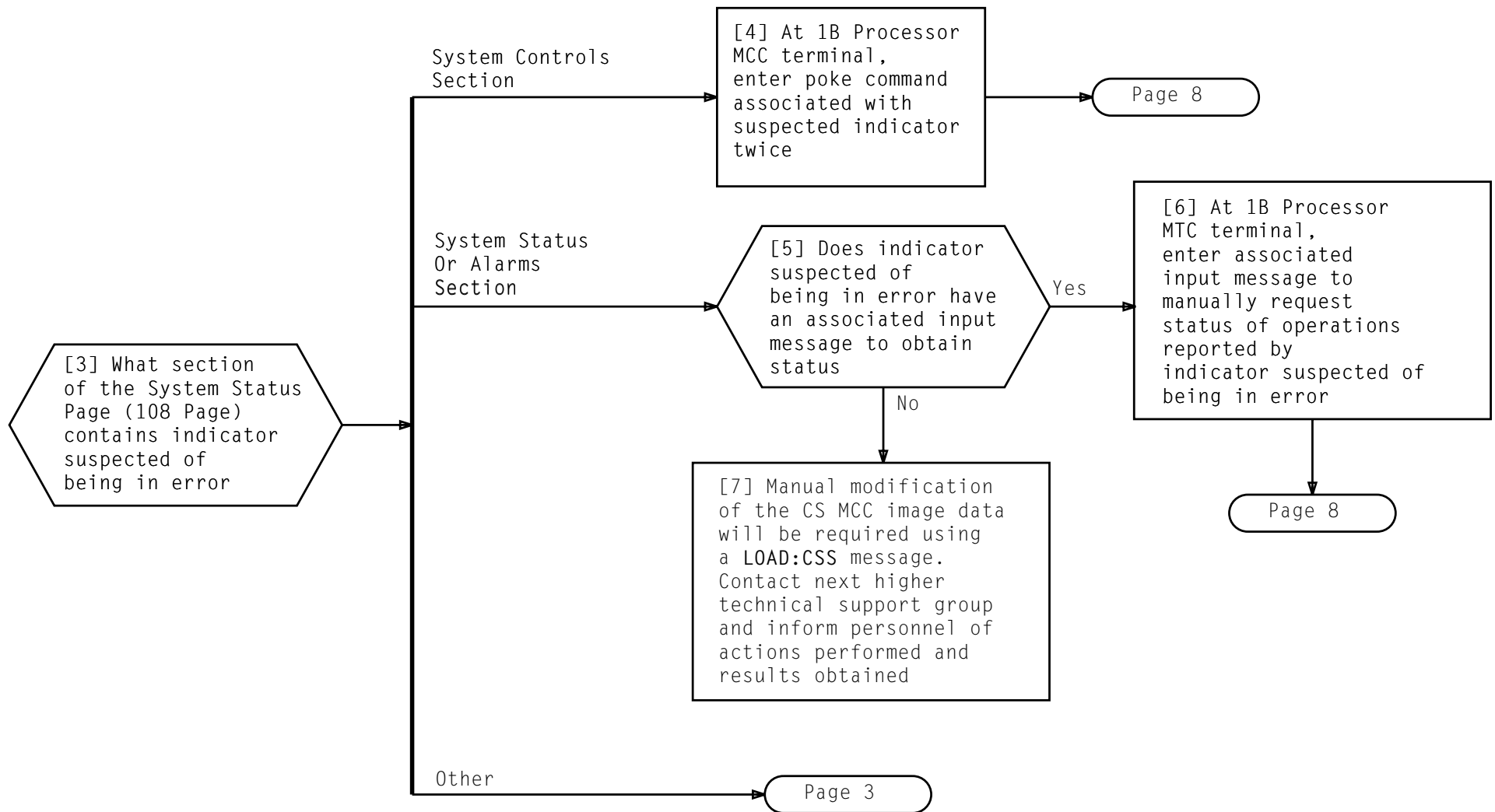
[40] Contact next
higher technical
support group and
inform personnel of
actions performed
and results obtained

Yes

[41] Record
corrective
action for
local records

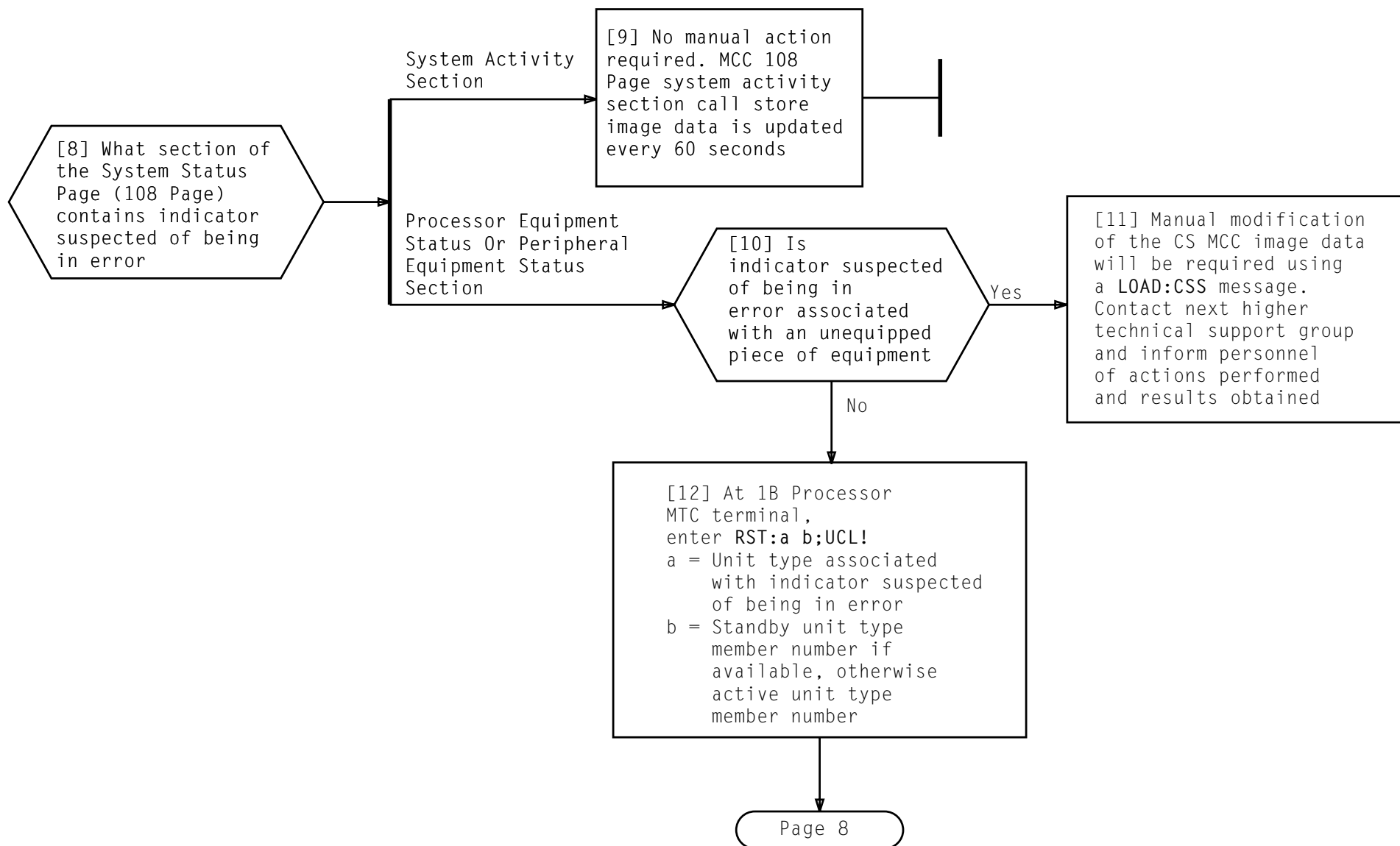


CLEAR 1B PROCESSOR MCC PAGE INDICATOR STATE ERRORS CAUSED BY MUTILATED CALL STORE MCC IMAGE DATA



CLEAR 1B PROCESSOR MCC PAGE INDICATOR STATE ERRORS CAUSED BY MUTILATED CALL STORE MCC IMAGE DATA

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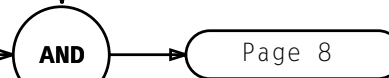
CLEAR 1B PROCESSOR MCC PAGE INDICATOR STATE ERRORS CAUSED BY MUTILATED CALL STORE MCC IMAGE DATA

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[13] At 1B Processor MTC terminal,
enter OP:MUPSTAT! _____

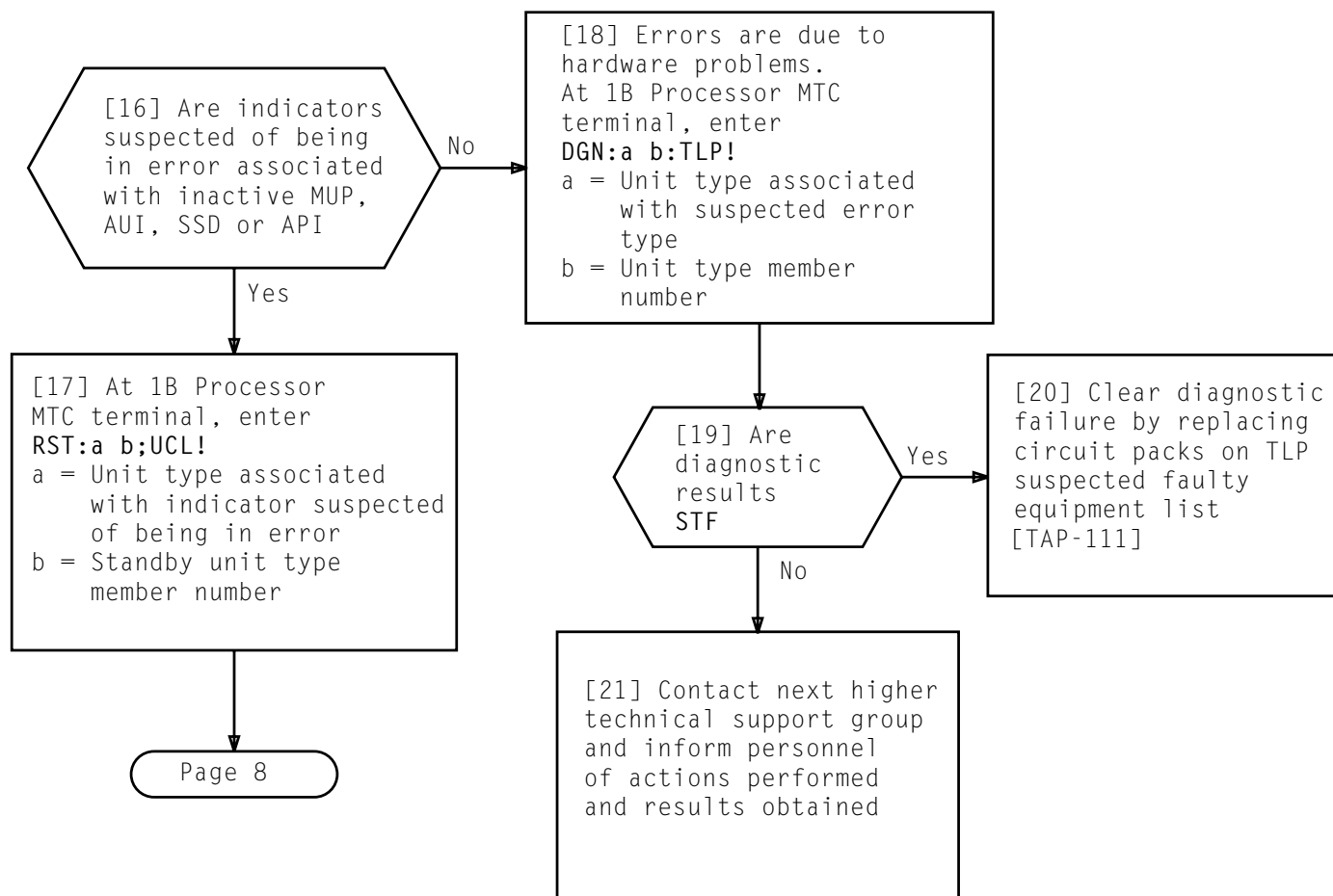
[14] Using MUP status printout, determine
standby MUP member number _____

[15] At 1B Processor MTC terminal, enter
RST:MUP a;UCL!
a = Standby MUP member
number (0 or 1) _____



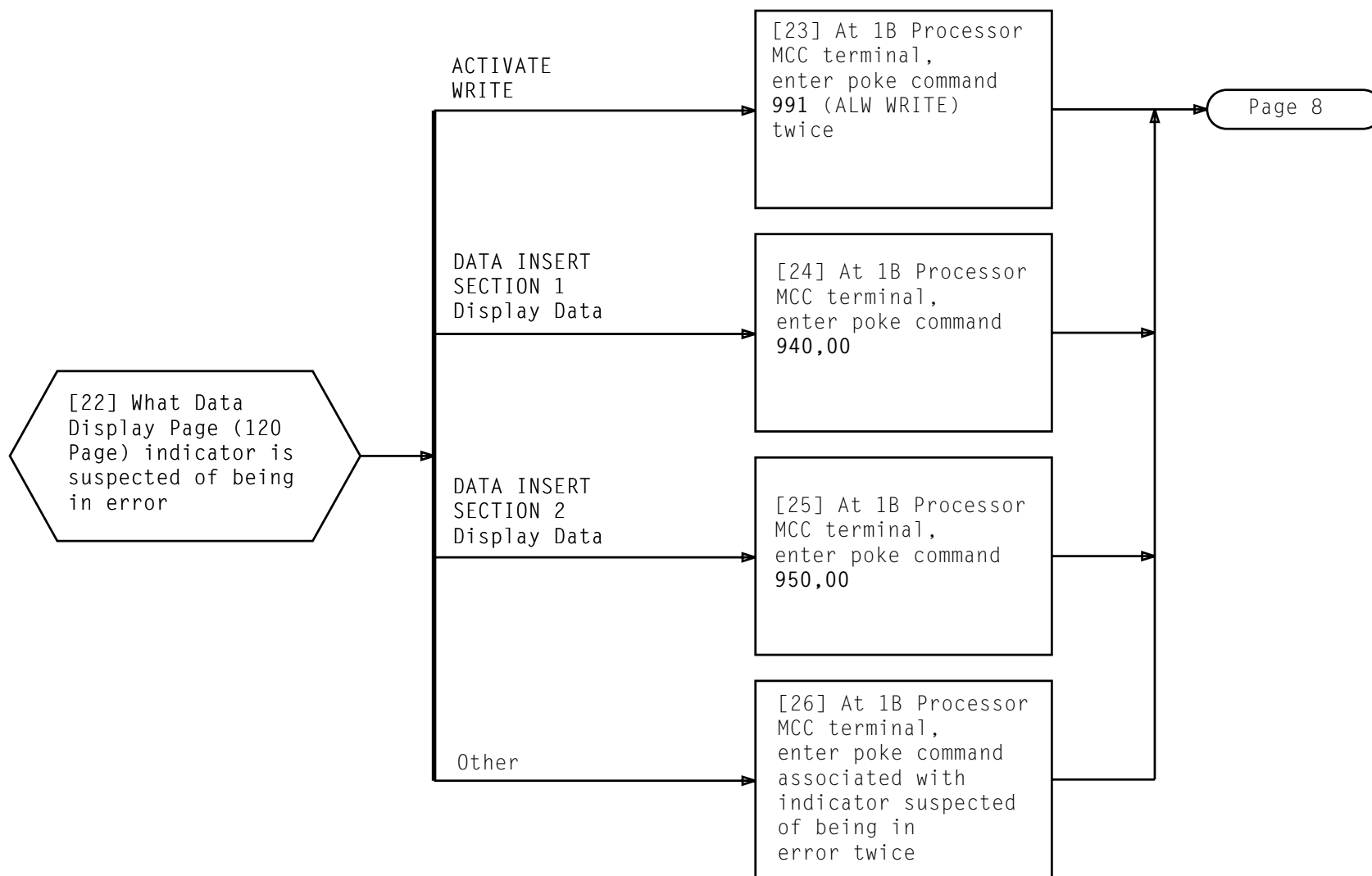
**CLEAR 1B PROCESSOR MCC PAGE INDICATOR STATE ERRORS CAUSED BY
MUTILATED CALL STORE MCC IMAGE DATA**

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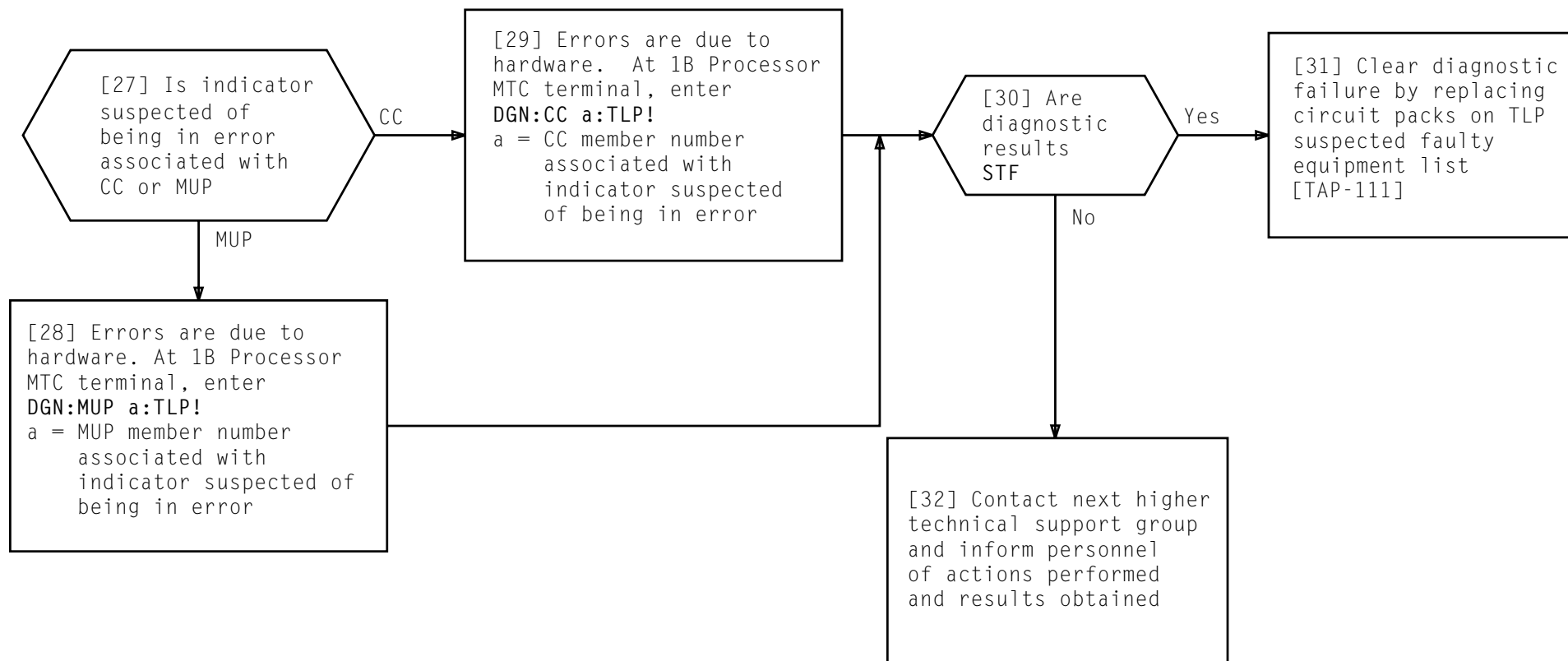
CLEAR 1B PROCESSOR MCC PAGE INDICATOR STATE ERRORS CAUSED BY MUTILATED CALL STORE MCC IMAGE DATA

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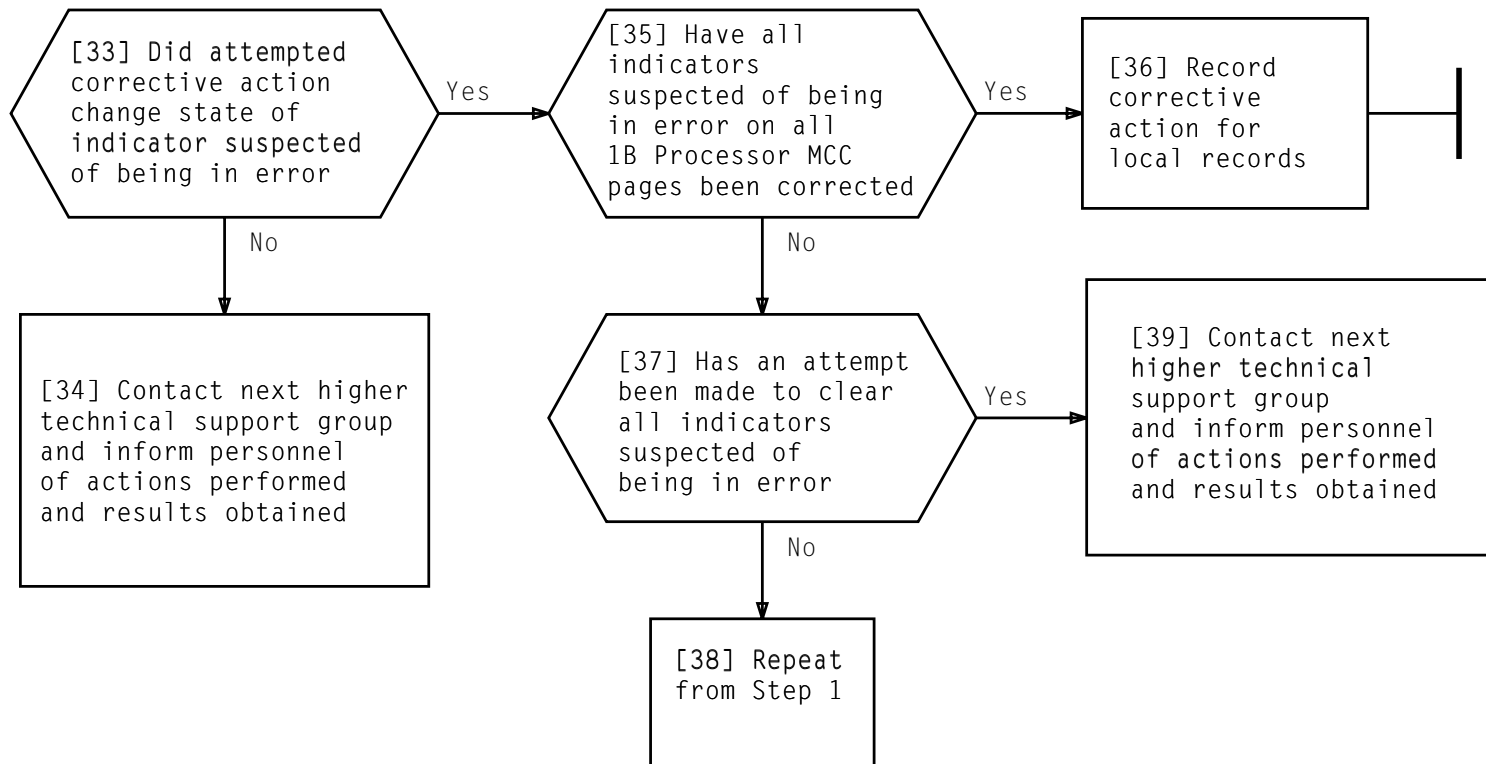
**CLEAR 1B PROCESSOR MCC PAGE INDICATOR STATE ERRORS CAUSED BY
MUTILATED CALL STORE MCC IMAGE DATA**

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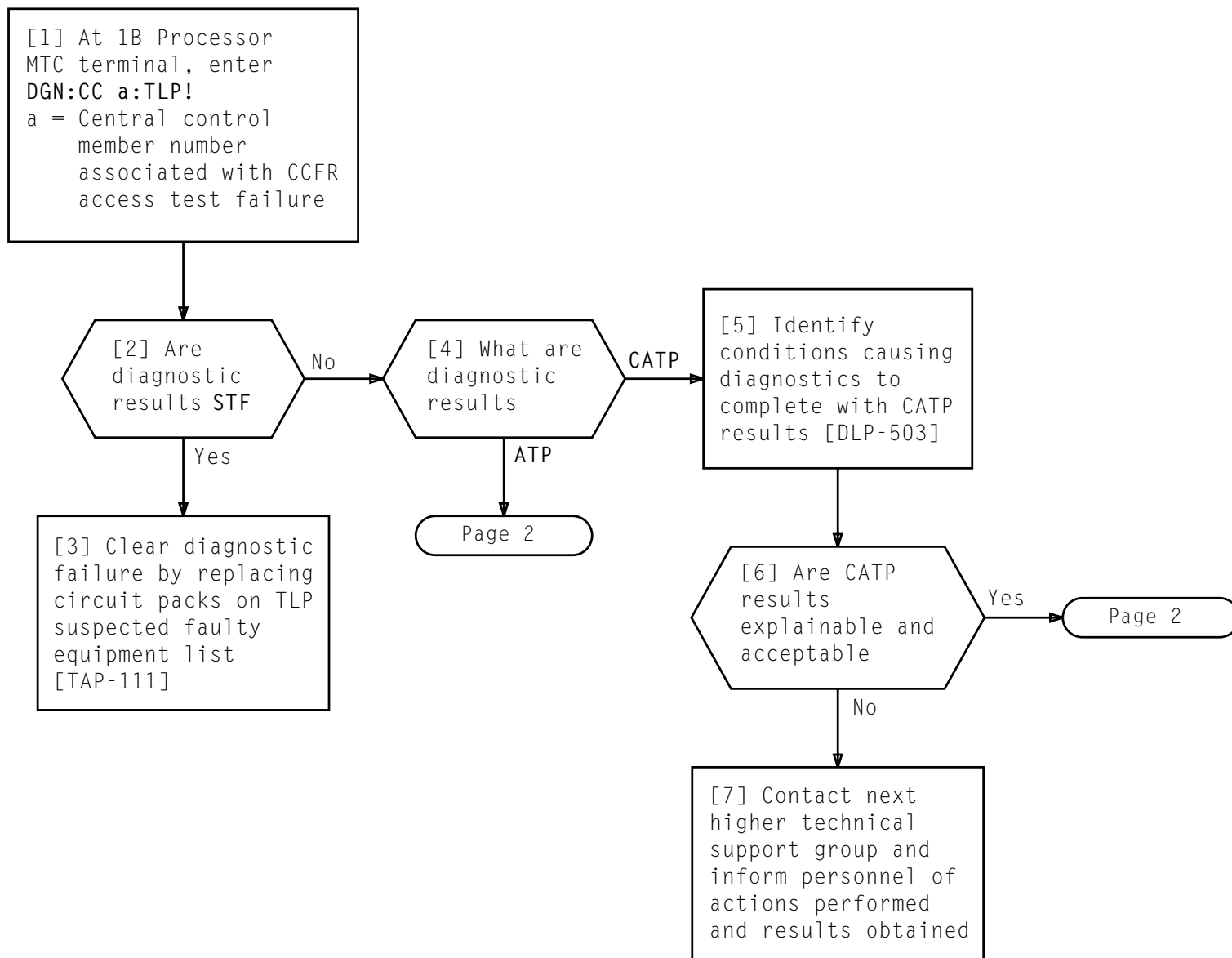
**CLEAR 1B PROCESSOR MCC PAGE INDICATOR STATE ERRORS CAUSED BY
MUTILATED CALL STORE MCC IMAGE DATA**

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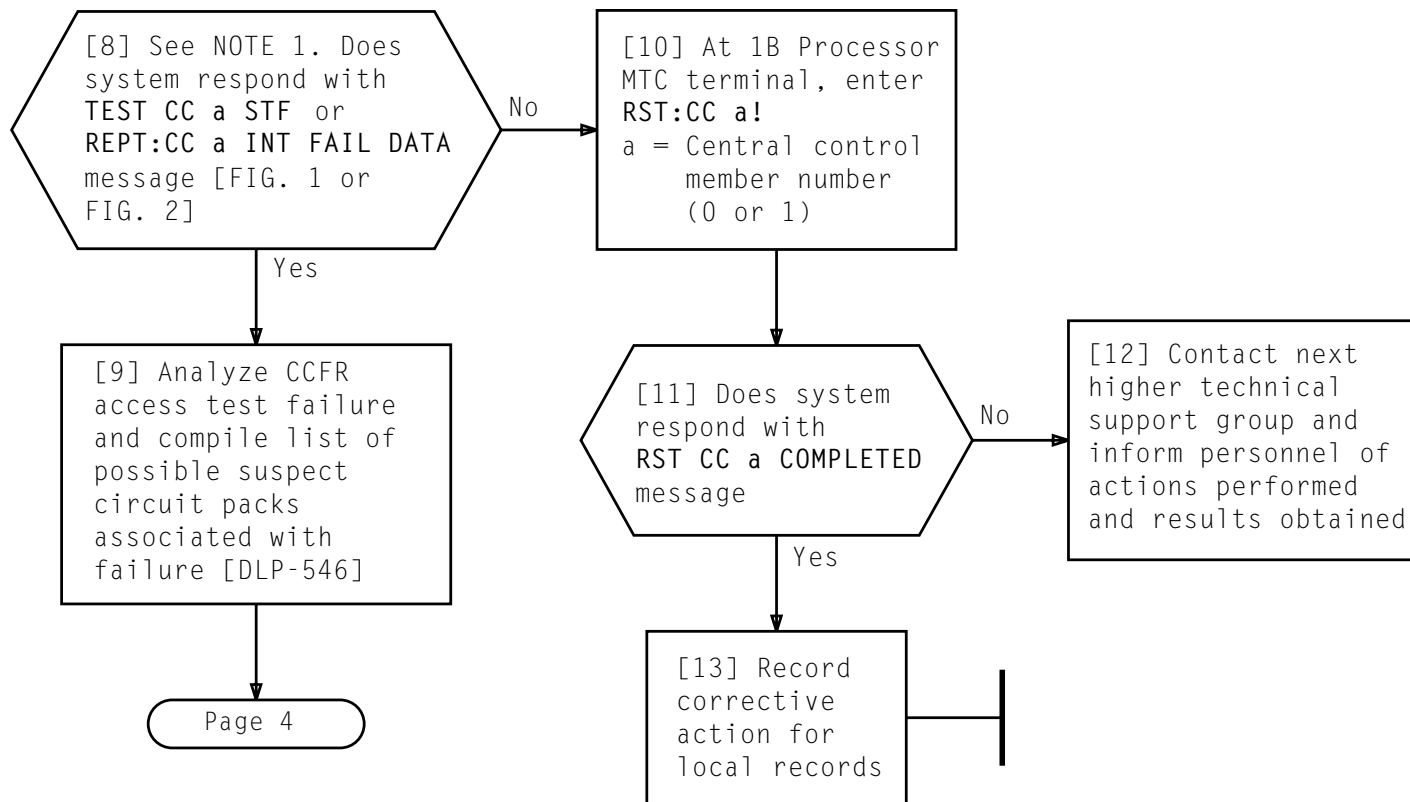
**CLEAR 1B PROCESSOR MCC PAGE INDICATOR STATE ERRORS CAUSED BY
MUTILATED CALL STORE MCC IMAGE DATA**

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CLEAR CENTRAL CONTROL FAULT RECOGNITION (CCFR) ACCESS TEST FAILURE

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NOTE 1			
If CCFR access test failure is reported via a diagnostic, the TEST CC a STF message will be received. If CCFR access test failure is reported via an interrupt, the REPT:CC a INT FAIL DATA message will be received			
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CLEAR CENTRAL CONTROL FAULT RECOGNITION (CCFR) ACCESS TEST FAILURE

M 08	TEST:CC a DFR FAIL					
	AC1FR(H)	AC1FR(L)	AC1GR(H)	AC1GR(L)	AC1JR(H)	AC1JR(L)
	AC1KR(H)	AC1KR(L)	AC1LR(H)	AC1LR(L)	AC1XR(H)	AC1XR(L)
	AC1YR(H)	AC1YR(L)	AC1ZR(H)	AC1ZR(L)	AC1BR(H)	AC1BR(L)
	AC1ER	AC1CSC	AC1CCS(H)	AC1CCS(L)	AC1ILA	CC1TESTFAIL
	CC1ACW	CC1BCW	CC1STATUS			

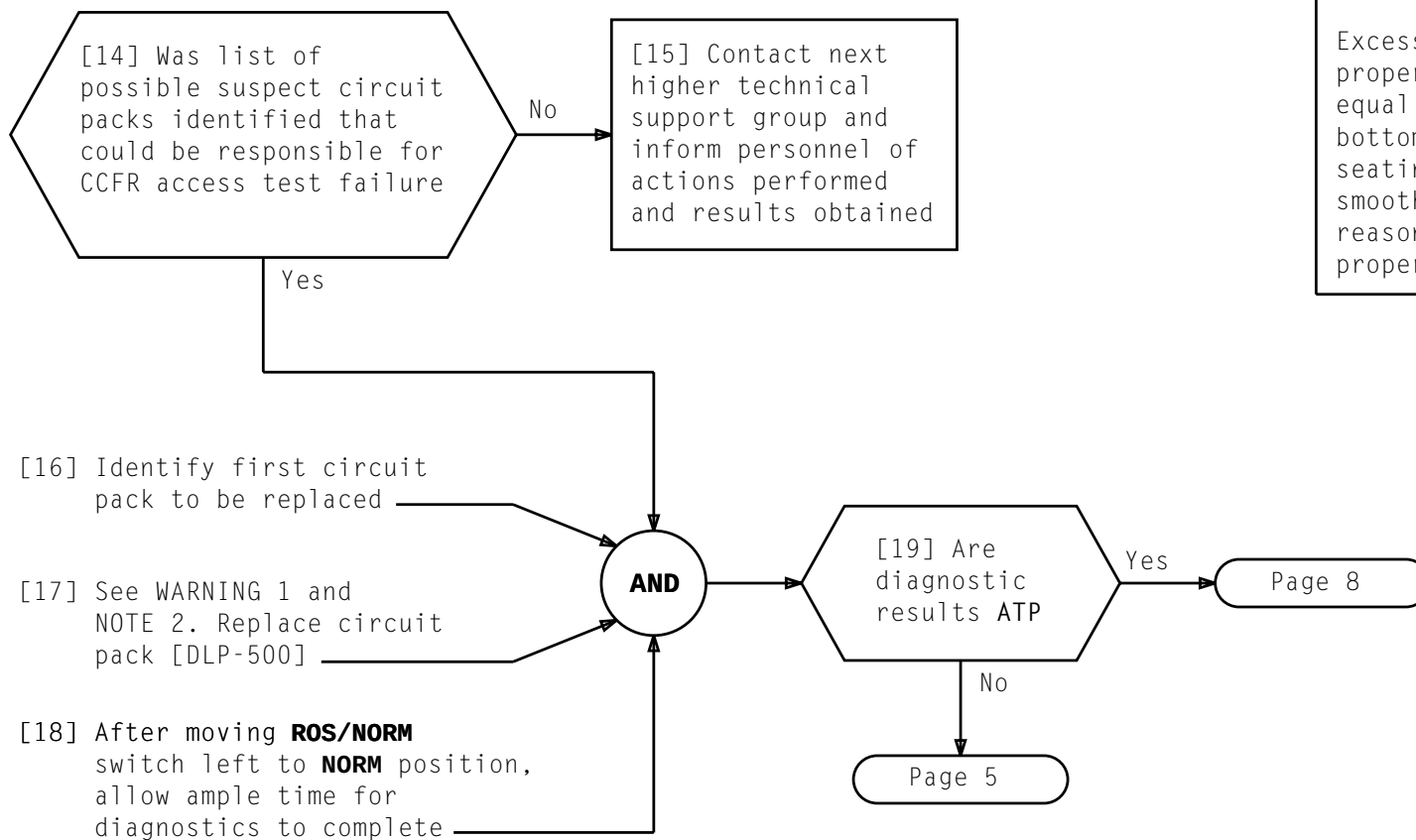
CC1TESTFAIL

FIG. 1 - Layout of Sample DFR Test Failure Printout For Active Central Control (CC)

M 08	TEST:CC a DFR FAIL				
	ST1FR(H)	ST1FR(L)	ST1GR(H)	ST1GR(L)	ST1JR(H)
	ST1KR(H)	ST1KR(L)	ST1LR(H)	ST1LR(L)	ST1XR(H)
	ST1YR(H)	ST1YR(L)	ST1ZR(H)	ST1ZR(L)	ST1MMR
	AC1MSR	ST1MSR	ST1BR(H)	ST1BR(L)	AC1ME0(H)
	ST1CAR(H)	ST1CAR(L)	ST1DAR(H)	ST1DAR(L)	ST1MIO(H)
	AC1MIO(H)	AC1MIO(L)	AC1ME1(H)	AC1ME1(L)	AC1MI1(H)
	ST1ME0(H)	ST1ME0(L)	ST1ME1(H)	ST1ME1(L)	ST1MI1(H)

CC1TESTFAIL

FIG. 2 - Layout of Sample DFR Test Failure Printout For Standby Central Control (CC)



NOTE 2

Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 1

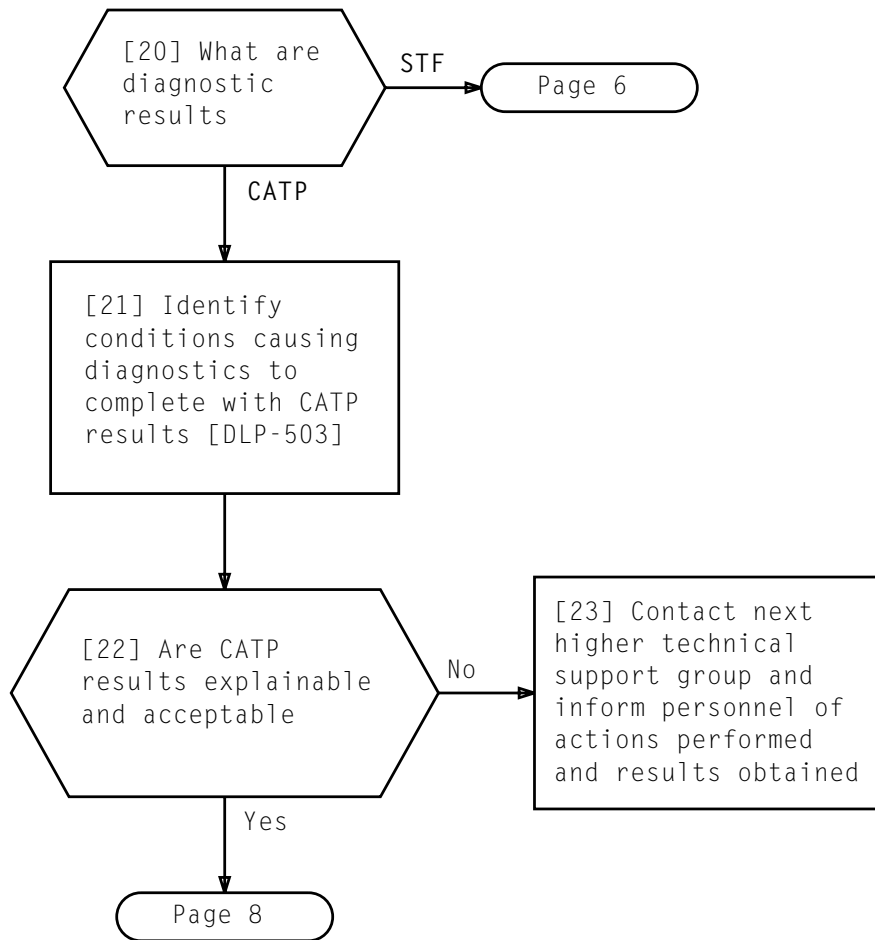
A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

CLEAR CENTRAL CONTROL FAULT RECOGNITION (CCFR) ACCESS TEST FAILURE

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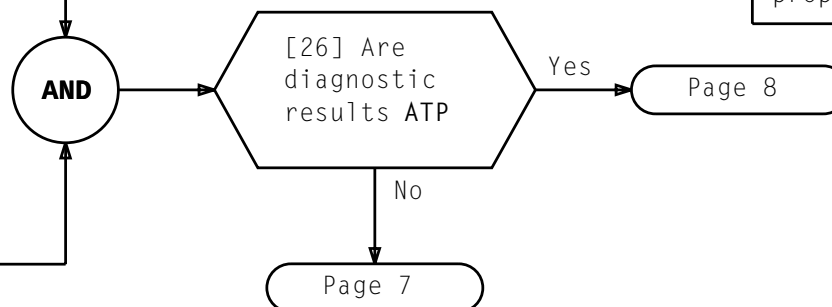
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[24] See WARNING 2 and NOTE 3.
Circuit pack just replaced is possibly faulty. Replace circuit pack just replaced with original pack [DLP-500]

[25] After moving **ROS/NORM** switch left to **NORM** position, allow ample time for diagnostics to complete



NOTE 3

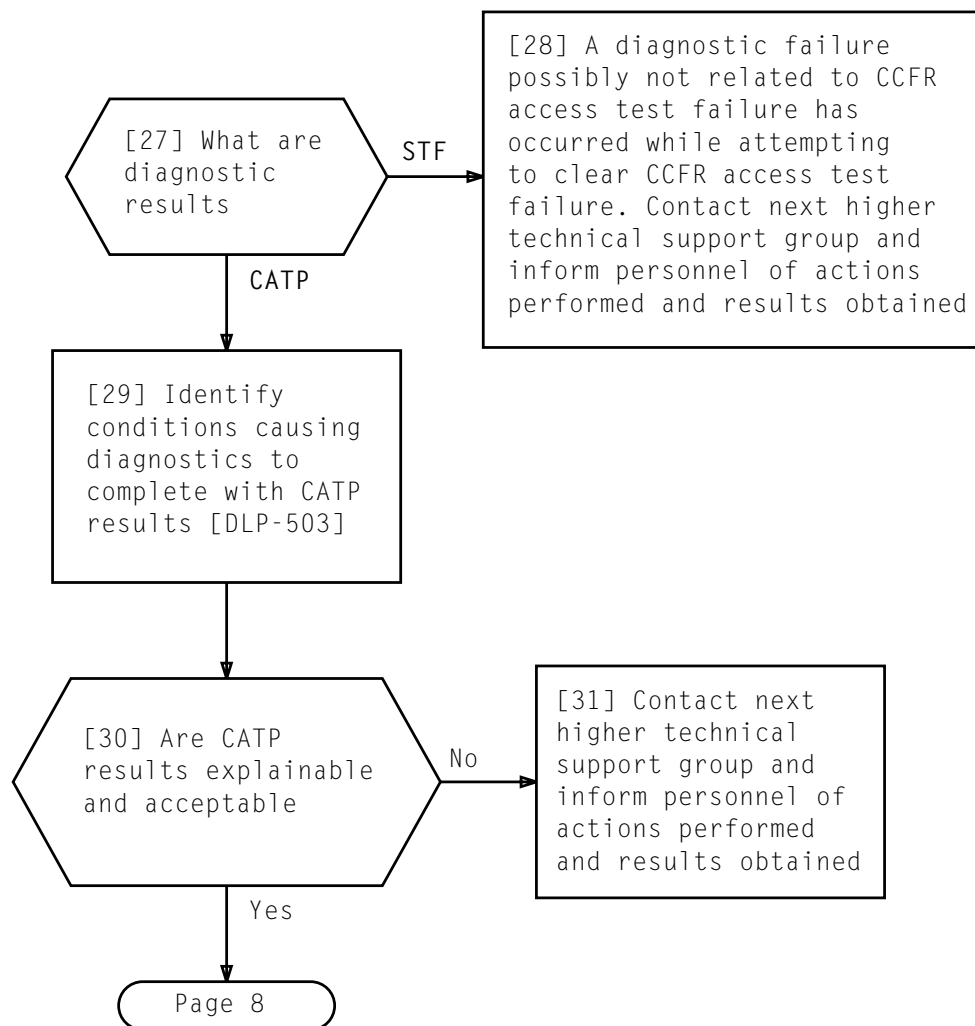
Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

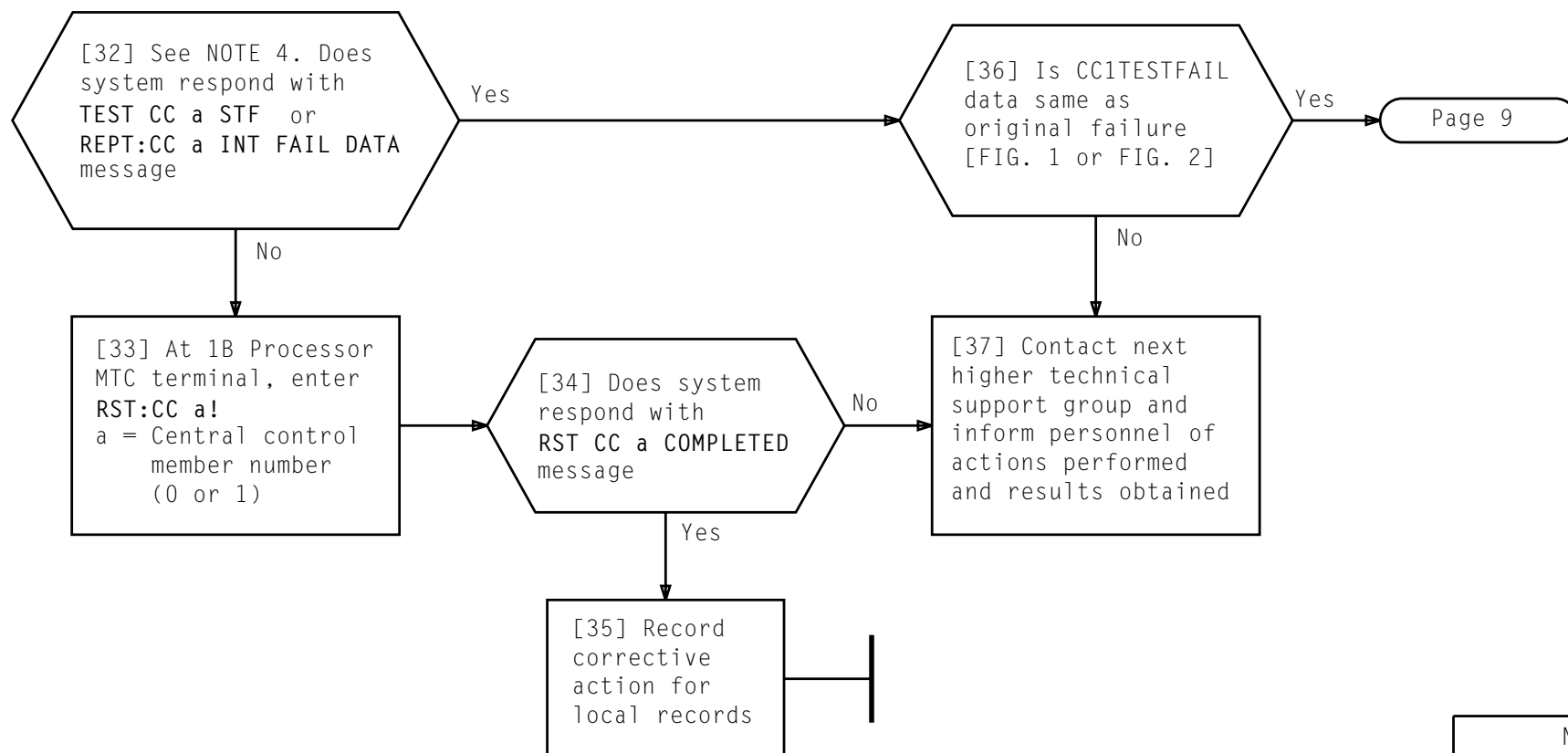
WARNING 2

A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

**CLEAR CENTRAL CONTROL FAULT RECOGNITION (CCFR)
ACCESS TEST FAILURE**

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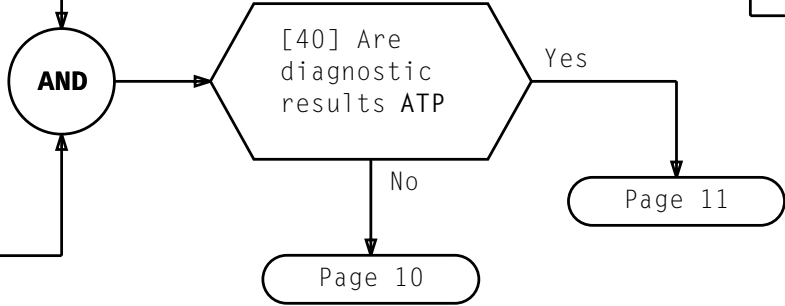


NOTE 4			
If CCFR access test failure is reported via a diagnostic, the TEST CC a STF message will be received. If CCFR access test failure is reported via an interrupt, the REPT:CC a INT FAIL DATA message will be received			
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CLEAR CENTRAL CONTROL FAULT RECOGNITION (CCFR) ACCESS TEST FAILURE

[38] See WARNING 3 and NOTE 5.
Circuit pack just replaced had
no affect on CCFR access test
failure. Replace circuit pack
just replaced with original
pack [DLP-500]

[39] After moving **ROS/NORM**
switch left to **NORM** position,
allow ample time for
diagnostics to complete

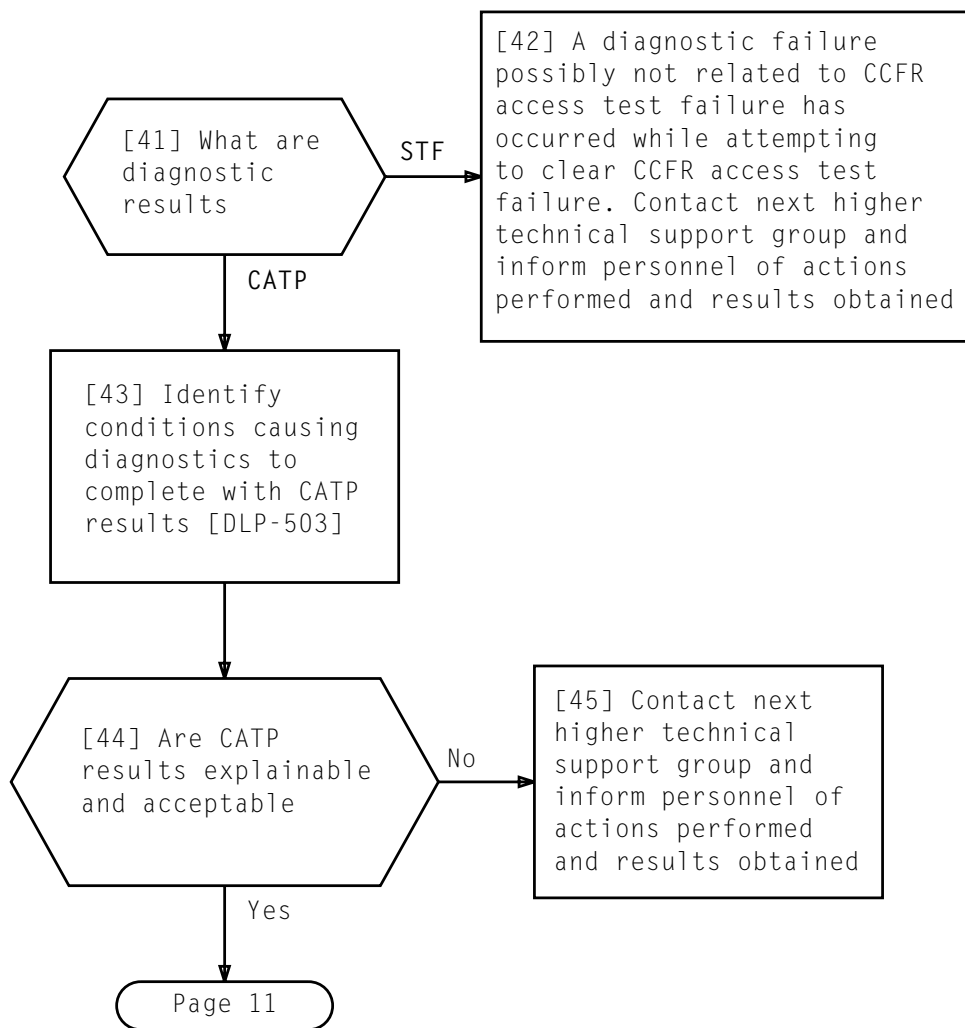


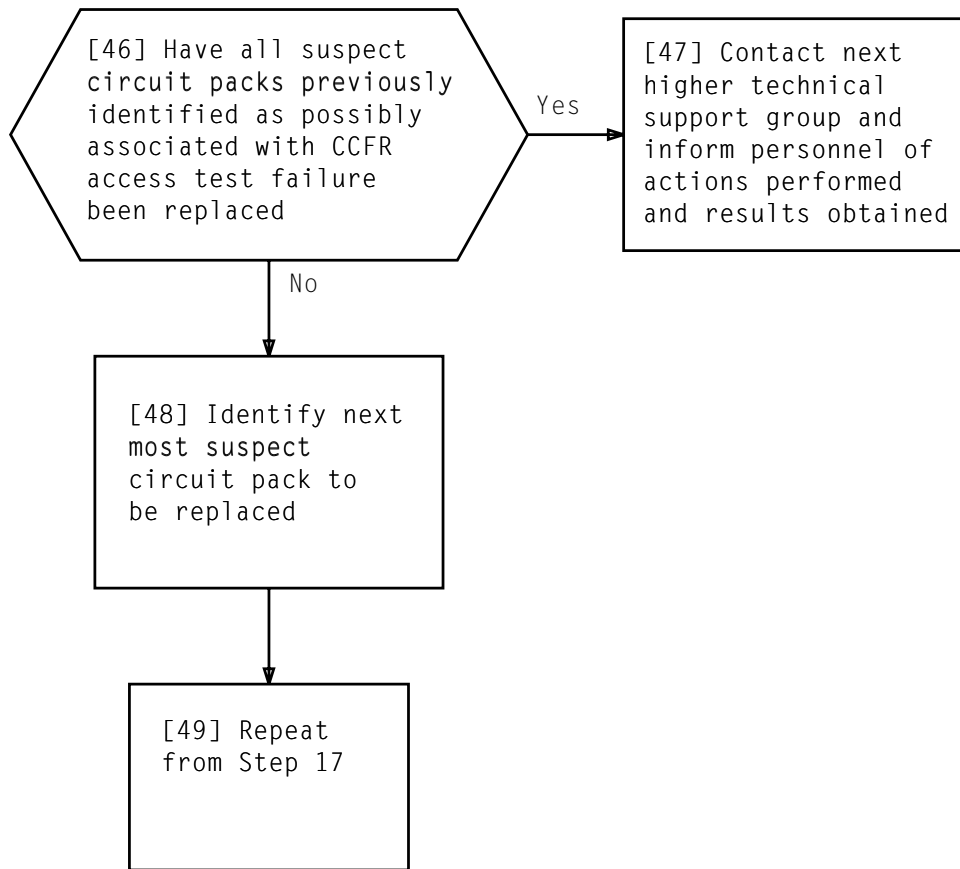
NOTE 5

Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 3

A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins





[1] Obtain deferred fault recognition (DFR)
test failure printout [FIG. 1]

[2] Using DFR test failure printout, identify
suspected faulty unit [FIG. 1]

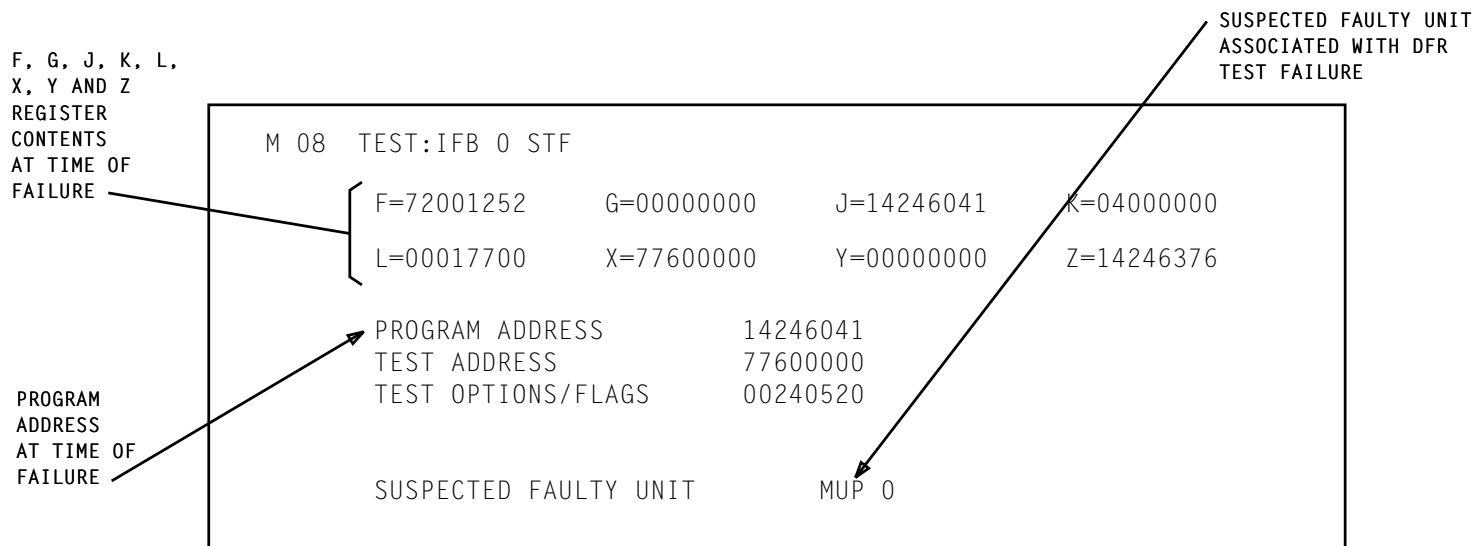
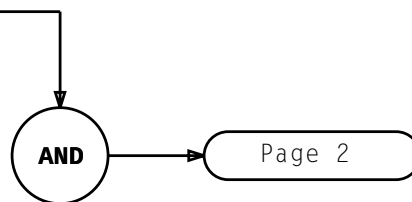
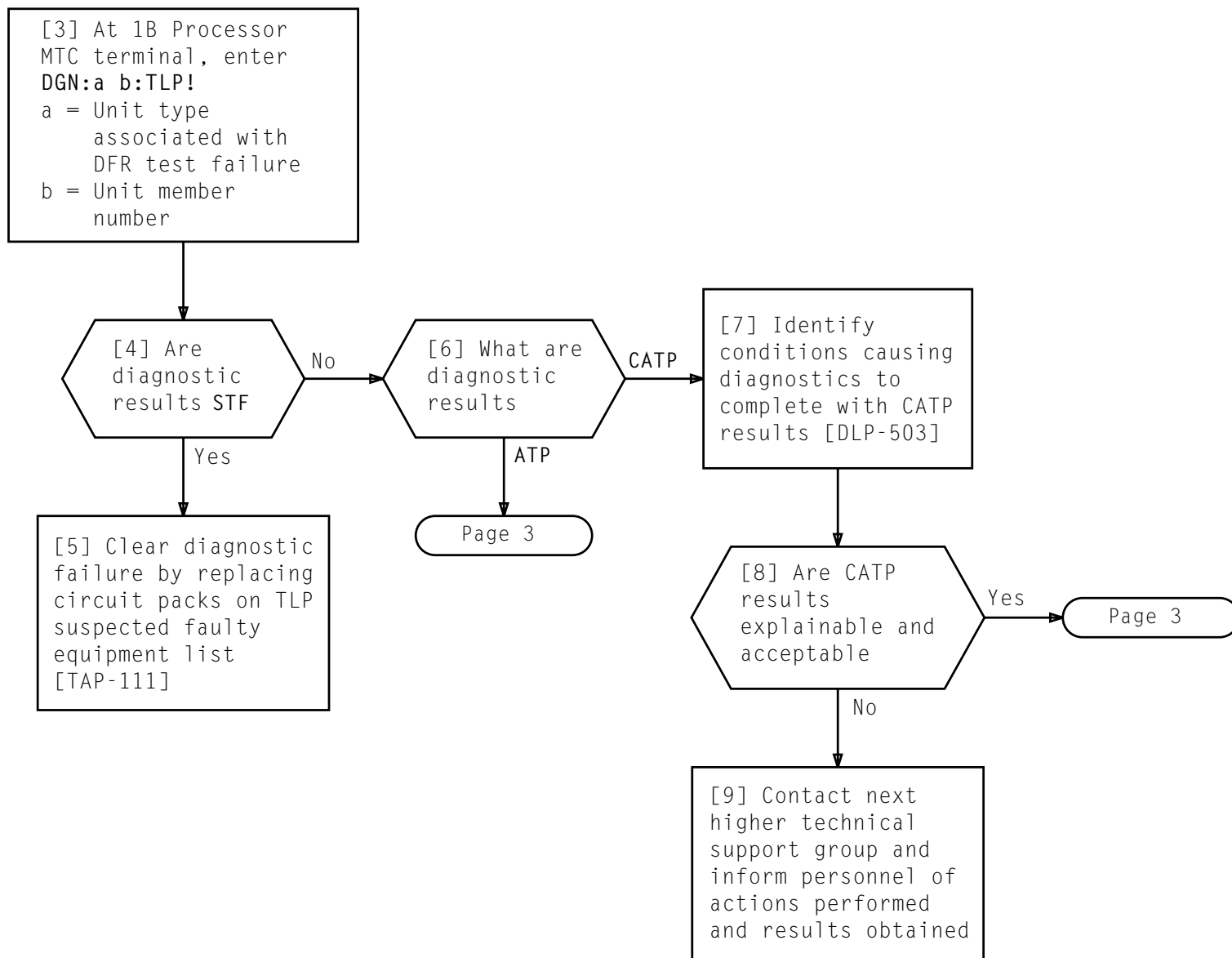


FIG. 1 - Layout of Sample DFR Test Failure Printout For 1B Processor
Cabinet Unit Other Than Central Control (CC) Unit

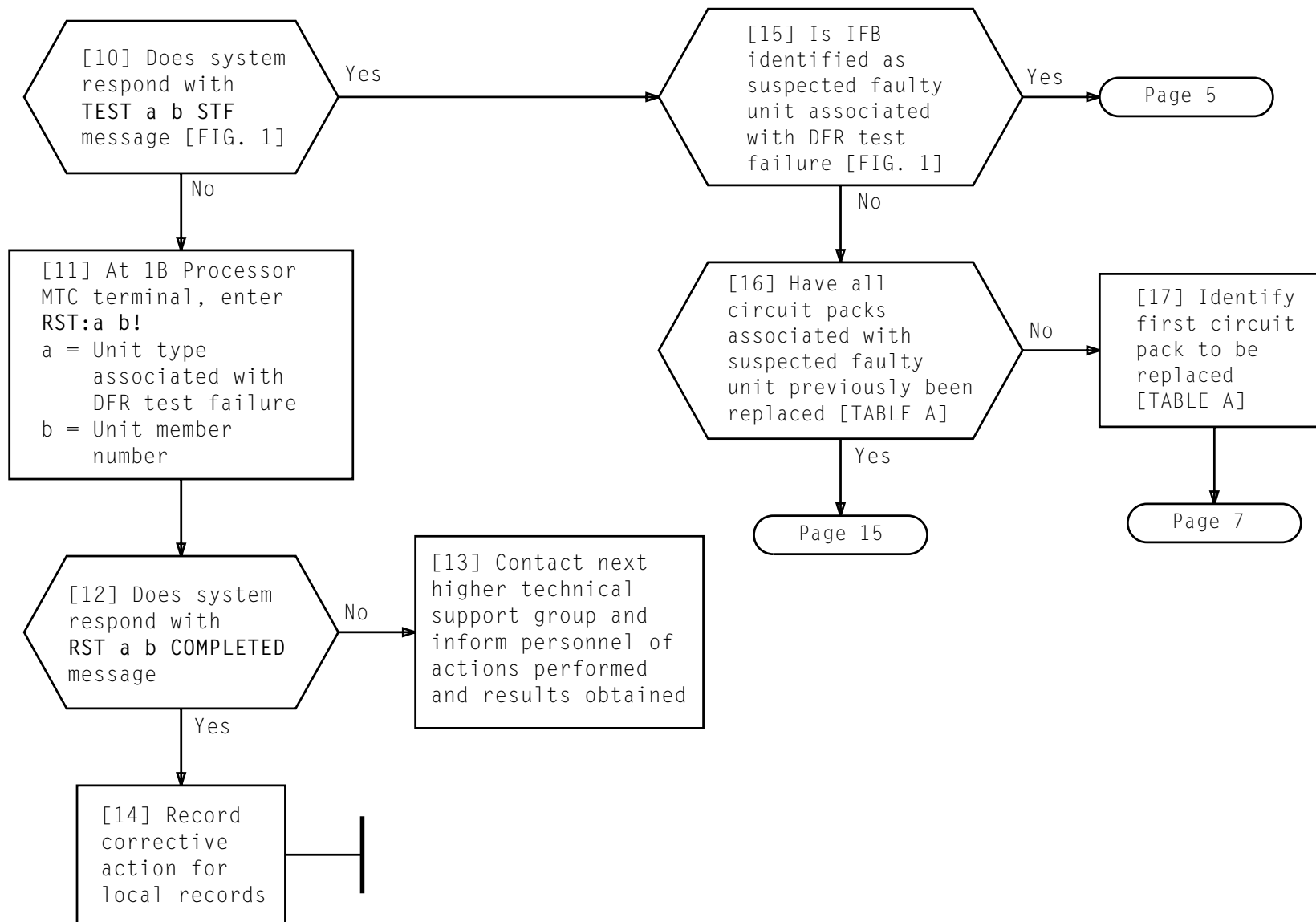
**CLEAR DEFERRED FAULT RECOGNITION (DFR) TEST FAILURE -
ALL 1B PROCESSOR CABINET UNITS OTHER THAN CENTRAL
CONTROL (CC) UNIT**

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**CLEAR DEFERRED FAULT RECOGNITION (DFR) TEST FAILURE -
ALL 1B PROCESSOR CABINET UNITS OTHER THAN CENTRAL
CONTROL (CC) UNIT**

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**CLEAR DEFERRED FAULT RECOGNITION (DFR) TEST FAILURE -
ALL 1B PROCESSOR CABINET UNITS OTHER THAN CENTRAL
CONTROL (CC) UNIT**

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TABLE A FAILING ACCESS TEST SUSPECTED FAULTY UNIT CIRCUIT PACKS					
SUSPECTED FAULTY UNIT	ASSOCIATED CIRCUIT PACK		SUSPECTED FAULTY UNIT	ASSOCIATED CIRCUIT PACK	
	IDENTIFIER	LOCATION		IDENTIFIER	LOCATION
AUB	UN338	70-096	MUP	KLW16/KLW116/ KLW216	58-078
		70-112		KLW25	58-086
		70-128	SSD	KLW15	58-168
		70-144			
		70-160			
		70-176			
AUI	KLW18	58-120			
	UN338	70-096			
		70-112			
		70-128			
		70-144			
		70-160			
		70-176			

**CLEAR DEFERRED FAULT RECOGNITION (DFR) TEST FAILURE -
ALL 1B PROCESSOR CABINET UNITS OTHER THAN CENTRAL
CONTROL (CC) UNIT**

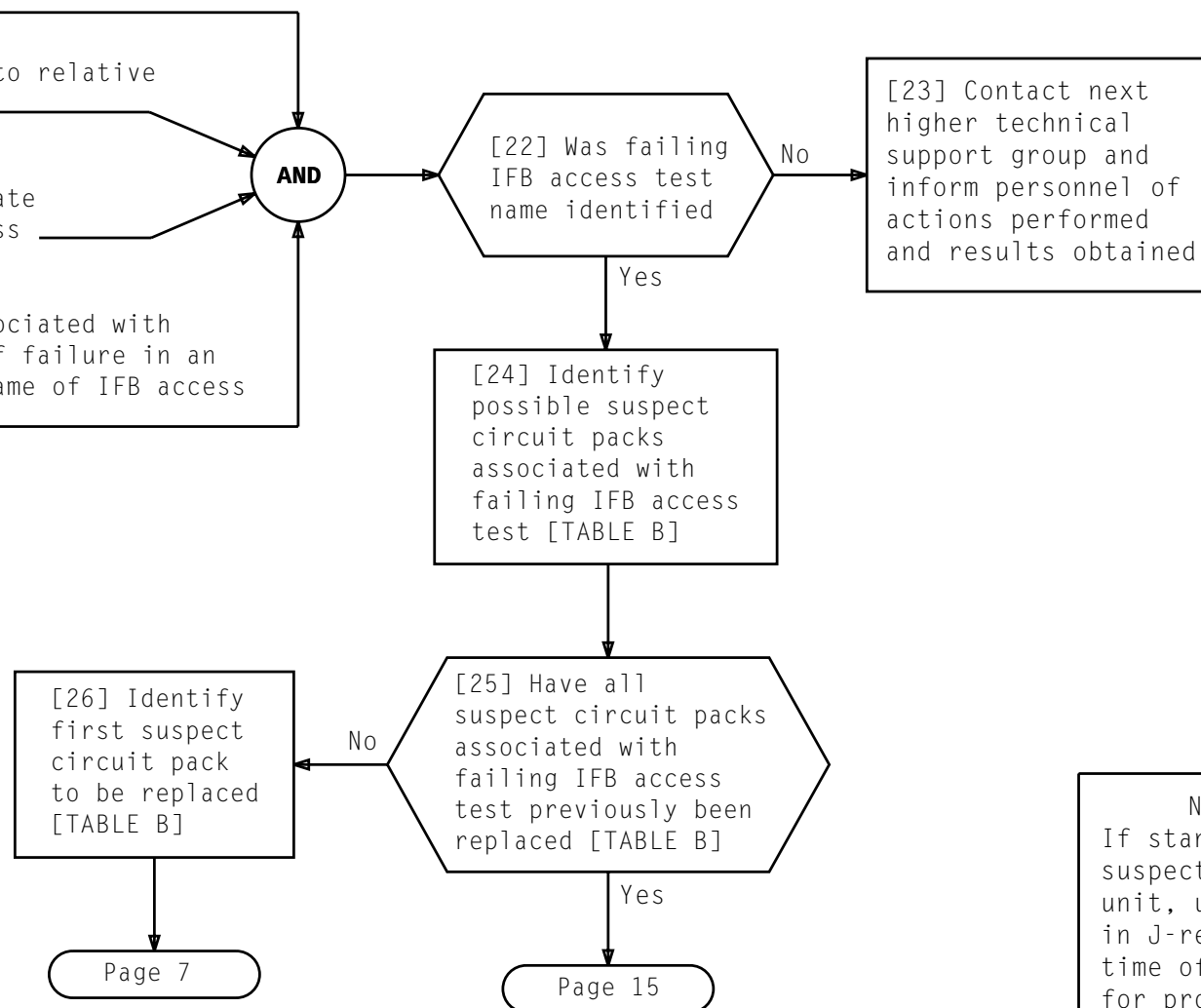
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[18] See NOTE 1. Using IFB DFR test failure printout [FIG. 1]. locate and identify program address (absolute address) at time of failure

[19] Convert absolute address to relative address [DLP-542]

[20] Obtain IFB Pident and locate identified relative address

[21] Read Pident test code associated with program address at time of failure in an attempt to identify the name of IFB access test that failed



NOTE 1 If standby CC is suspected faulty unit, use address in J-register at time of failure for program address			
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CLEAR DEFERRED FAULT RECOGNITION (DFR) TEST FAILURE - ALL 1B PROCESSOR CABINET UNITS OTHER THAN CENTRAL CONTROL (CC) UNIT

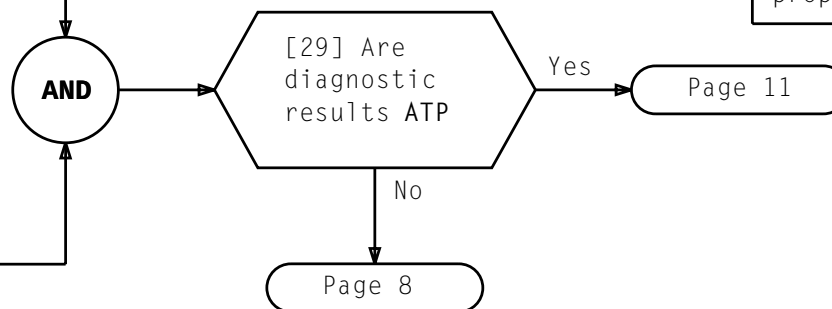
TABLE B POSSIBLE SUSPECT CIRCUIT PACKS ASSOCIATED WITH CC/IFB ACCESS TEST FAILURE	
IFB ACCESS TEST NAME (See Note)	POSSIBLE SUSPECT CC CIRCUIT PACKS
Buffer Bus Access Test	KLW8, KLW9, KLW13, KLW14, KLW20, KLW22/KLW122/KLW222
Reset Output Enable Test	KLW8, KLW9, KLW13, KLW14, KLW20, KLW22/KLW122/KLW222
Control Parity Test	KLW3, KLW4, KLW8, KLW13, KLW22/KLW122/KLW222
Error Enable Test	KLW3, KLW4, KLW8, KLW13, KLW22/KLW122/KLW222
Grant Timeout Test	KLW13, KLW20
Arbitor Single Request Test	KLW3, KLW4, KLW13, KLW20, KLW22/KLW122/KLW222
Arbitor Multiple Request Test	KLW3, KLW4, KLW13, KLW20, KLW22/KLW122/KLW222
Bus Enable Functional Test	KLW3, KLW4, KLW8, KLW13, KLW20, KLW22/KLW122/KLW222
MMIO Address Parity Test	KLW3, KLW4, KLW8, KLW13, KLW20, KLW22/KLW122/KLW222
Control Parity Test	KLW3, KLW4, KLW8, KLW13, KLW20, KLW22/KLW122/KLW222
MMIO Address Loop Around Test	KLW3, KLW4, KLW8, KLW13, KLW20, KLW22/KLW122/KLW222
IFB Address Parity Test	KLW3, KLW4, KLW8, KLW13, KLW20, KLW22/KLW122/KLW222
IFB Address & Data Loop Around Test	KLW3, KLW4, KLW8, KLW13, KLW20, KLW22/KLW122/KLW222
Slave Reply Code Test	KLW3, KLW4, KLW8, KLW13, KLW20, KLW22/KLW122/KLW222
Master Reply Code Test	KLW3, KLW4, KLW8, KLW13, KLW20, KLW22/KLW122/KLW222
NOTE: The Specified IFB Access Tests Only Represent The Tests Performed During CC To IFB Testing As Part Of IFFRTIBC. The Specified Tests Do Not Include Client Tests Performed As Part Of TIFC, TDMA and TCLS.	

**CLEAR DEFERRED FAULT RECOGNITION (DFR) TEST FAILURE -
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[27] See WARNING 1 and
NOTE 2. Replace circuit
pack [DLP-500]

[28] After moving **ROS/NORM**
switch left to **NORM** position,
allow ample time for
diagnostics to complete



NOTE 2

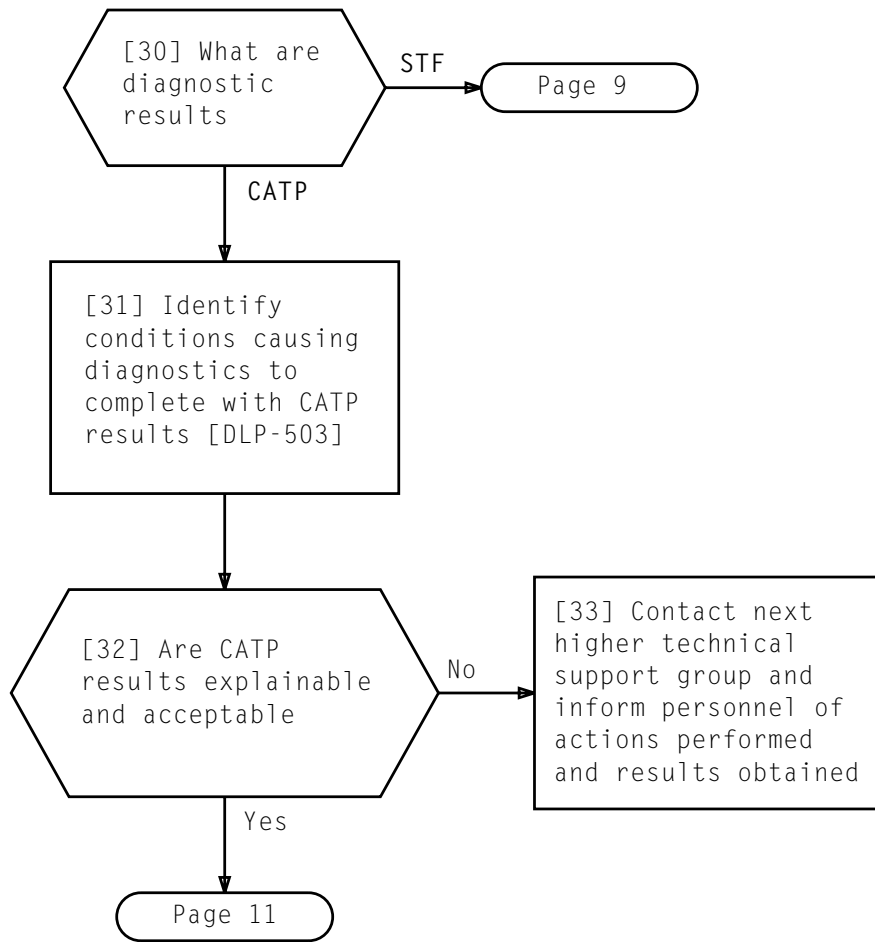
Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 1

A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

**CLEAR DEFERRED FAULT RECOGNITION (DFR) TEST FAILURE -
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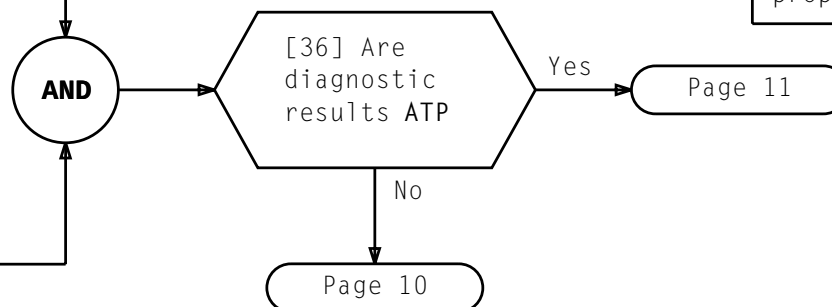


**CLEAR DEFERRED FAULT RECOGNITION (DFR) TEST FAILURE -
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[34] See WARNING 2 and NOTE 3.
Circuit pack just replaced is possibly faulty. Replace circuit pack just replaced with original pack [DLP-500]

[35] After moving **ROS/NORM** switch left to **NORM** position, allow ample time for diagnostics to complete



NOTE 3

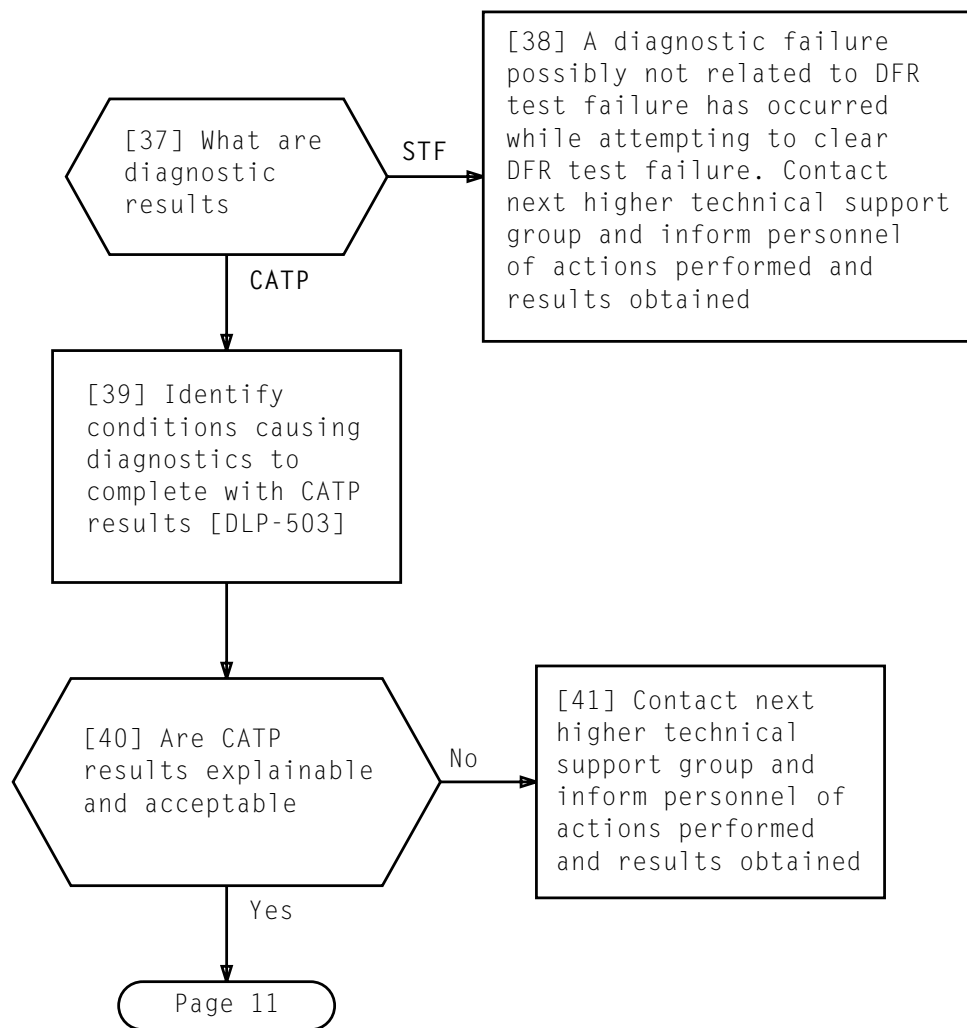
Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 2

A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

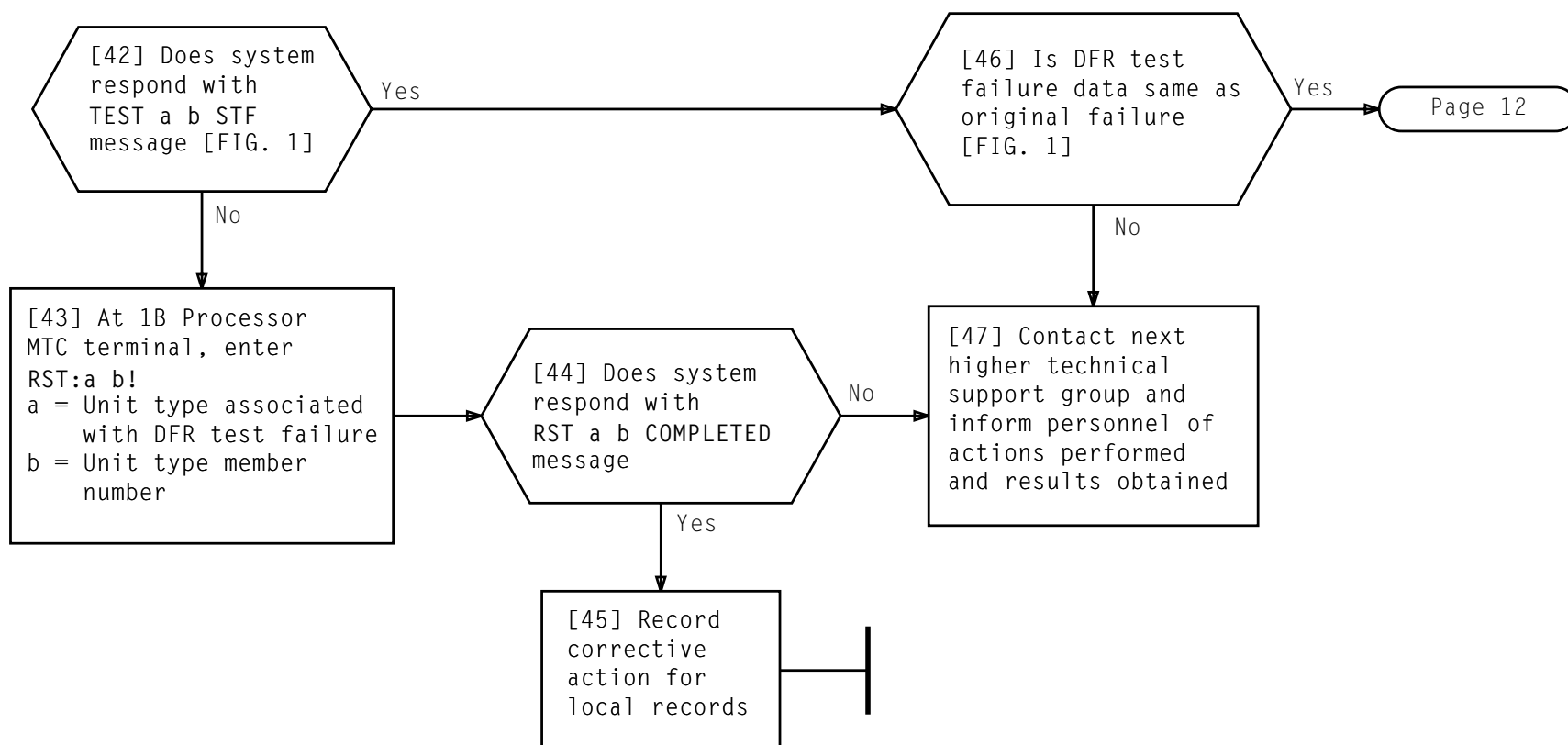
**CLEAR DEFERRED FAULT RECOGNITION (DFR) TEST FAILURE -
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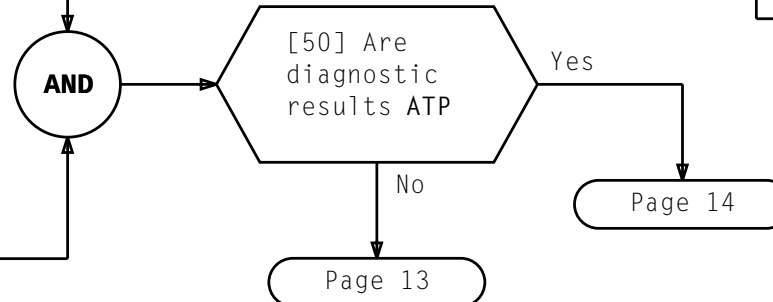


**CLEAR DEFERRED FAULT RECOGNITION (DFR) TEST FAILURE -
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[48] Circuit pack just replaced had no affect on DFR test failure. Replace circuit pack just replaced with original pack [DLP-500]

[49] After moving **ROS/NORM** switch left to **NORM** position, allow ample time for diagnostics to complete



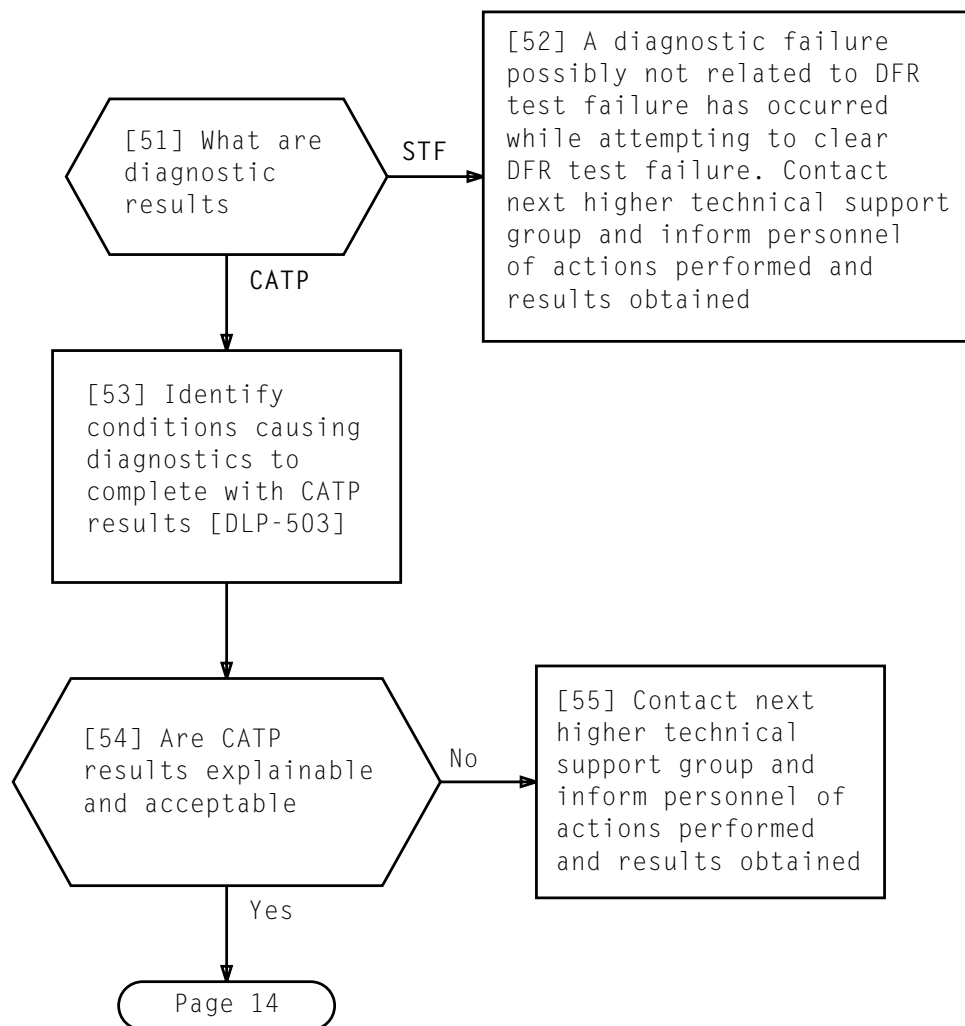
NOTE 4

Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 3

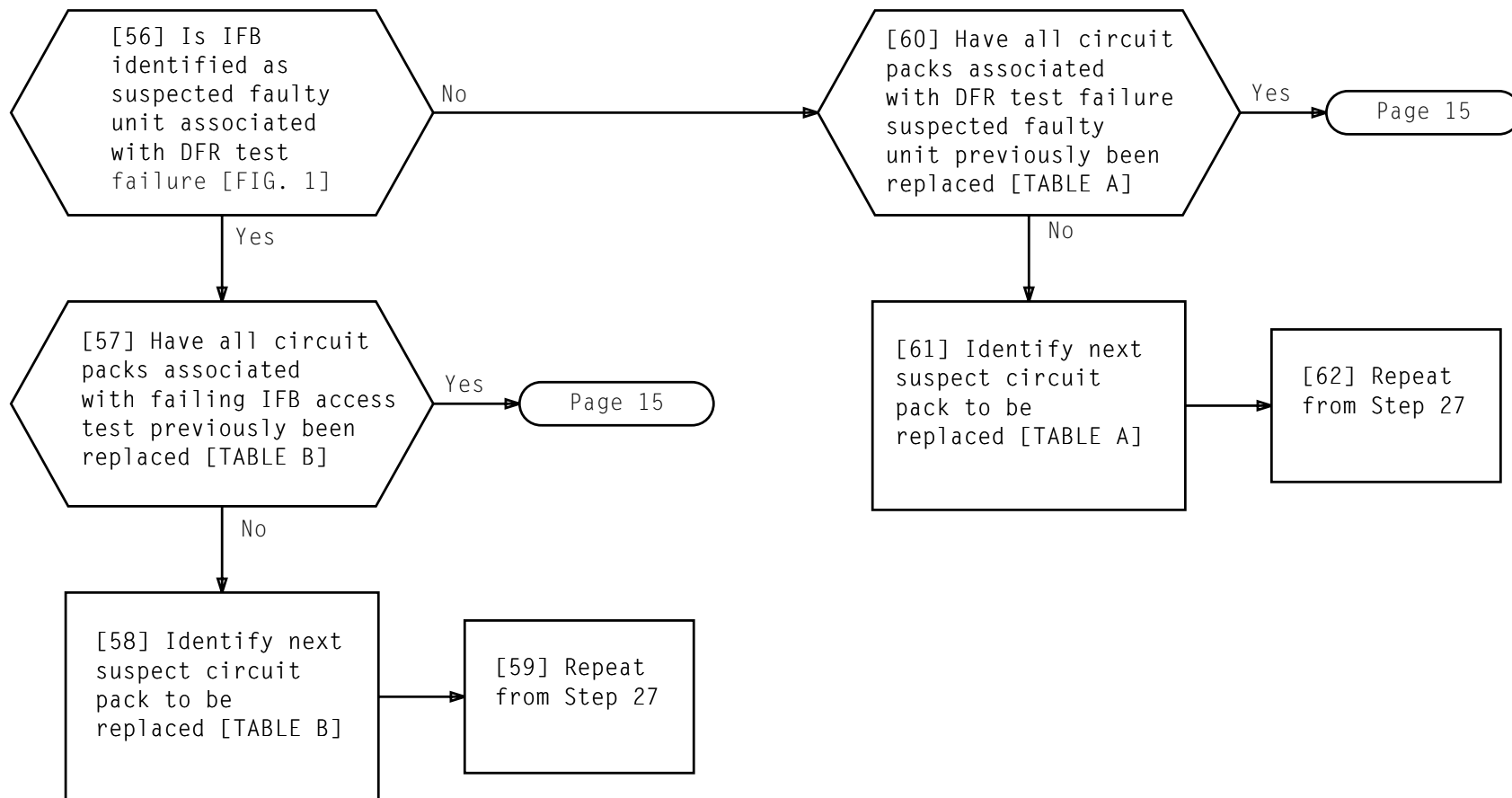
A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

**CLEAR DEFERRED FAULT RECOGNITION (DFR) TEST FAILURE -
ALL 1B PROCESSOR CABINET UNITS OTHER THAN CENTRAL
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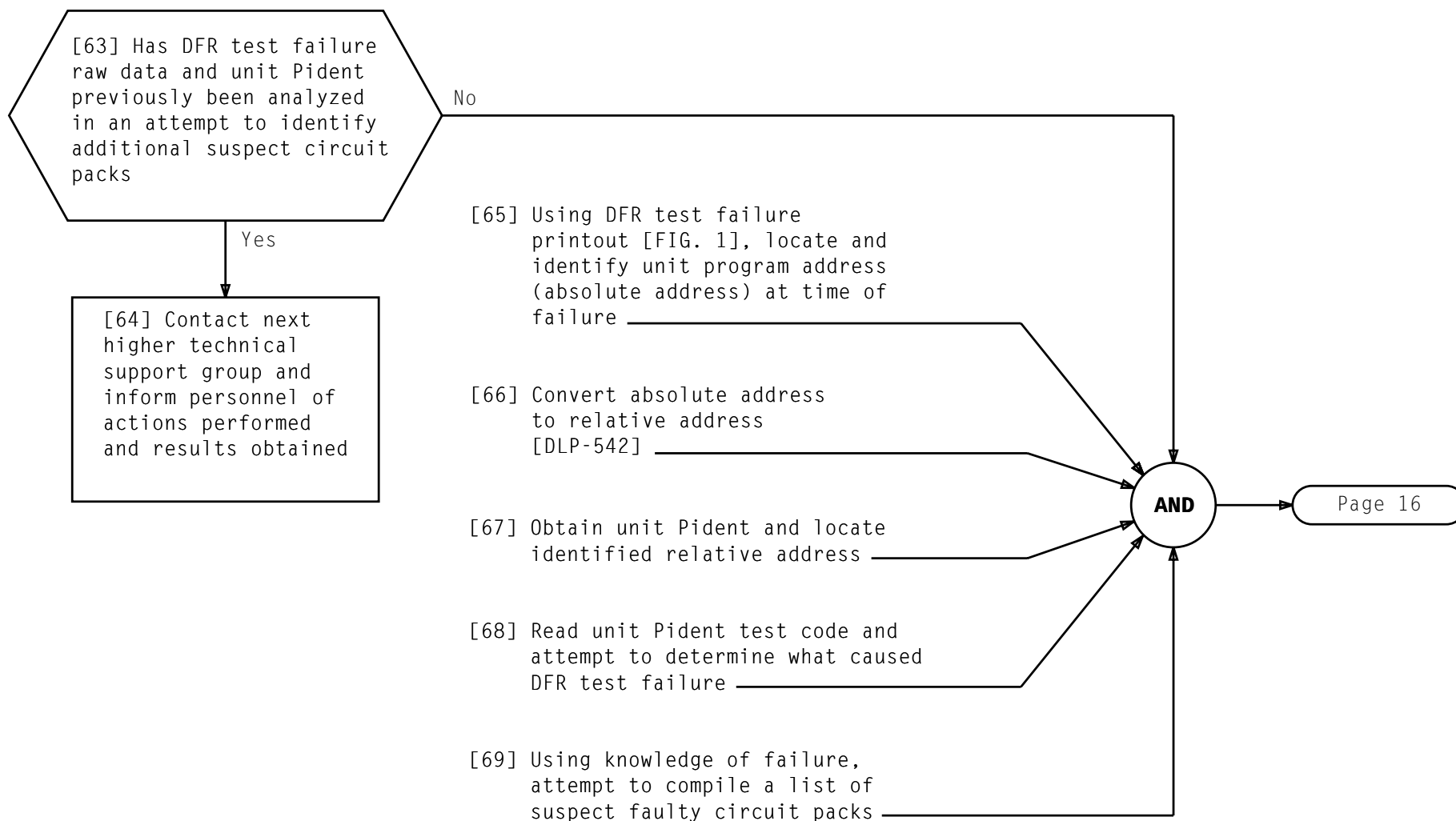
**CLEAR DEFERRED FAULT RECOGNITION (DFR) TEST FAILURE -
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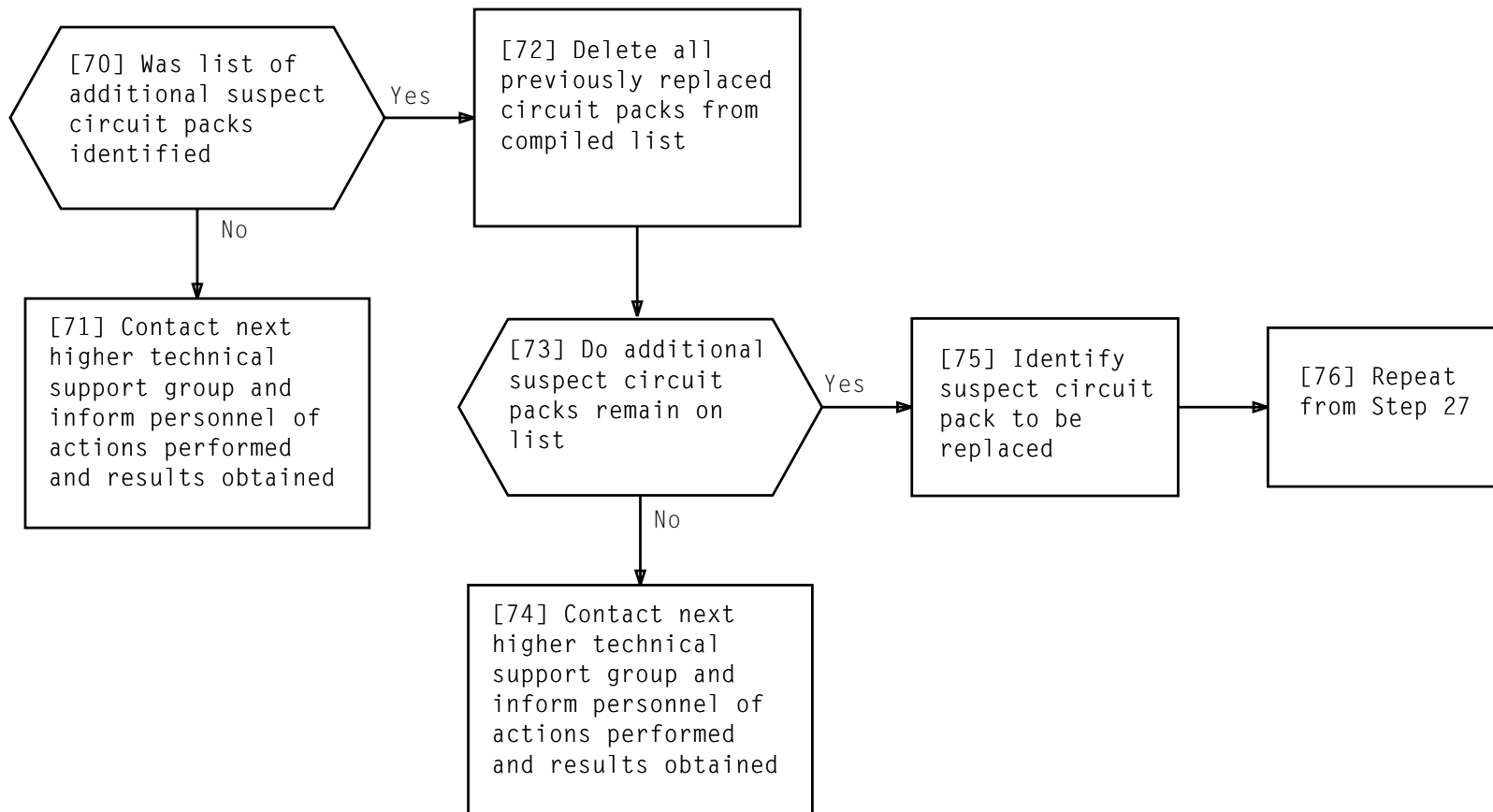
**CLEAR DEFERRED FAULT RECOGNITION (DFR) TEST FAILURE -
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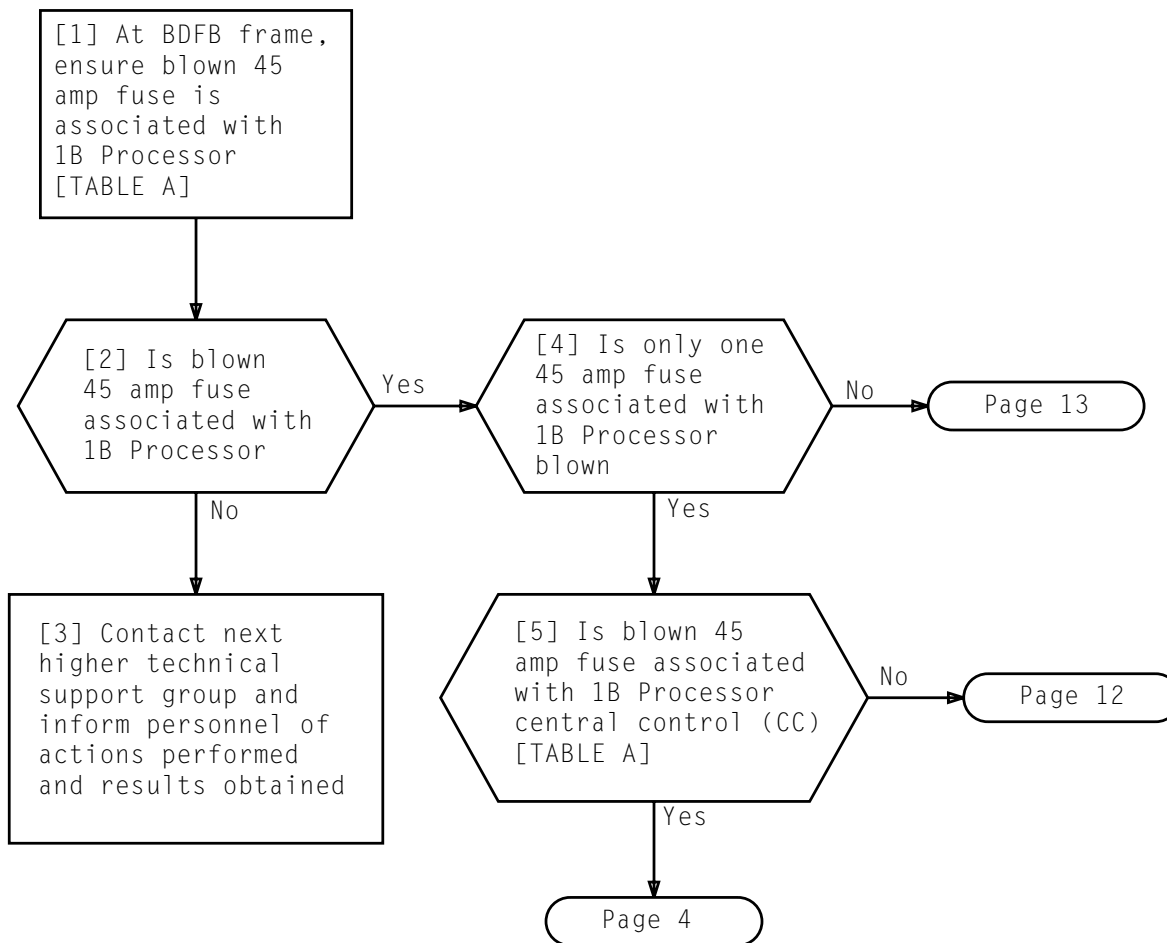
**CLEAR DEFERRED FAULT RECOGNITION (DFR) TEST FAILURE -
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CLEAR BATTERY DISTRIBUTION FUSE BOARD (BDFB) FRAME BLOWN 45 AMP FUSE ASSOCIATED WITH 1B PROCESSOR CABINET

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TABLE A BDFB FRAME 45 AMP FUSES AND ASSOCIATED 1B PROCESSOR UNITS/CIRCUIT PACKS		
BLOWN FUSE NAME	AFFECTED 1B PROCESSOR	
	UNITS	CIRCUIT PACKS
048V1A	CC0	KLW03 (041-104), KLW04 (041-112), KLW05/KLW105/KLW205 (041-096), KLW06 (041-054), KLW07 (041-078), KLW08 (041-046), KLW09 (041-038), KLW10/KLW210 (041-030), KLW11 (041-014), KLW12 (058-014), KLW13 (058-070), KLW14 (058-038), KLW17/KLW117/KLW217 (041-086), KLW19 (041-070), KLW20 (058-062), KLW21 (058-046), KLW22/KLW122/KLW222 (041-120), KLW24 (041-062), KLW28 (041-022), UN339 (070-014, 070-030, 070-070 & 070-086), UN340 (070-038 & 070-062)
148V1B	CC1	KLW03 (141-104), KLW04 (141-112), KLW05/KLW105/KLW205 (141-096), KLW06 (141-054), KLW07 (141-078), KLW08 (141-046), KLW09 (141-038), KLW10/KLW210 (141-030), KLW11 (141-014), KLW12 (158-014), KLW13 (158-070), KLW14 (158-038), KLW17/KLW117/KLW217 (141-086), KLW19 (141-070), KLW20 (158-062), KLW21 (158-046), KLW22/KLW122/KLW222 (141-120), KLW24 (141-062), KLW28 (141-022), UN339 (170-014, 170-030, 170-070 & 170-086), UN340 (170-038 & 170-062)
048V2A or 048V2B	Even PSs (KLW02)	PS0 (041-128), PS2 (041-136), PS4 (041-144), PS6 (041-152), PS8 (041-160), PS10 (041-168), PS12 (041-176)
	MUP 0	KLW16/KLW116/KLW216 (058-078) & KLW25 (058-086)
	AUI 0	KLW18 (058-120)
	SSD 0	KLW15 (058-168)
	Fan System 0	Fan Controller (077-000)

**CLEAR BATTERY DISTRIBUTION FUSE BOARD (BDFB) FRAME
BLOWN 45 AMP FUSE ASSOCIATED WITH 1B PROCESSOR CABINET**

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TABLE A (Contd)		
BDFB FRAME 45 AMP FUSES AND ASSOCIATED 1B PROCESSOR UNITS/CIRCUIT PACKS		
BLOWN FUSE NAME	AFFECTED 1B PROCESSOR	
	UNITS	CIRCUIT PACKS
048V3A Or 048V3B	Even CSs (KLW01)	CS0 (024-006), CS2 (024-176), CS4 (024-14), CS6 (024-168), CS8 (024-022), CS10 (024-160), CS12 (024-030), CS14 (024-152), CS16 (024-038), CS18 (024-144), CS20 (024-046), CS22 (024-136), CS24 (024-054), CS26 (024-128), CS28 (024-062), CS30 (024-120), CS32 (024-070), CS34 (024-112), CS36 (024-078), CS38 (024-104)
	BUS 0 BUF	KLW26 (024-086)
	BUS 1 BUF	KLW27 (024-096)
148V4A Or 148V4B	Odd PSs (KLW02)	PS1 (141-128), PS3 (141-136), PS5 (141-144), PS7 (141-152), PS9 (141-160), PS11 (141-168), PS13 (141-176)
	MUP 1	KLW16/KLW116/KLW216 (158-078) & KLW25 (158-086)
	AUI 1	KLW18 (158-120)
	SSD 1	KLW15 (158-168)
	Fan System 1	Fan Controller (177-000)
148V5A Or 148V5B	Odd CSs (KLW01)	CS1 (124-006), CS3 (124-176), CS5 (124-14), CS7 (124-168), CS9 (124-022), CS11 (124-160), CS13 (124-030), CS15 (124-152), CS17 (124-038), CS19 (124-144), CS21 (124-046), CS23 (124-136), CS25 (124-054), CS27 (124-128), CS29 (124-062), CS31 (124-120), CS33 (124-070), CS35 (124-112), CS37 (124-078), CS39 (124-104)
	BUS 0 BUF	KLW26 (124-086)
	BUS 1 BUF	KLW27 (124-096)

**CLEAR BATTERY DISTRIBUTION FUSE BOARD (BDFB) FRAME
BLOWN 45 AMP FUSE ASSOCIATED WITH 1B PROCESSOR CABINET**

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[6] Determine CC (0 or 1) associated
with blown 45 amp fuse [TABLE A]

[7] At **KLW11** circuit pack (41-014) associated with
out-of-service CC, move **ROS/NORM** switch right to
ROS position

[8] At **KLW11** circuit pack (41-014) associated with
out-of-service CC, depress **OFF** pushbutton

[9] See CAUTION 1. Identify first circuit pack associated
with out-of-service CC to be unseated [TABLE B]

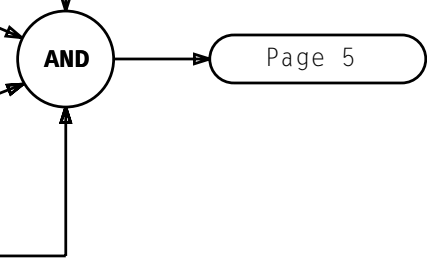
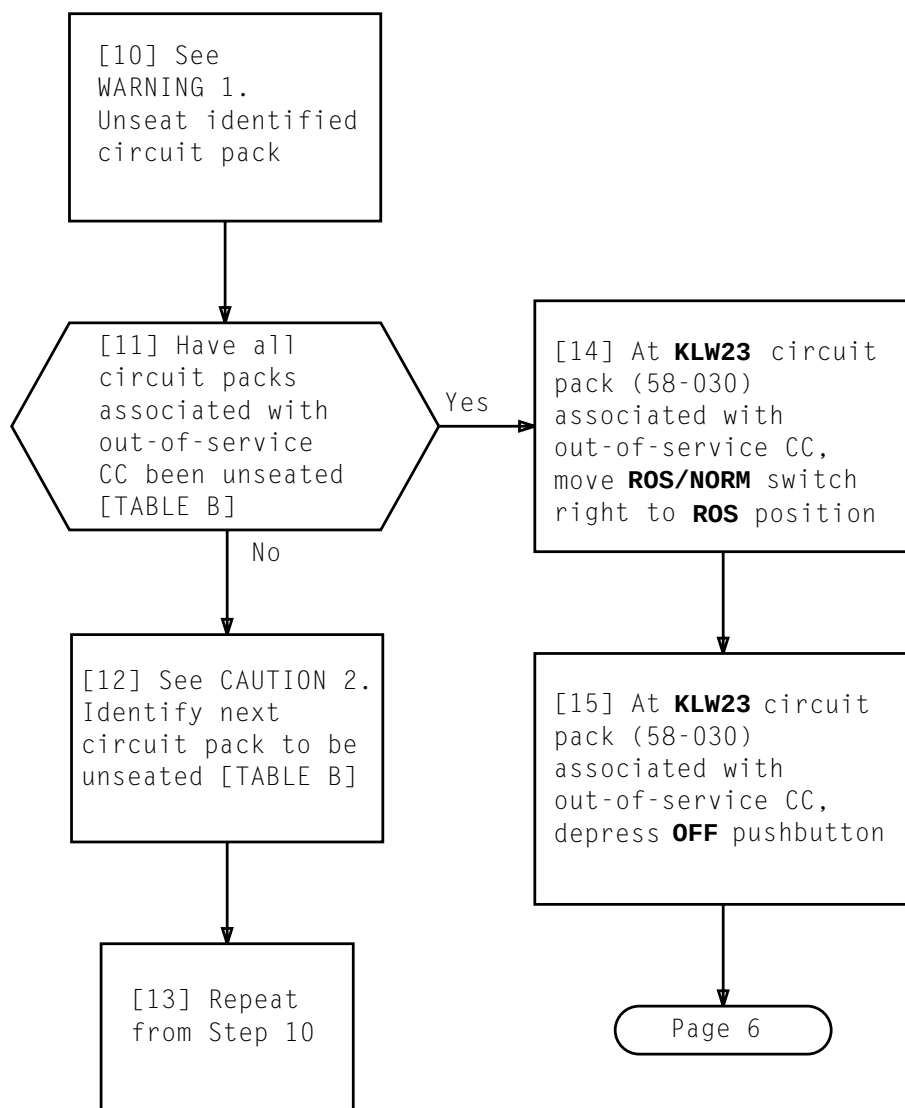


TABLE B CENTRAL CONTROL CIRCUIT PACKS ASSOCIATED WITH BLOWN 45 AMP BDFB FUSE		
CIRCUIT PACK	OUT-OF-SERVICE CC	
	CC0	CC1
KLW11	041-014	141-014
KLW12	058-014	158-014
KLW3	041-104	141-104
KLW4	041-112	141-112
KLW22/ KLW122/ KLW222	041-120	141-120

CAUTION 1
*Do not disturb
circuit packs
in active units.
Unseating
circuit packs
in active unit
will cause
severe service
interruptions*

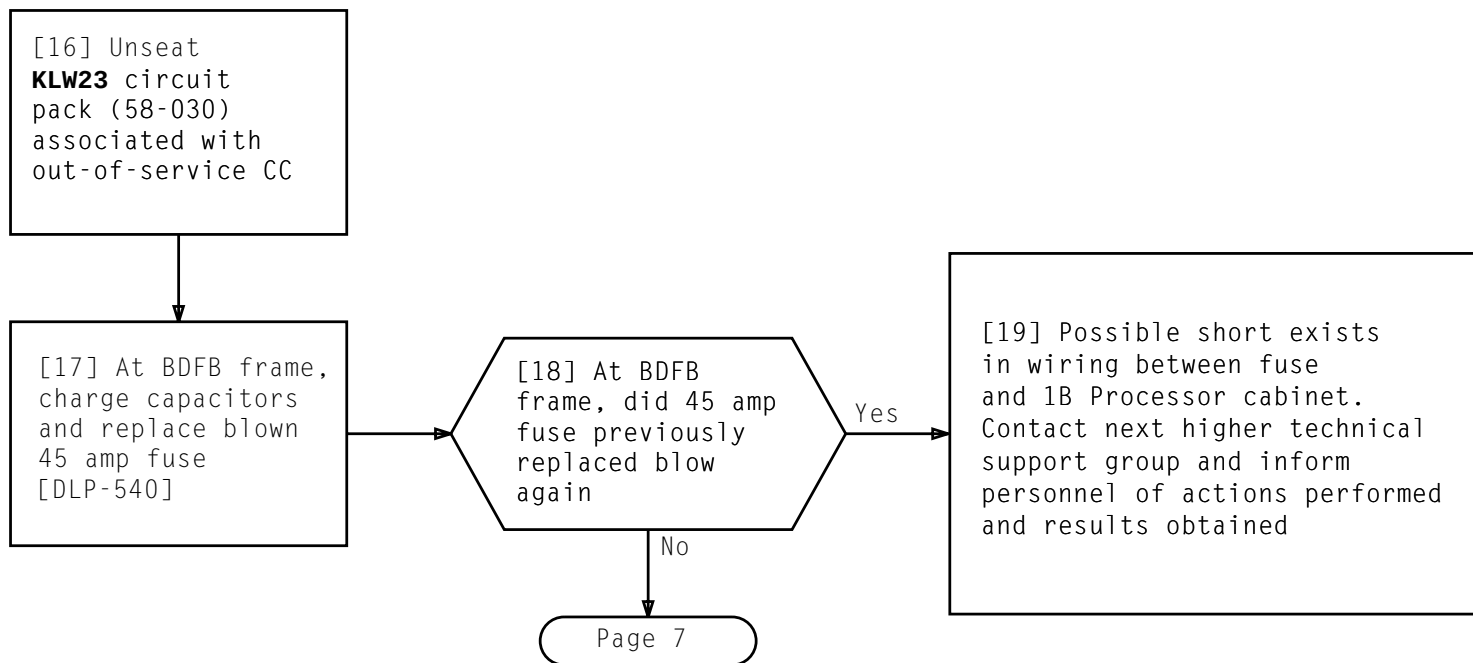
**CLEAR BATTERY DISTRIBUTION FUSE BOARD (BDFB) FRAME
BLOWN 45 AMP FUSE ASSOCIATED WITH 1B PROCESSOR CABINET**



CAUTION 2 <i>Do not disturb circuit packs in active units. Unseating circuit packs in active unit will cause severe service interruptions</i>	
WARNING 1 <i>A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins</i>	

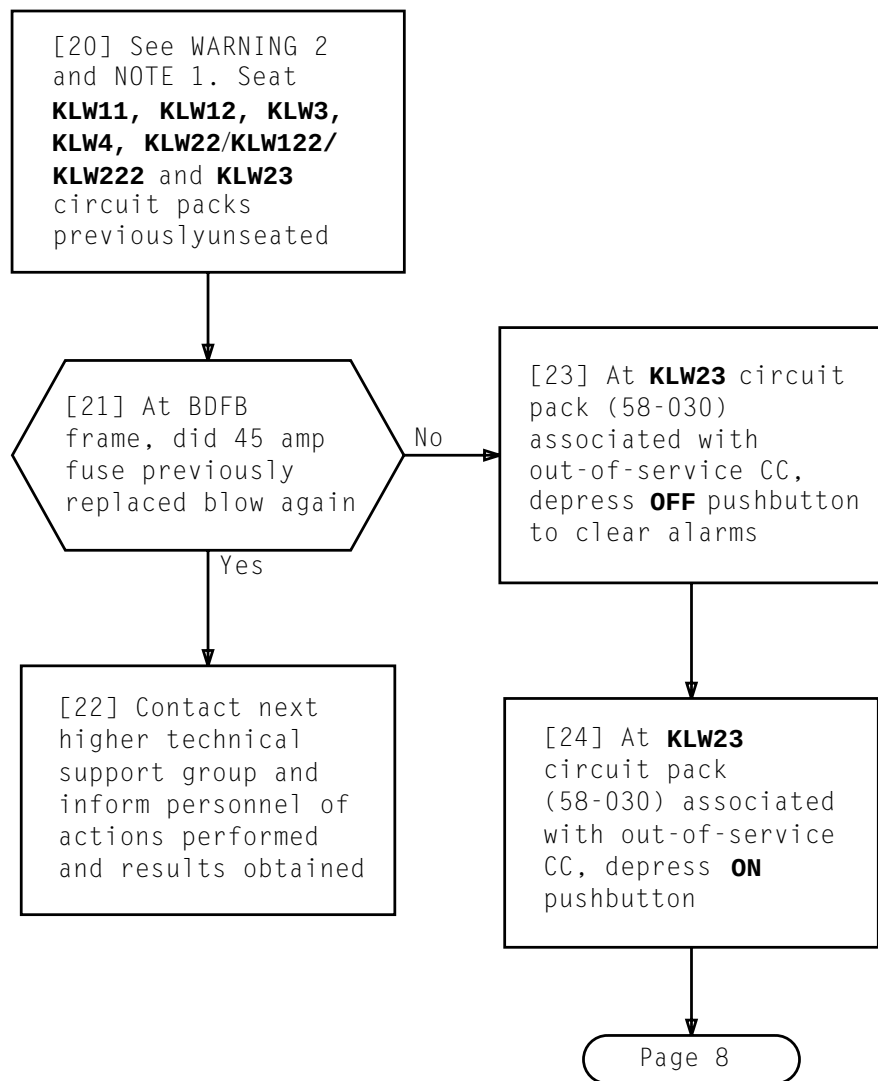
CLEAR BATTERY DISTRIBUTION FUSE BOARD (BDFB) FRAME BLOWN 45 AMP FUSE ASSOCIATED WITH 1B PROCESSOR CABINET

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NOTE 1

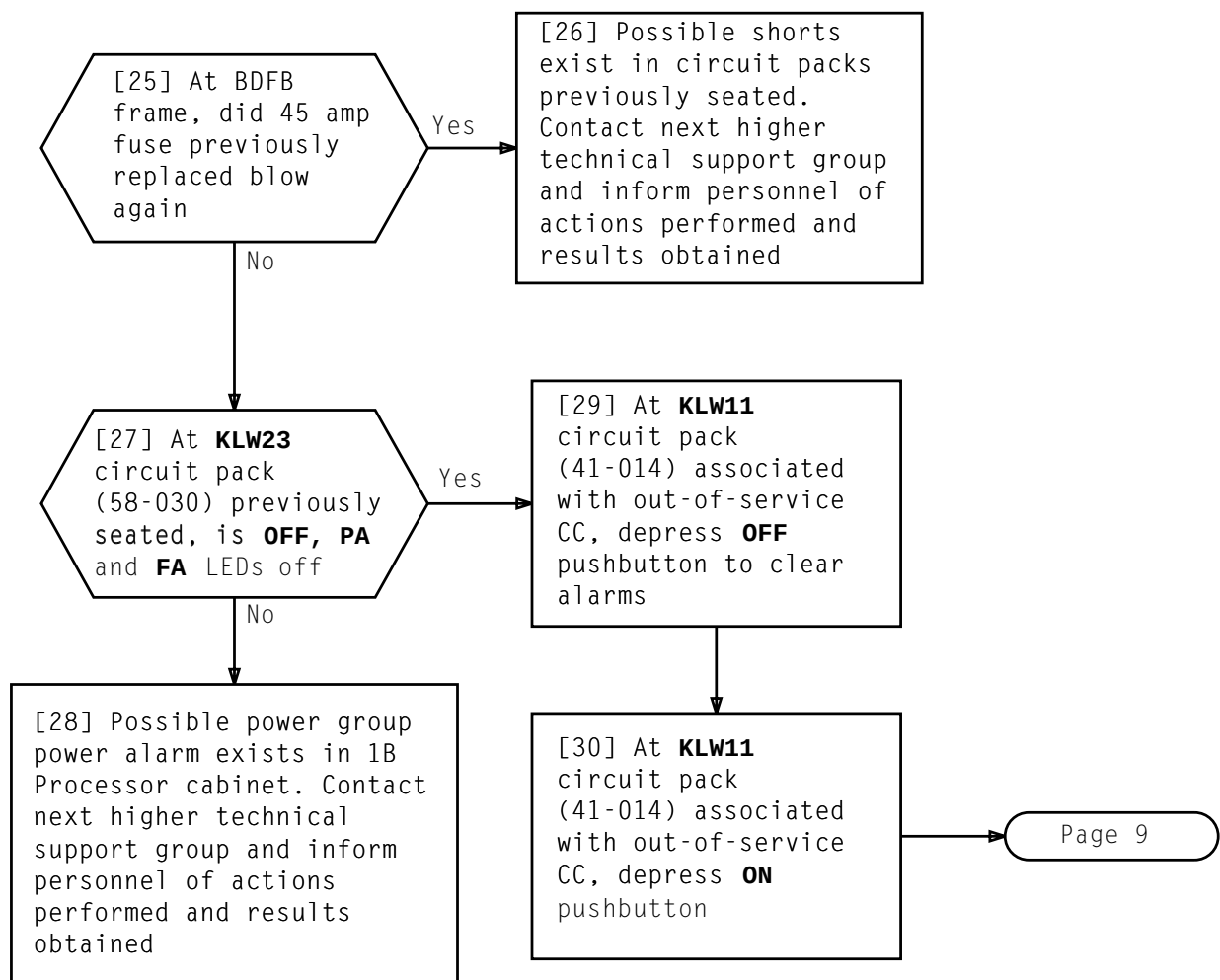
Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 2

A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

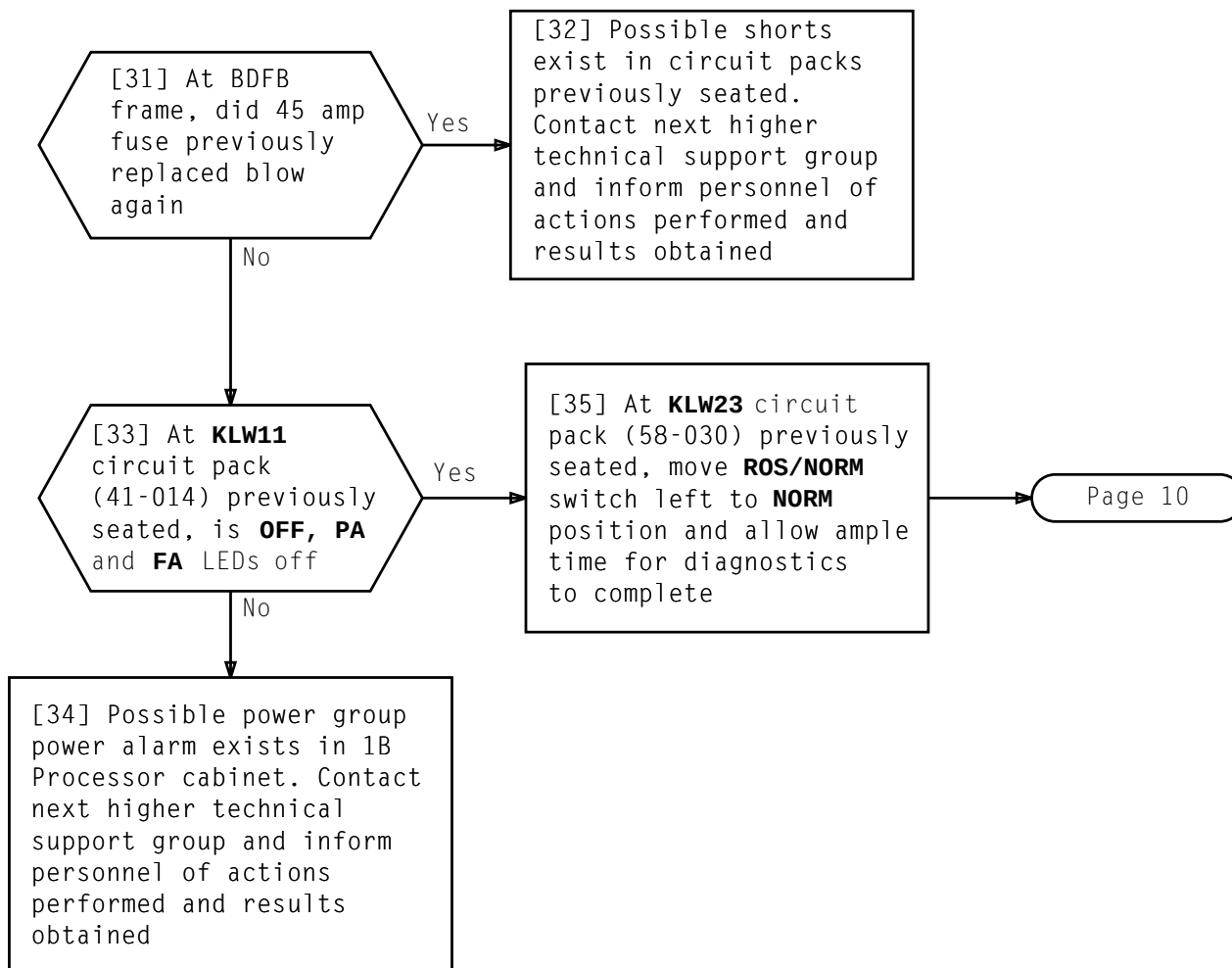
**CLEAR BATTERY DISTRIBUTION FUSE BOARD (BDFB) FRAME
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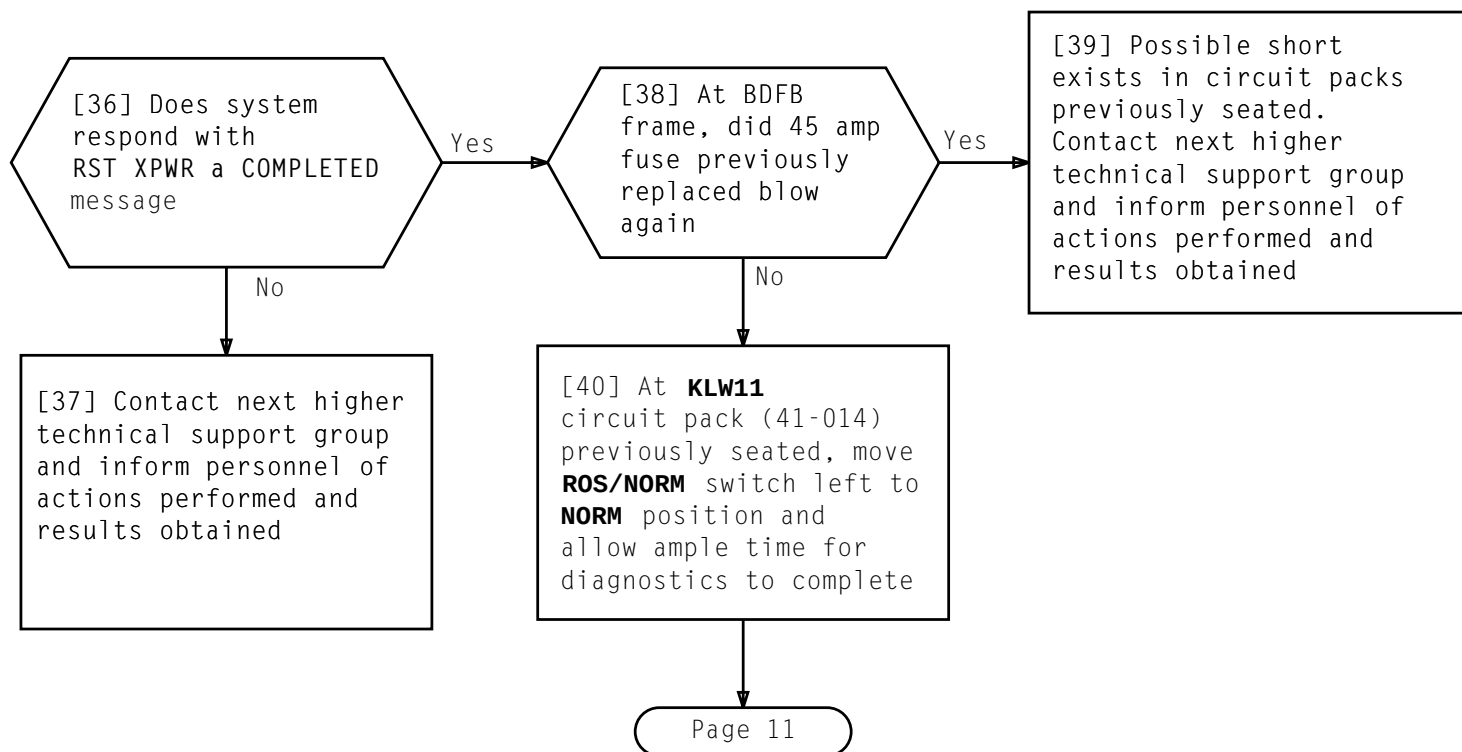
**CLEAR BATTERY DISTRIBUTION FUSE BOARD (BDFB) FRAME
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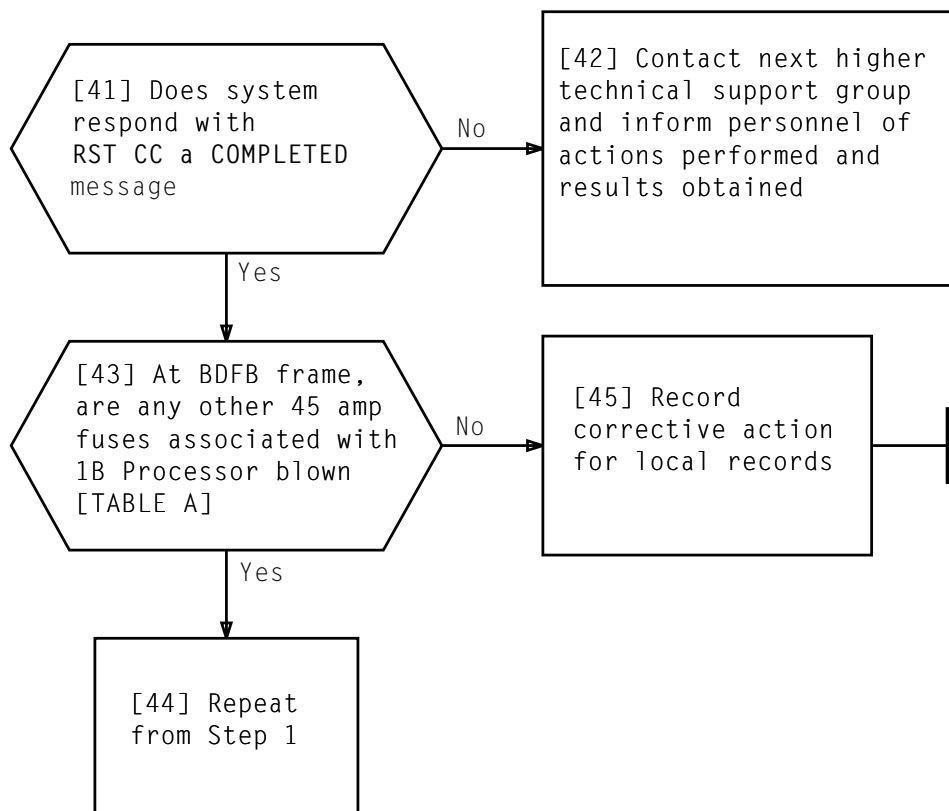
**CLEAR BATTERY DISTRIBUTION FUSE BOARD (BDFB) FRAME
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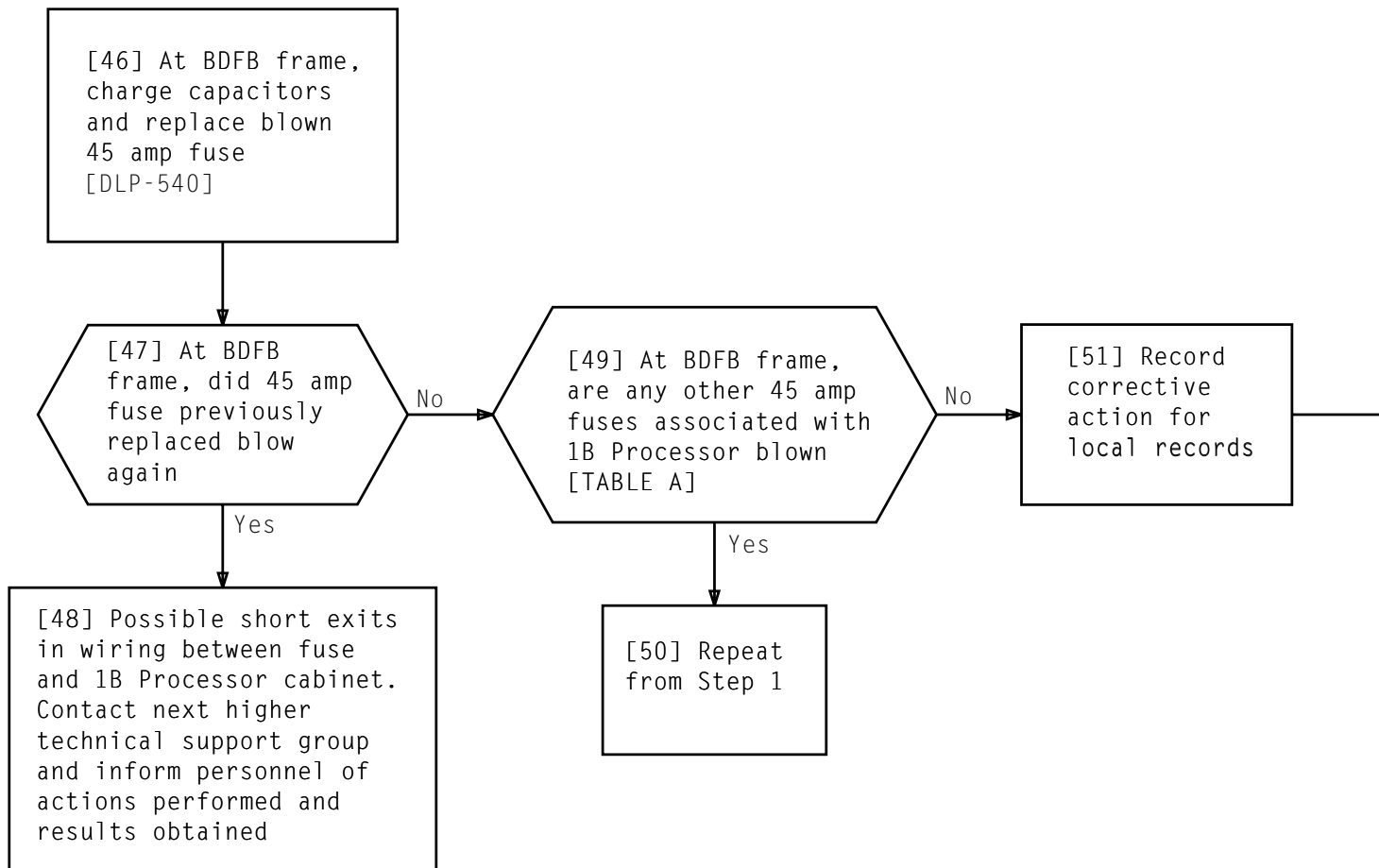
**CLEAR BATTERY DISTRIBUTION FUSE BOARD (BDFB) FRAME
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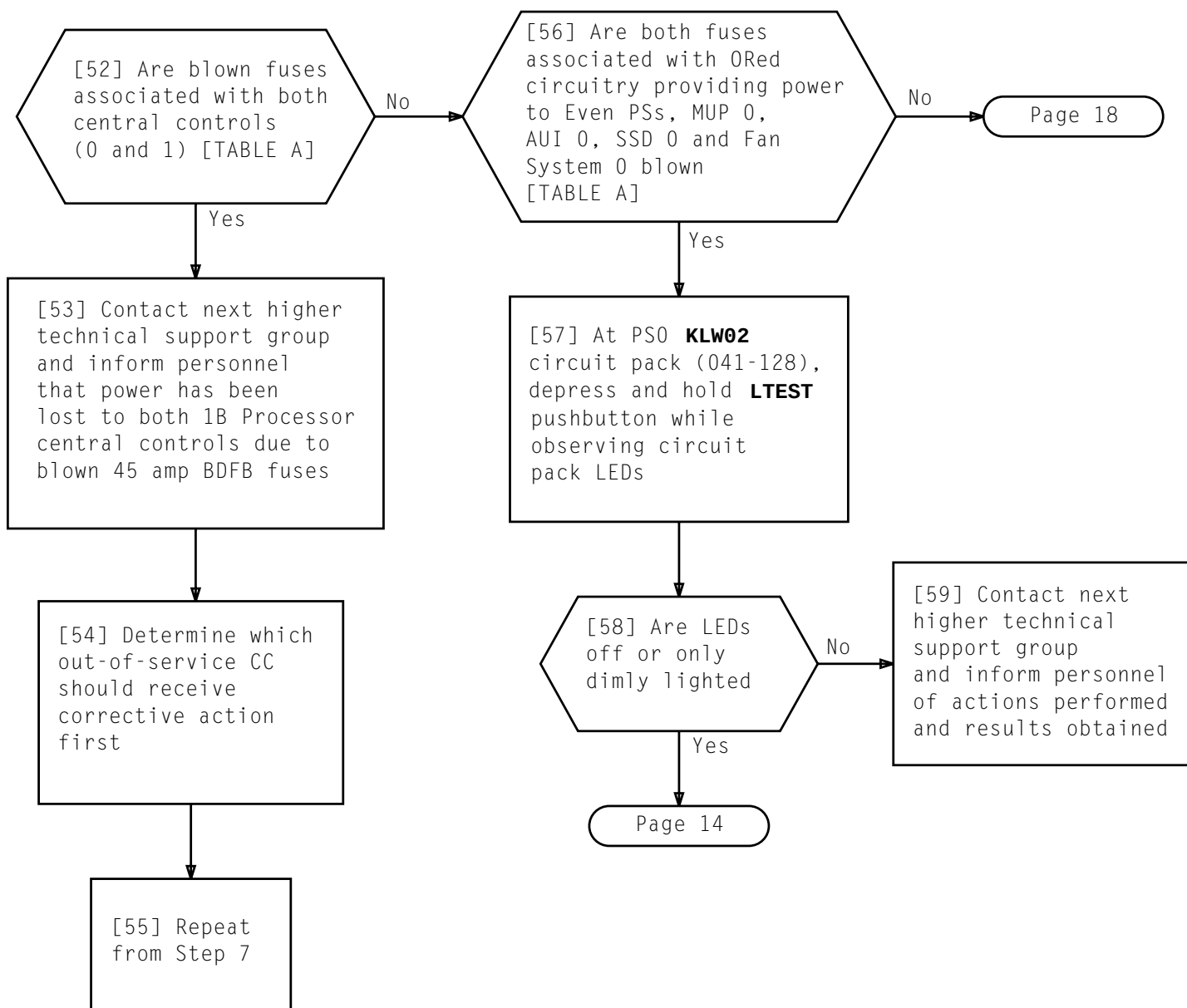
**CLEAR BATTERY DISTRIBUTION FUSE BOARD (BDFB) FRAME
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[60] At all circuit packs containing power switch associated with blown fuses [TABLE A], move **ROS/NORM** switch right to **ROS** position

[61] At all circuit packs containing power switch associated with blown fuses [TABLE A], depress **OFF** pushbutton

[62] Unseat all circuit packs associated with blown fuses [TABLE A]

[63] At 1B Processor cabinet fuse unit, remove all Fan System 0 fuses in fuse card locations 081-031, 081-036 and 081-041

[64] At BDFB frame, charge capacitors and replace blown 45 amp fuse [DLP-540]

AND

[65] At BDFB frame, did 45 amp fuse previously replaced blow again

Yes

No

[67] At 1B Processor cabinet fuse unit, replace all Fan System 0 fuses previously removed (081-031, 081-036 and 081-041)

[68] At BDFB frame, did 45 amp fuse previously replaced blow again

Yes

No

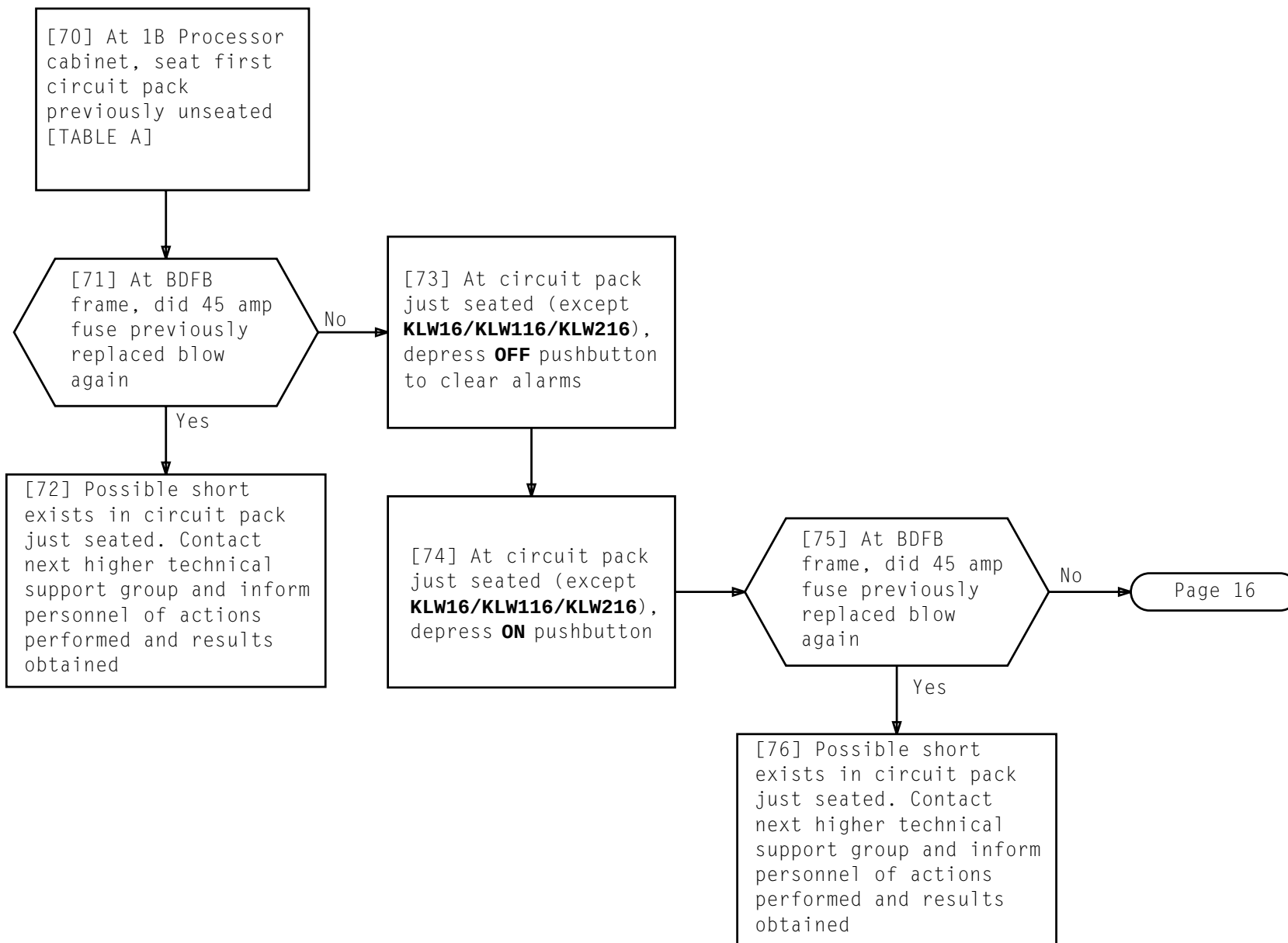
[66] Possible short exists in wiring between fuse and 1B Processor cabinet. Contact next higher technical support group and inform personnel of actions performed and results obtained

[69] Possible short exists in circuitry associated with Fan System 0. Contact next higher technical support group and inform personnel of actions performed and results obtained

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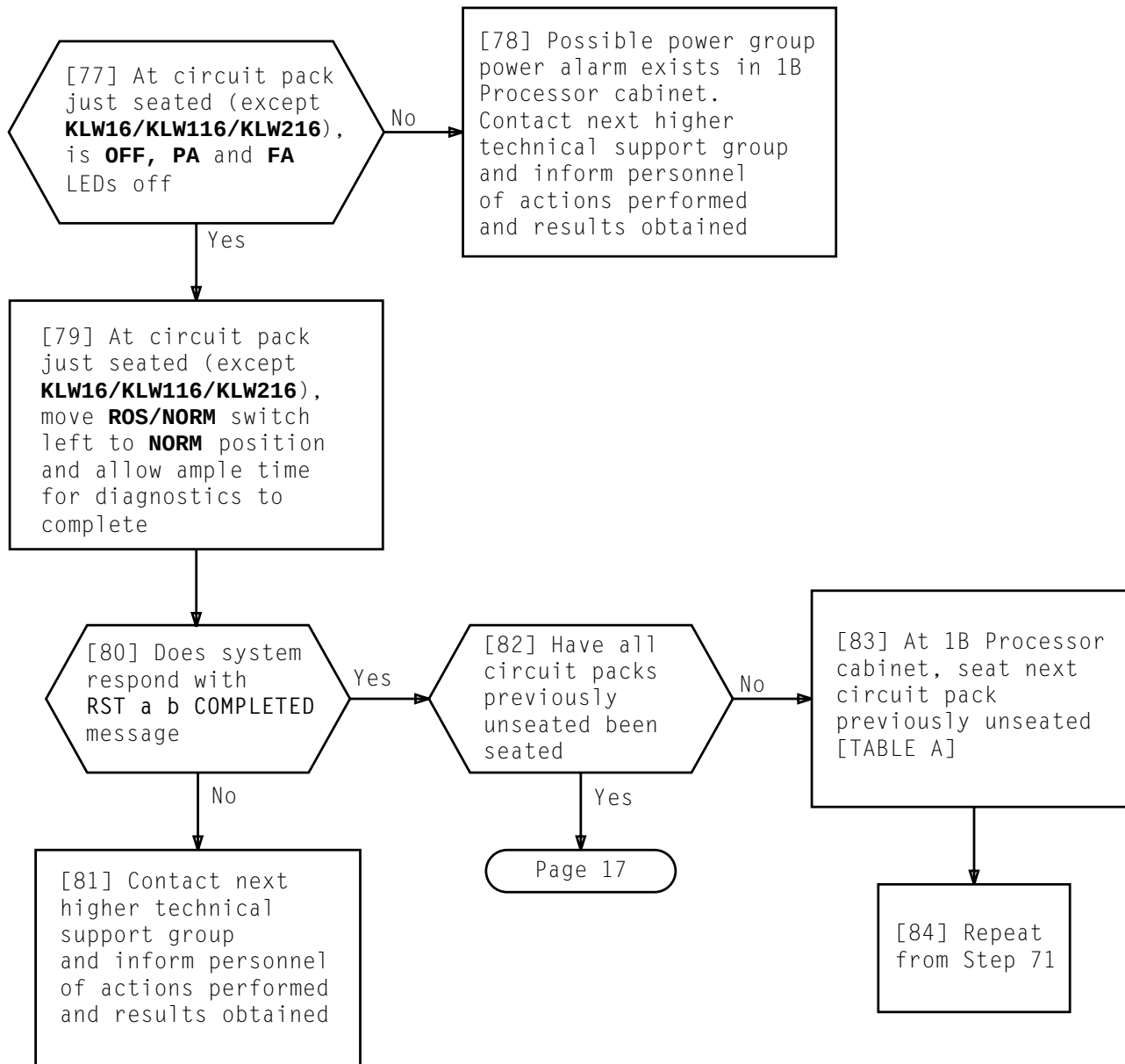
CLEAR BATTERY DISTRIBUTION FUSE BOARD (BDFB) FRAME BLOWN 45 AMP FUSE ASSOCIATED WITH 1B PROCESSOR CABINET

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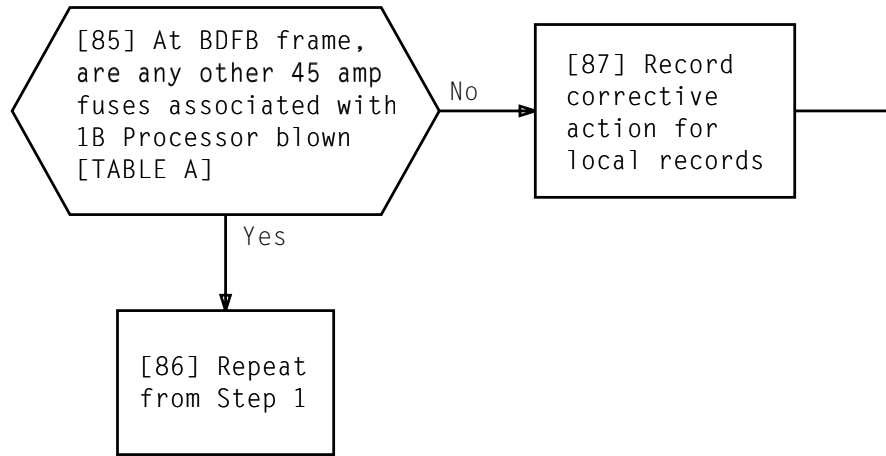
**CLEAR BATTERY DISTRIBUTION FUSE BOARD (BDFB) FRAME
BLOWN 45 AMP FUSE ASSOCIATED WITH 1B PROCESSOR CABINET**

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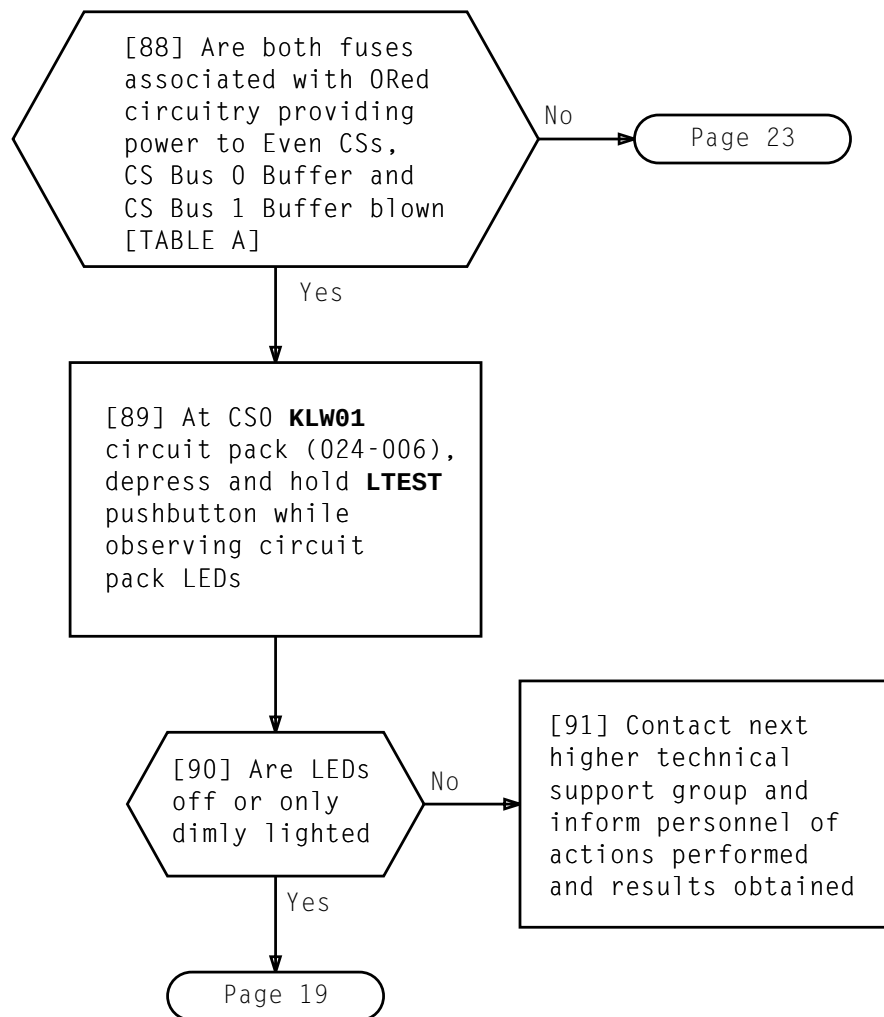
**CLEAR BATTERY DISTRIBUTION FUSE BOARD (BDFB) FRAME
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**CLEAR BATTERY DISTRIBUTION FUSE BOARD (BDFB) FRAME
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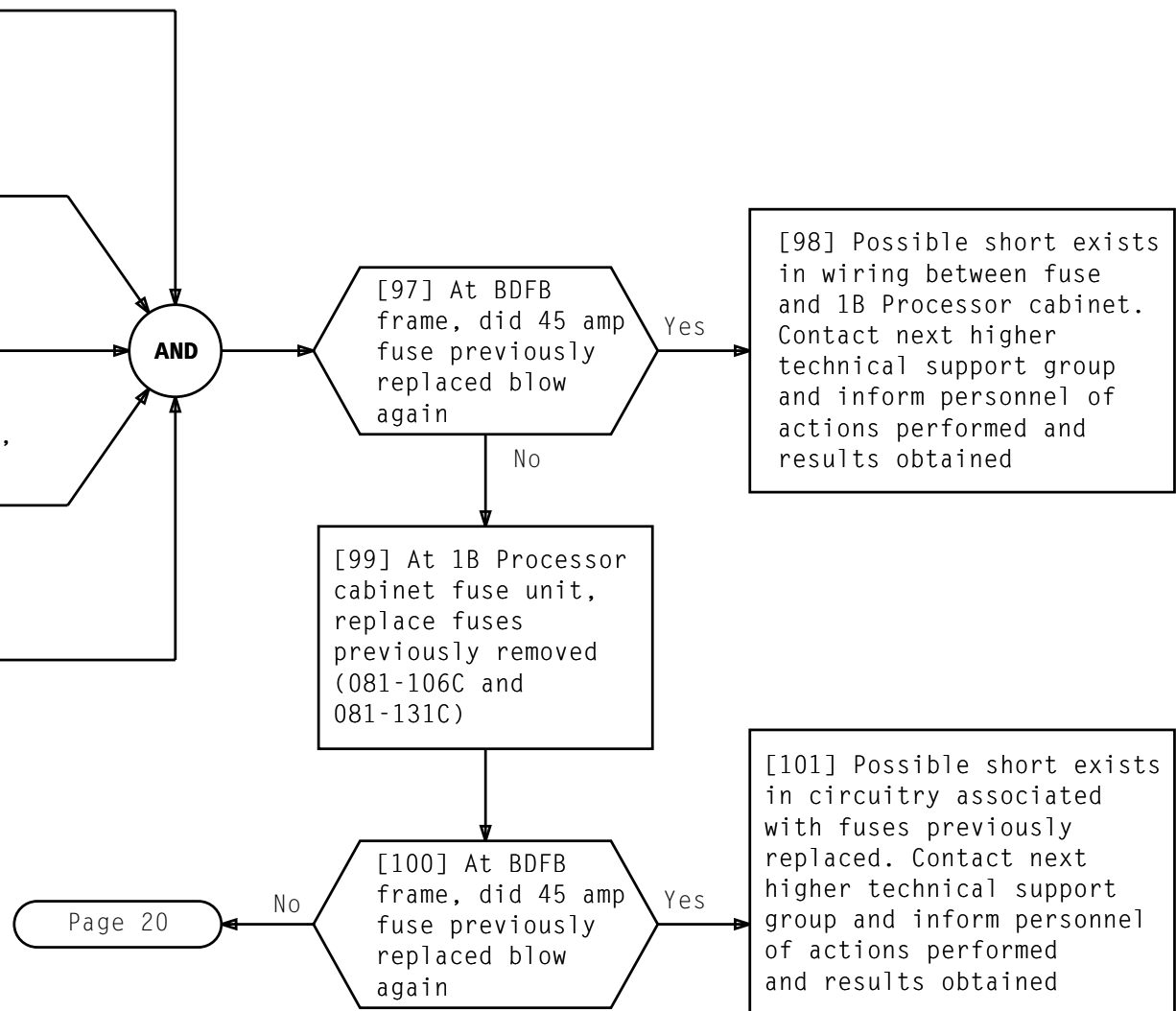
[92] At all circuit packs containing power switch associated with blown fuses [TABLE A], move **ROS/NORM** switch right to **ROS** position

[93] At all circuit packs containing power switch associated with blown fuses [TABLE A], depress **OFF** pushbutton

[94] Unseat all circuit packs associated with blown fuses [TABLE A]

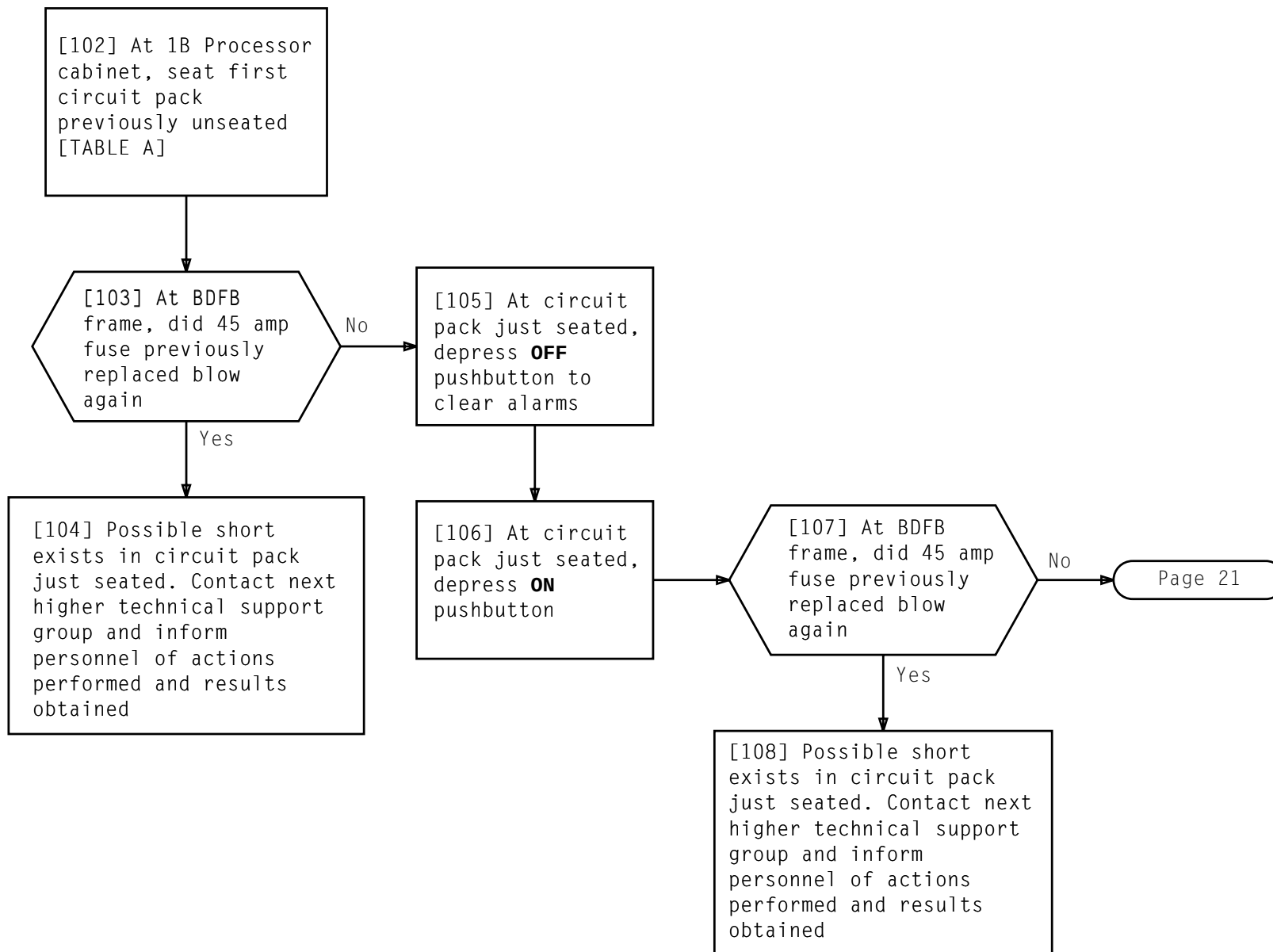
[95] At 1B Processor cabinet fuse unit, remove **48FAPA** fuse (081-106C) and **48FAPB** fuse (081-131C)

[96] At BDFB frame, charge capacitors and replace blown 45 amp fuse [DLP-540]



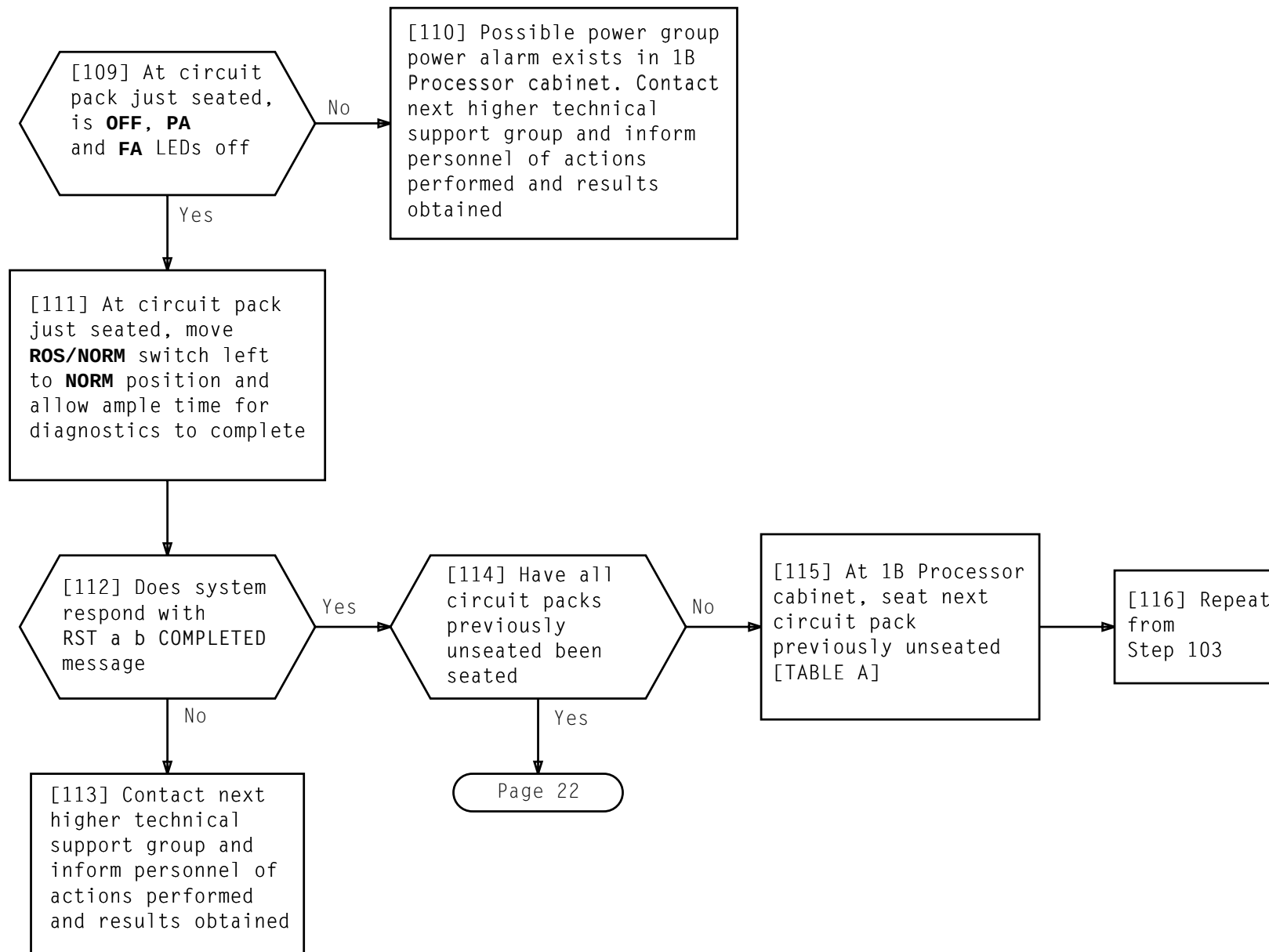
CLEAR BATTERY DISTRIBUTION FUSE BOARD (BDFB) FRAME BLOWN 45 AMP FUSE ASSOCIATED WITH 1B PROCESSOR CABINET

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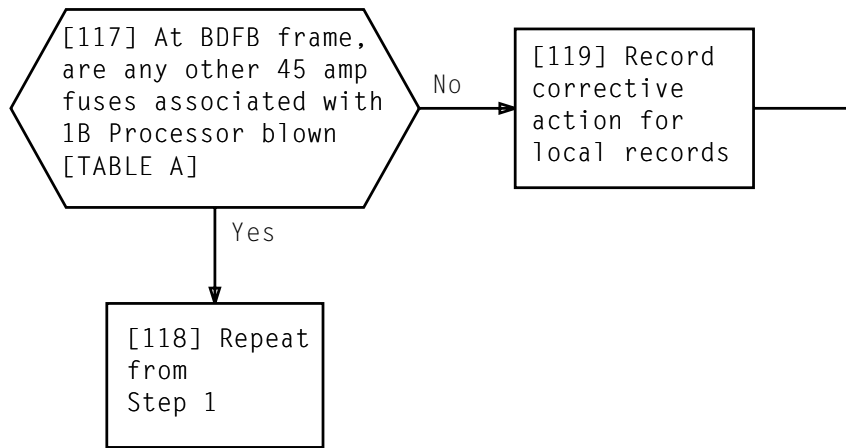
**CLEAR BATTERY DISTRIBUTION FUSE BOARD (BDFB) FRAME
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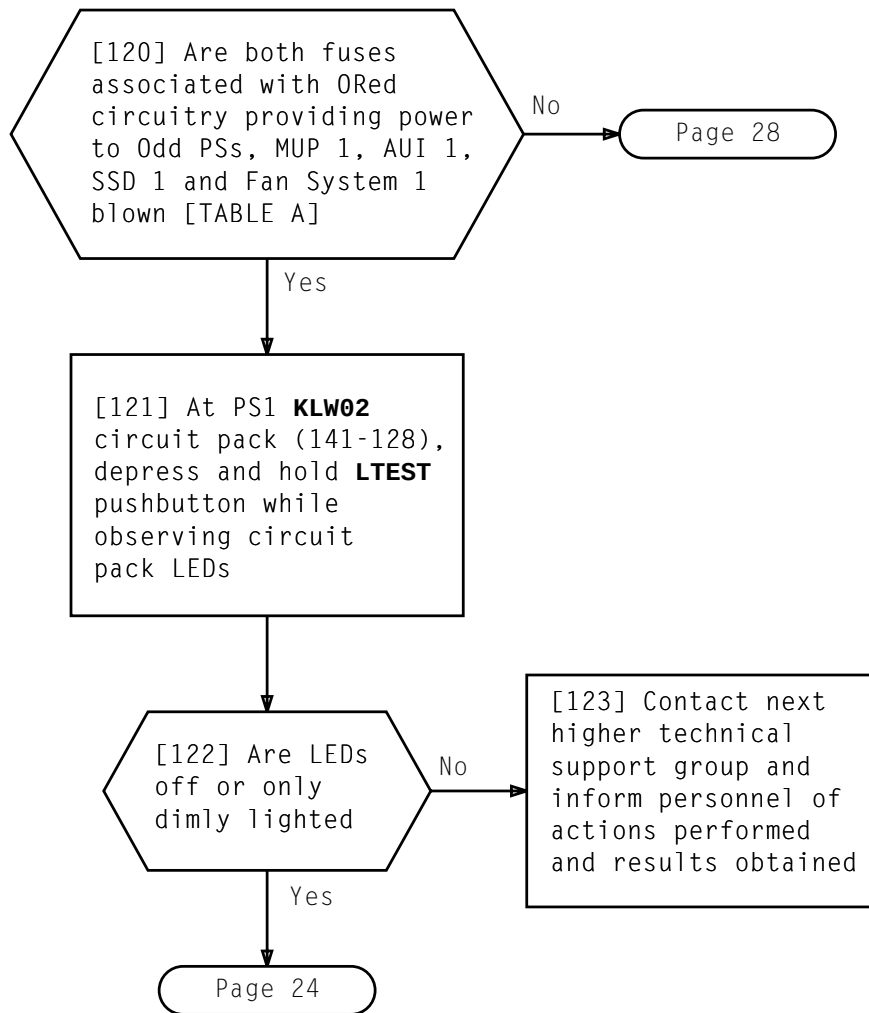
**CLEAR BATTERY DISTRIBUTION FUSE BOARD (BDFB) FRAME
BLOWN 45 AMP FUSE ASSOCIATED WITH 1B PROCESSOR CABINET**

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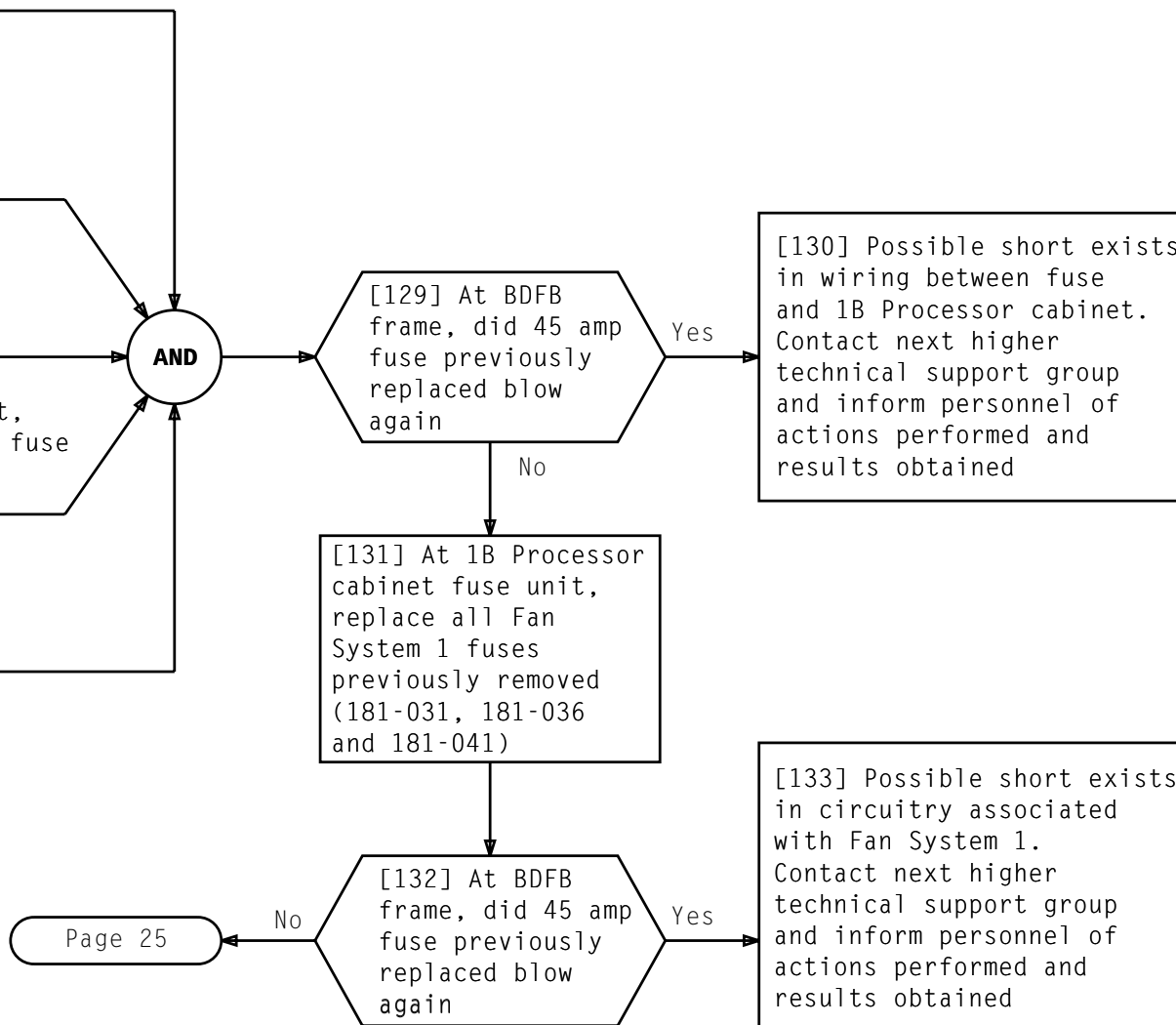
[124] At all circuit packs containing power switch associated with blown fuses [TABLE A], move **ROS/NORM** switch right to **ROS** position

[125] At all circuit packs containing power switch associated with blown fuses [TABLE A], depress **OFF** pushbutton

[126] Unseat all circuit packs associated with blown fuses [TABLE A]

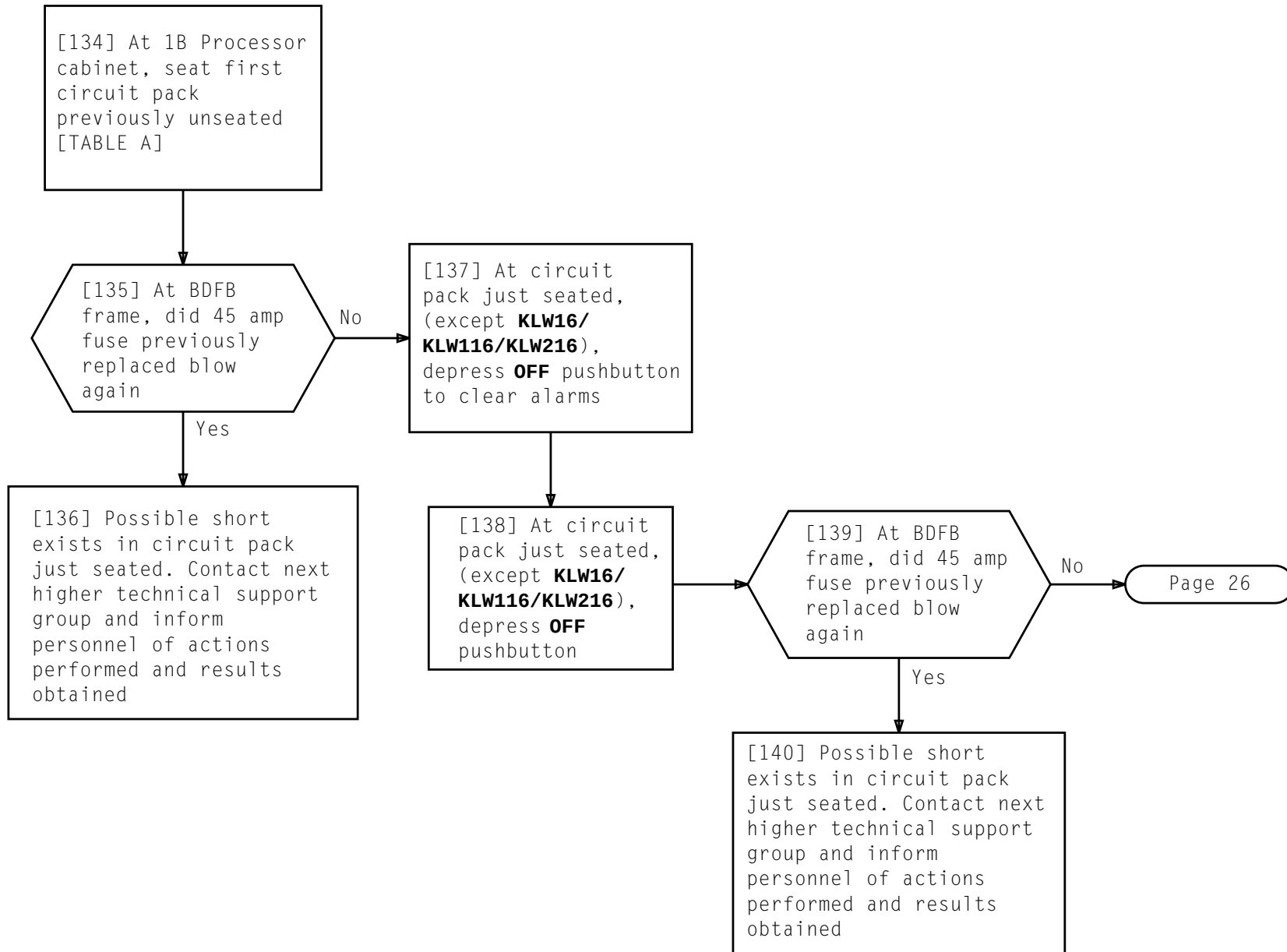
[127] At 1B Processor cabinet fuse unit, remove all Fan System 1 fuses in fuse card locations 181-031, 181-036 and 181-041

[128] At BDFB frame, charge capacitors and replace blown 45 amp fuse [DLP-540]



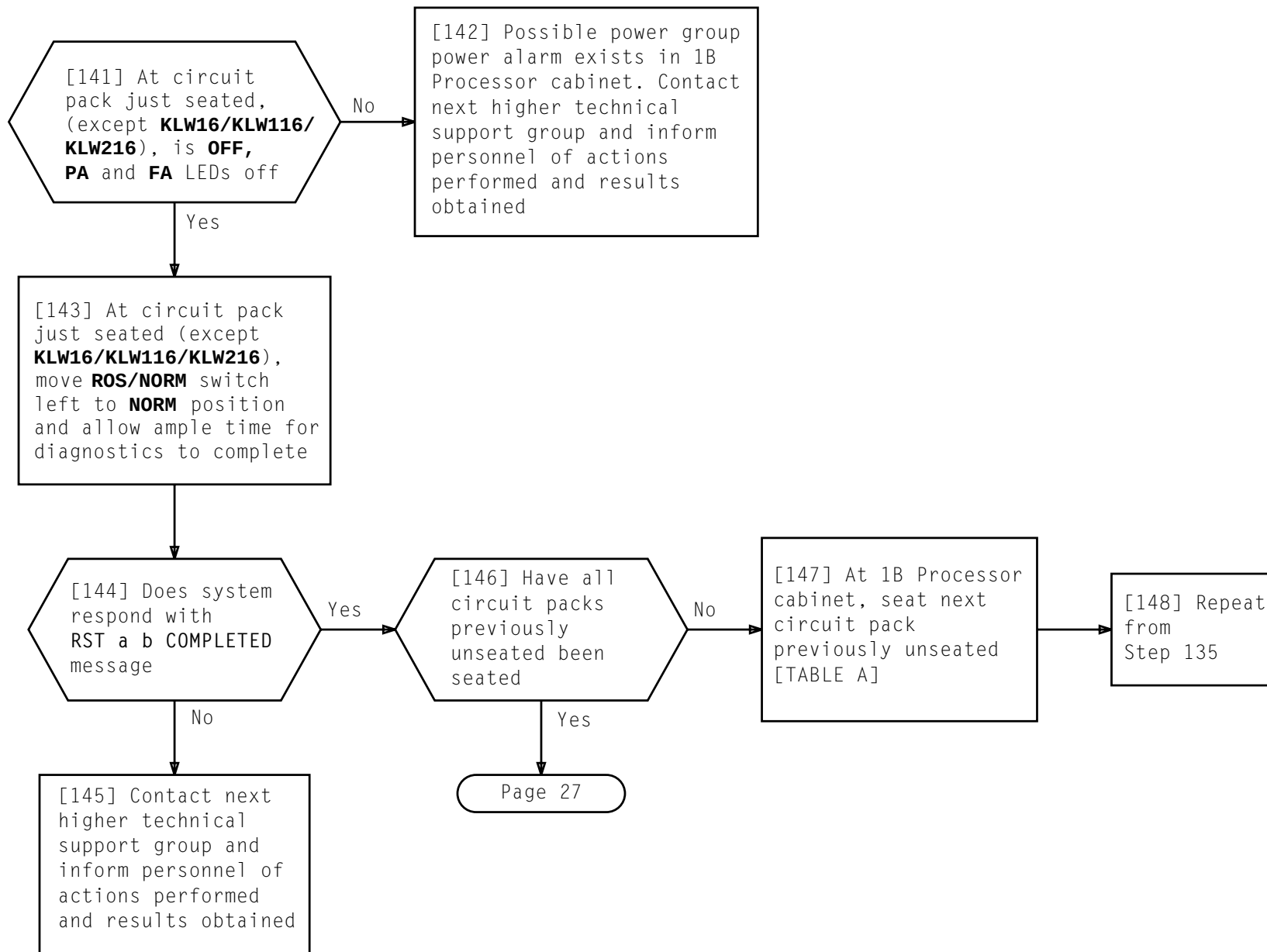
CLEAR BATTERY DISTRIBUTION FUSE BOARD (BDFB) FRAME BLOWN 45 AMP FUSE ASSOCIATED WITH 1B PROCESSOR CABINET

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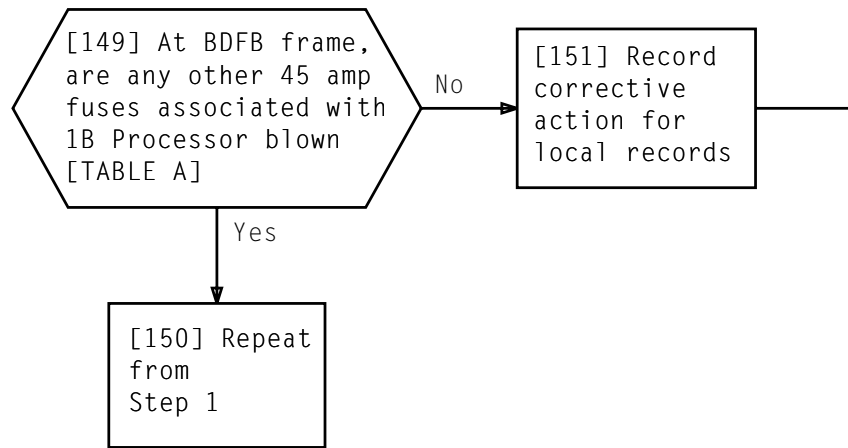
**CLEAR BATTERY DISTRIBUTION FUSE BOARD (BDFB) FRAME
BLOWN 45 AMP FUSE ASSOCIATED WITH 1B PROCESSOR CABINET**

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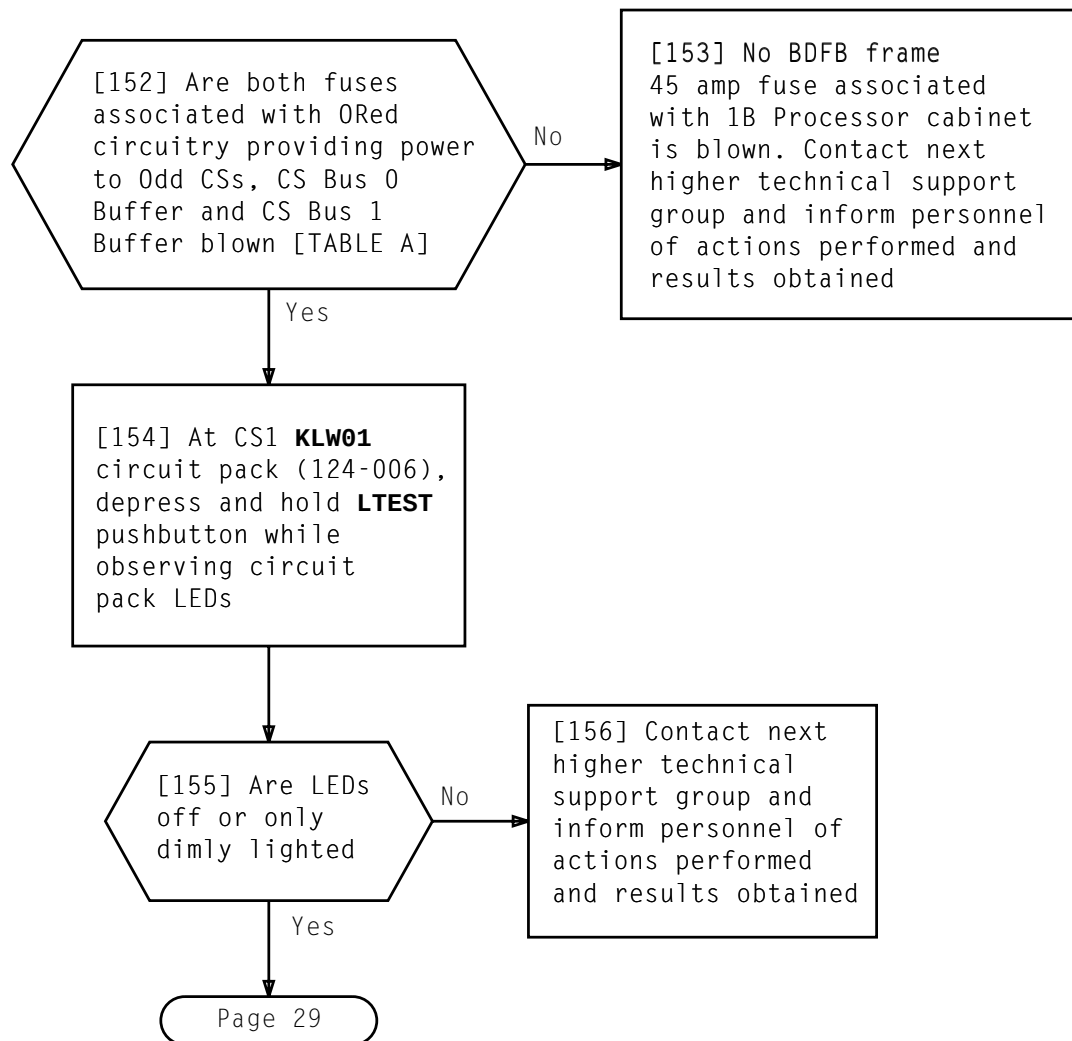
**CLEAR BATTERY DISTRIBUTION FUSE BOARD (BDFB) FRAME
BLOWN 45 AMP FUSE ASSOCIATED WITH 1B PROCESSOR CABINET**

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**CLEAR BATTERY DISTRIBUTION FUSE BOARD (BDFB) FRAME
BLOWN 45 AMP FUSE ASSOCIATED WITH 1B PROCESSOR CABINET**

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**CLEAR BATTERY DISTRIBUTION FUSE BOARD (BDFB) FRAME
BLOWN 45 AMP FUSE ASSOCIATED WITH 1B PROCESSOR CABINET**

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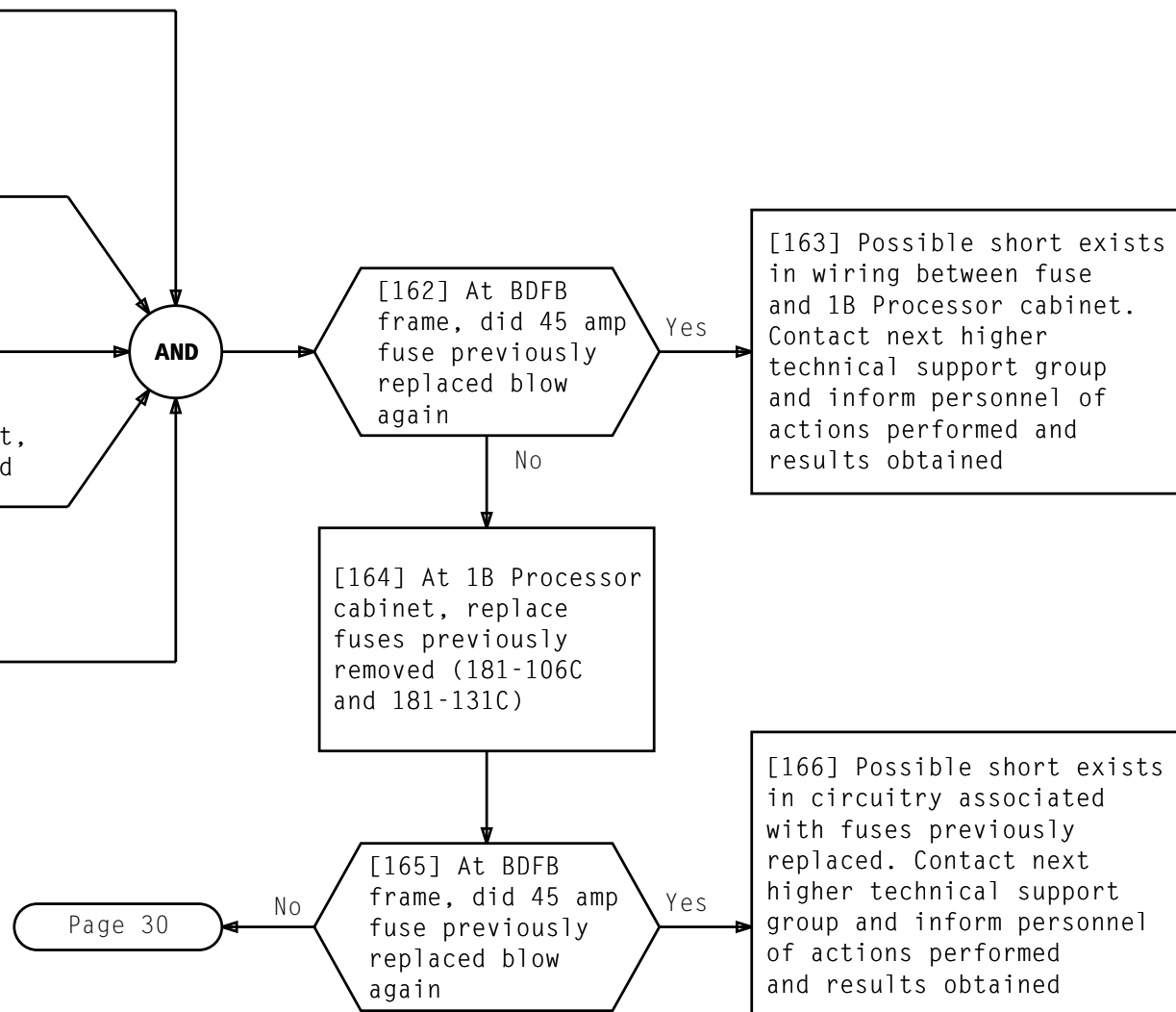
[157] At all circuit packs containing power switch associated with blown fuses [TABLE A], move **ROS/NORM** switch right to **ROS** position

[158] At all circuit packs containing power switch associated with blown fuses [TABLE A], depress **OFF** pushbutton

[159] Unseat all circuit packs associated with blown fuses [TABLE A]

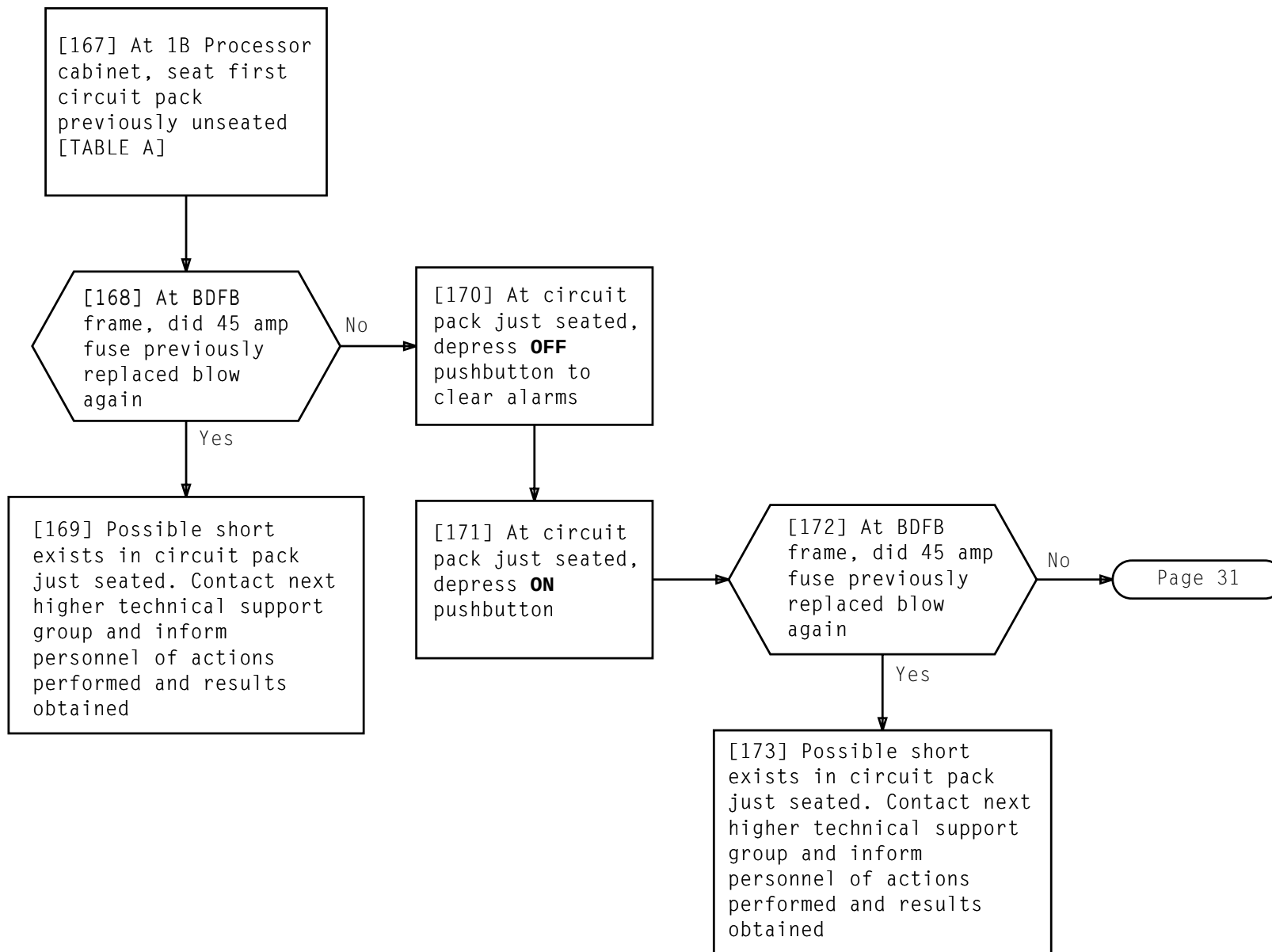
[160] At 1B Processor cabinet fuse unit, remove **48FAPA** fuse (181-106C) and **48FAPB** fuse (181-131C)

[161] At BDFB frame, charge capacitors and replace blown 45 amp fuse [DLP-540]



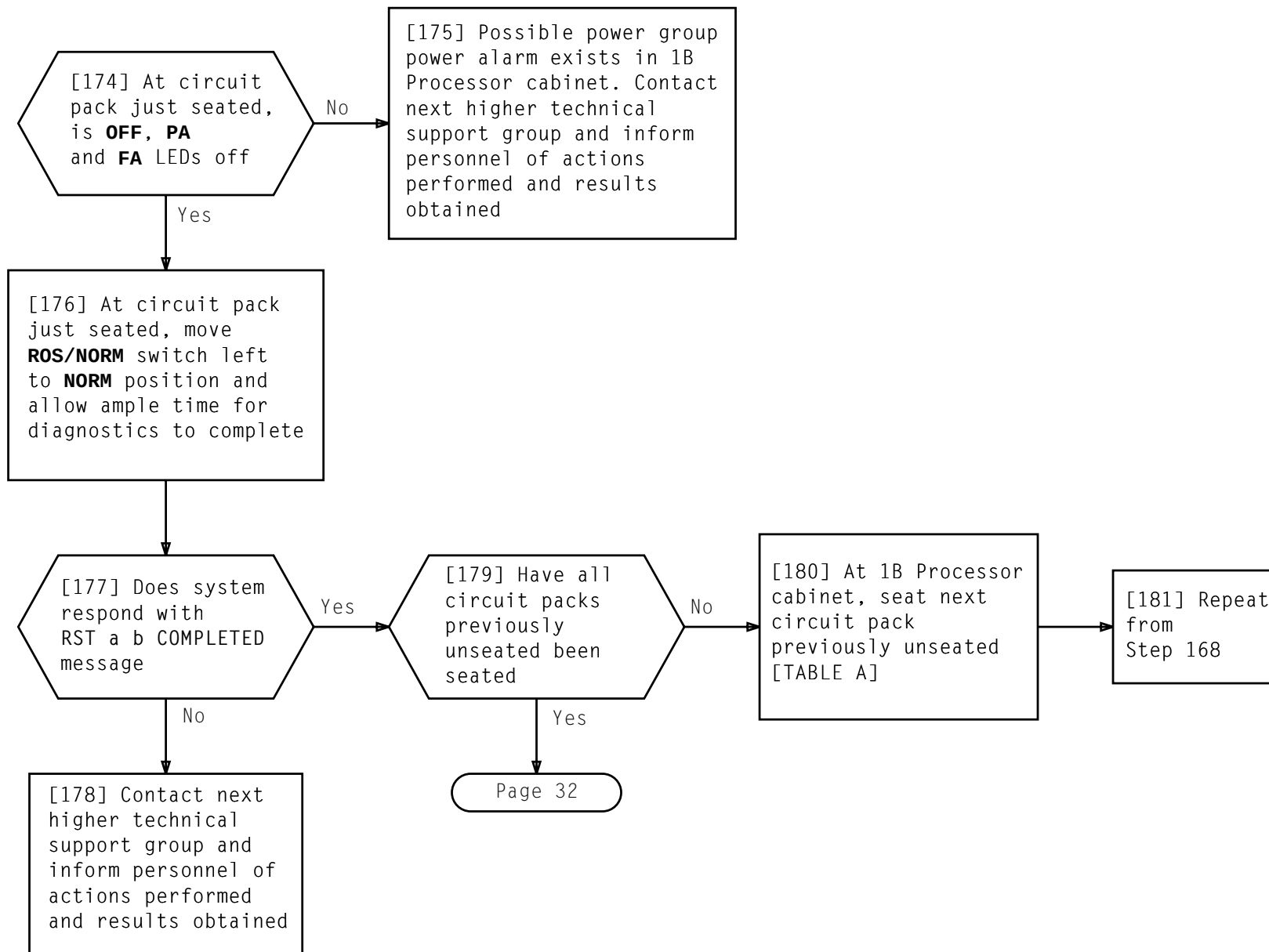
CLEAR BATTERY DISTRIBUTION FUSE BOARD (BDFB) FRAME BLOWN 45 AMP FUSE ASSOCIATED WITH 1B PROCESSOR CABINET

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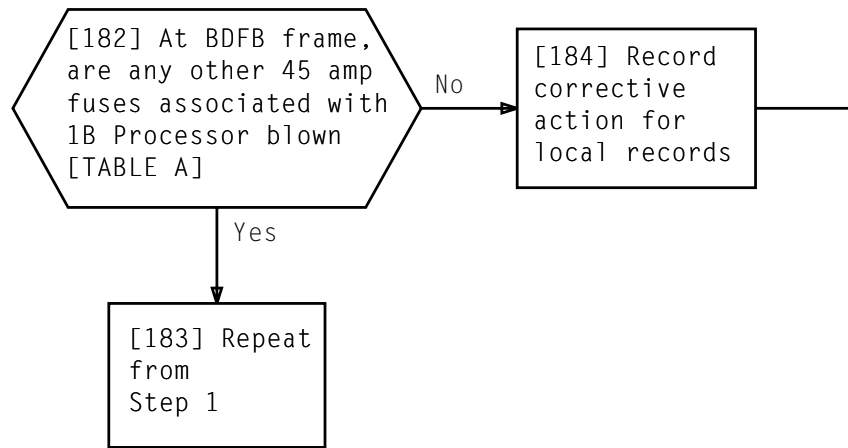
**CLEAR BATTERY DISTRIBUTION FUSE BOARD (BDFB) FRAME
BLOWN 45 AMP FUSE ASSOCIATED WITH 1B PROCESSOR CABINET**

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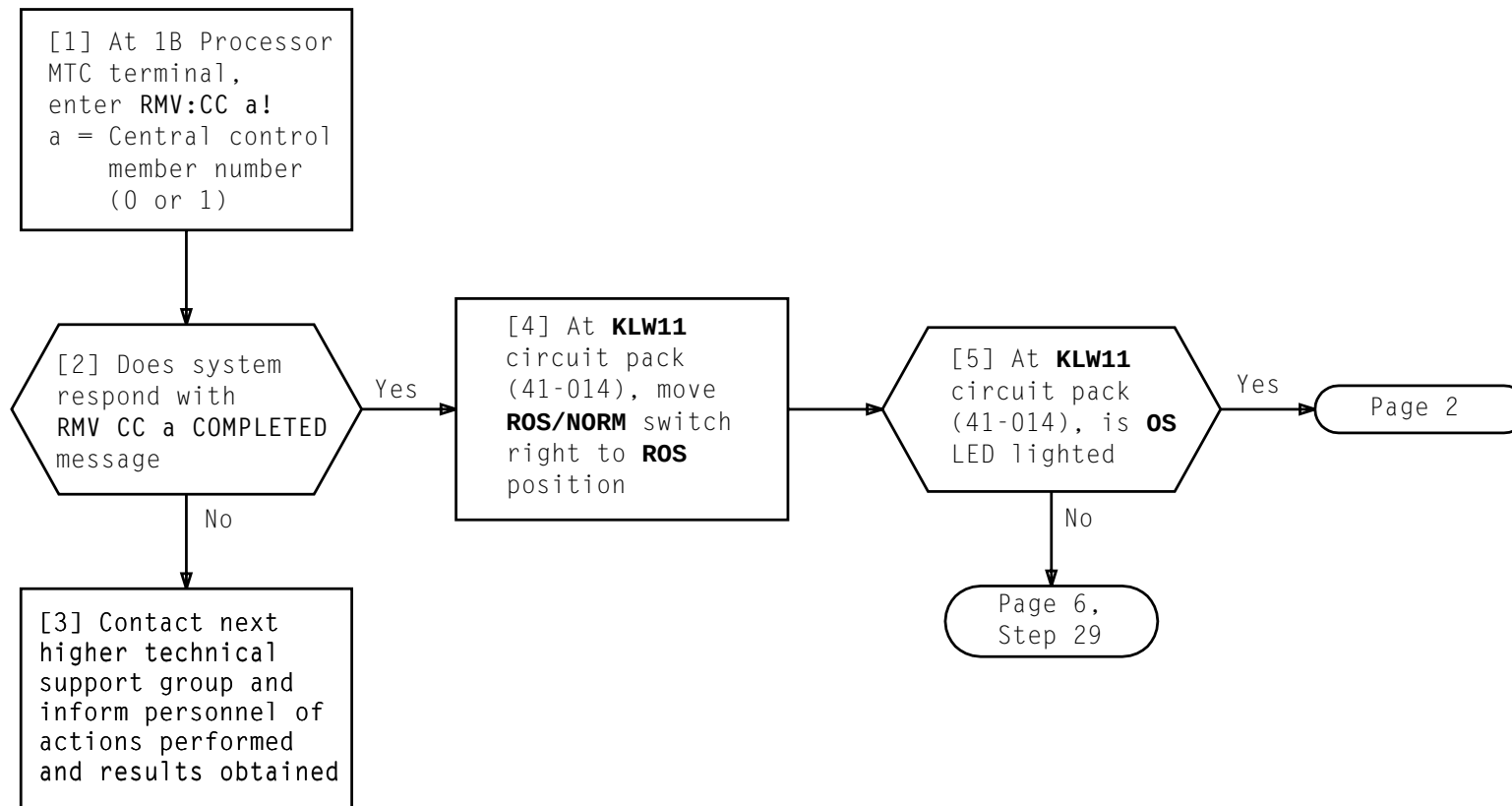
**CLEAR BATTERY DISTRIBUTION FUSE BOARD (BDFB) FRAME
BLOWN 45 AMP FUSE ASSOCIATED WITH 1B PROCESSOR CABINET**

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**CLEAR BATTERY DISTRIBUTION FUSE BOARD (BDFB) FRAME
BLOWN 45 AMP FUSE ASSOCIATED WITH 1B PROCESSOR CABINET**

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**CLEAR MANUAL POWER ALARM CIRCUIT TEST FAILURE, ONE OR MORE
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[6] At **KLW11** circuit pack (41-014), depress and hold **LTEST** pushbutton while observing LEDs on all circuit packs [TABLE A]

[7] Release **LTEST** pushbutton

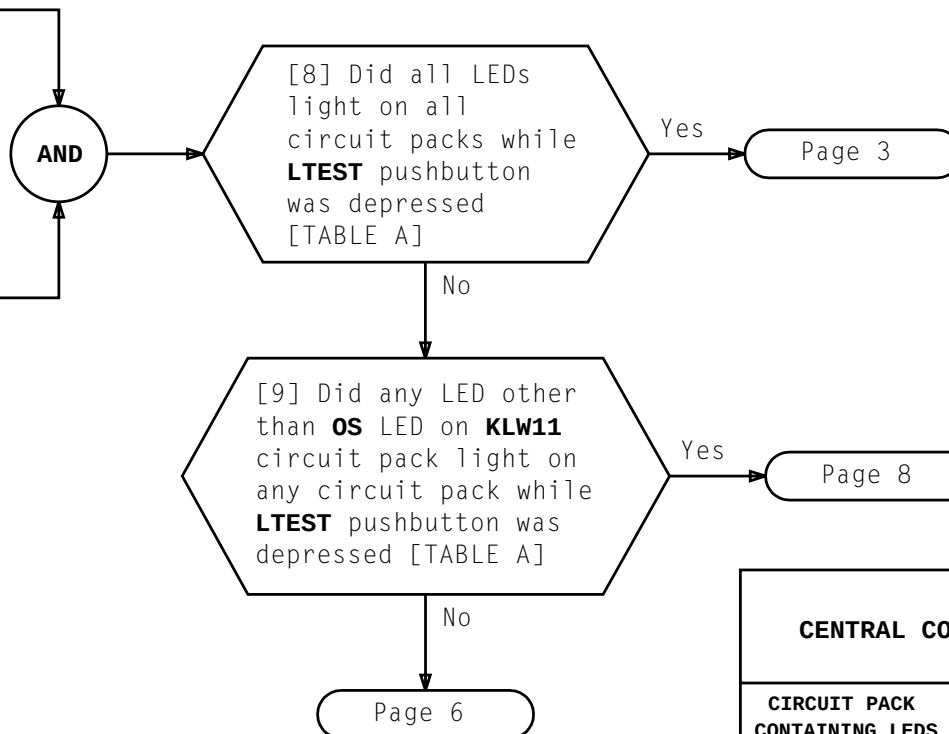
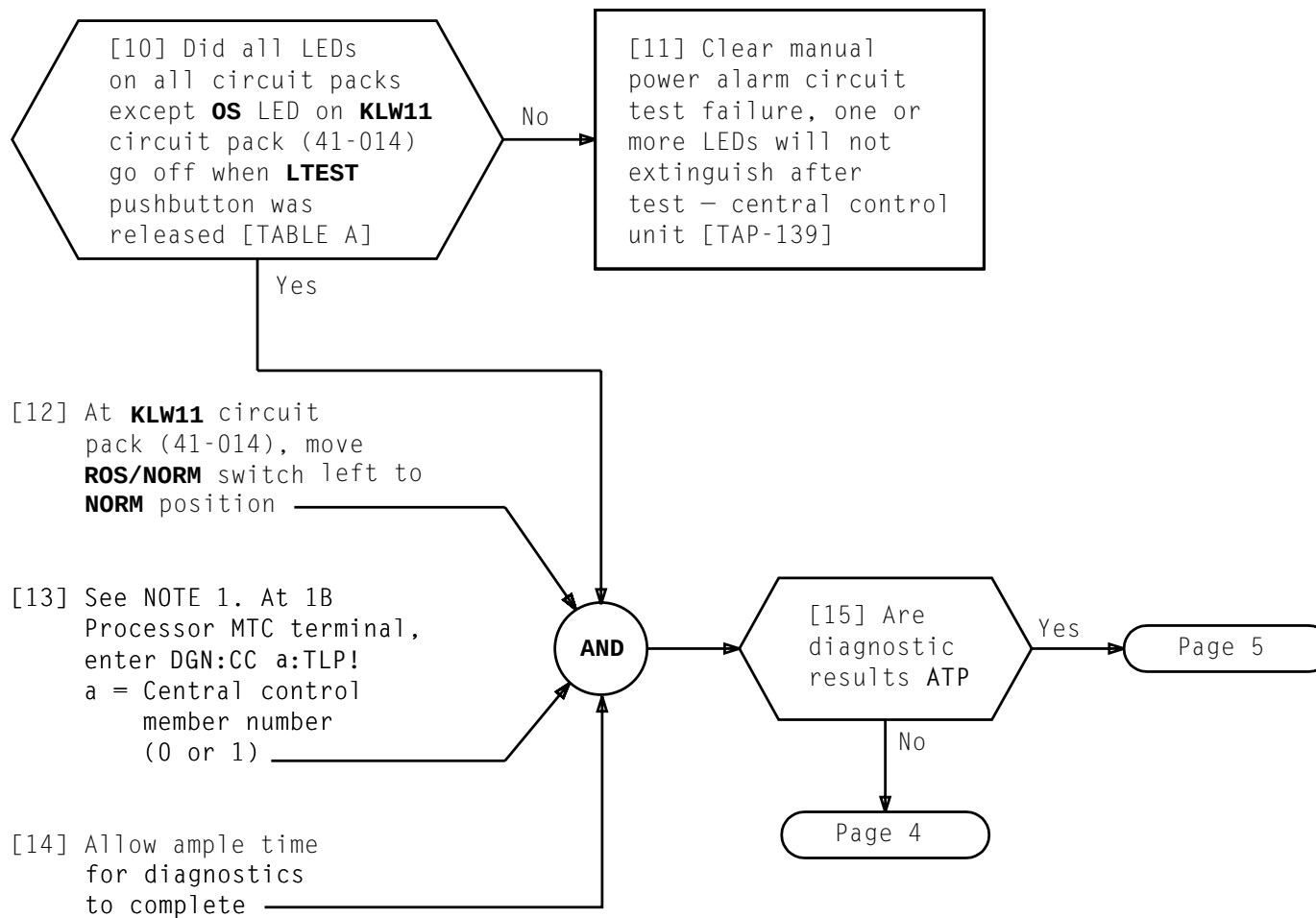


TABLE A CENTRAL CONTROL UNIT POWER ALARM CIRCUIT LED LOCATIONS		
CIRCUIT PACK CONTAINING LEDS	CIRCUIT PACK LOCATION	NUMBER OF LEDS ON CIRCUIT PACK
KLW11	41-014	19
KLW12	58-014	16
KLW3	41-104	1
KLW4	41-112	1
KLW22/ KLW122/ KLW222	41-120	1

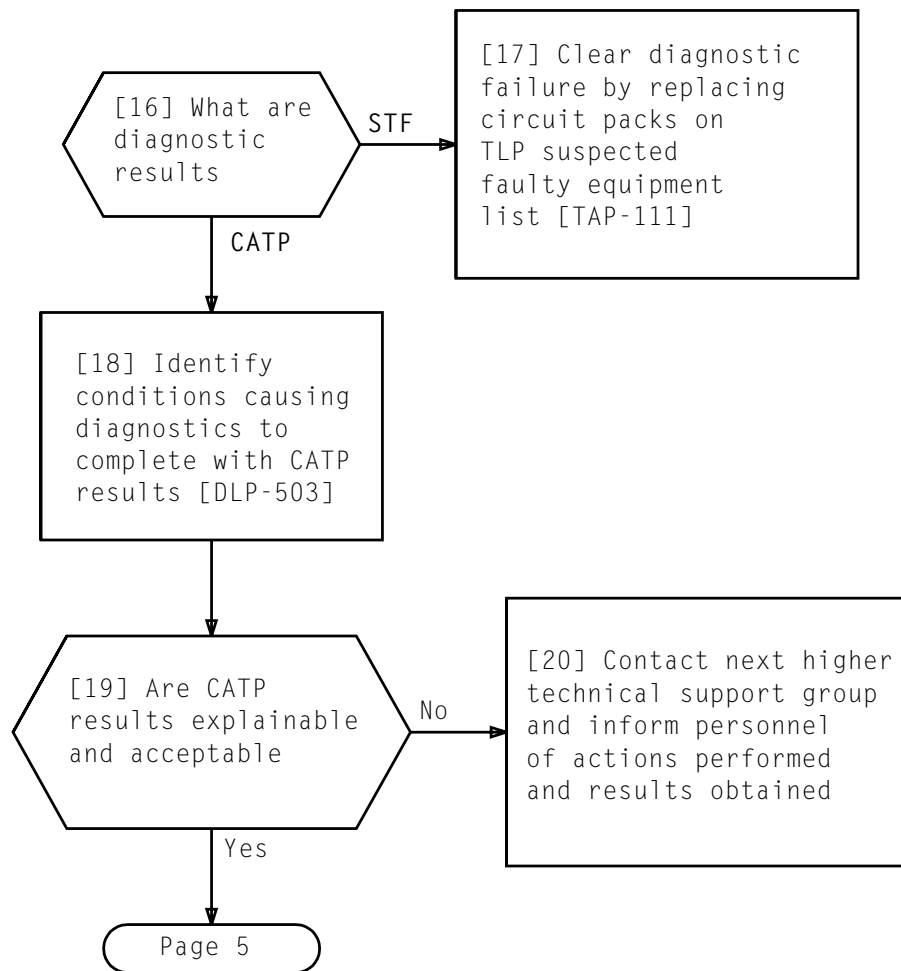
**CLEAR MANUAL POWER ALARM CIRCUIT TEST FAILURE, ONE OR MORE
LEDs NOT LIGHTED DURING TEST – CENTRAL CONTROL UNIT**

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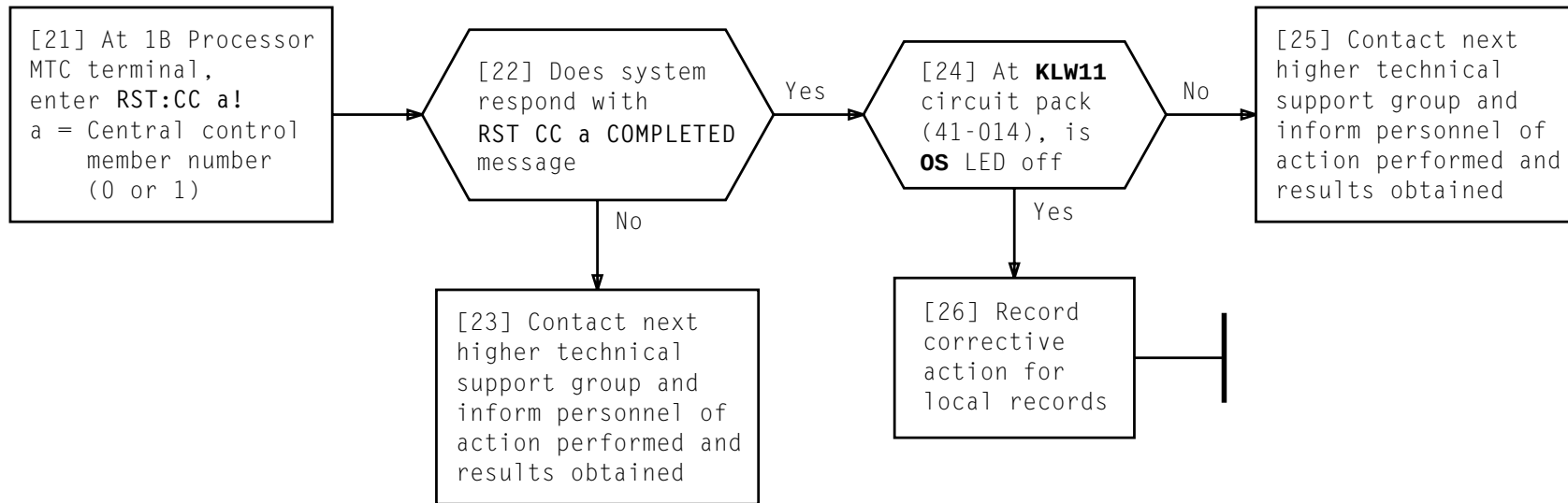
NOTE 1 Diagnostics will be requested using an input message to ensure power alarm circuit tests (Phase 1) are performed		
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CLEAR MANUAL POWER ALARM CIRCUIT TEST FAILURE, ONE OR MORE LEDs NOT LIGHTED DURING TEST – CENTRAL CONTROL UNIT



**CLEAR MANUAL POWER ALARM CIRCUIT TEST FAILURE, ONE OR MORE
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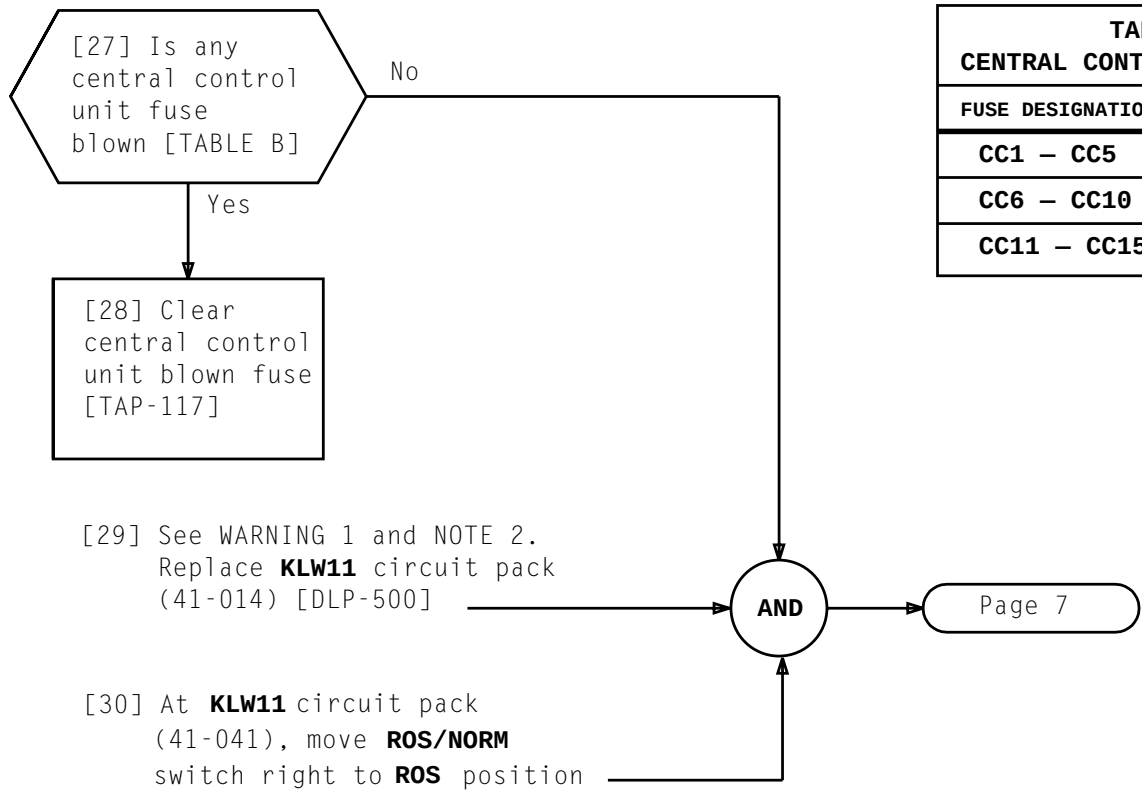


TABLE B CENTRAL CONTROL UNIT FUSES	
FUSE DESIGNATIONS	FUSE LOCATION
CC1 – CC5	81-006 (A-E)
CC6 – CC10	81-011 (A-E)
CC11 – CC15	81-016 (A-E)

NOTE 2
Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 1
A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

**CLEAR MANUAL POWER ALARM CIRCUIT TEST FAILURE, ONE OR MORE
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[31] At **KLW11** circuit pack (41-014), depress and hold **LTEST** pushbutton while observing LEDs on all circuit packs [TABLE C]

[32] Release **LTEST** pushbutton

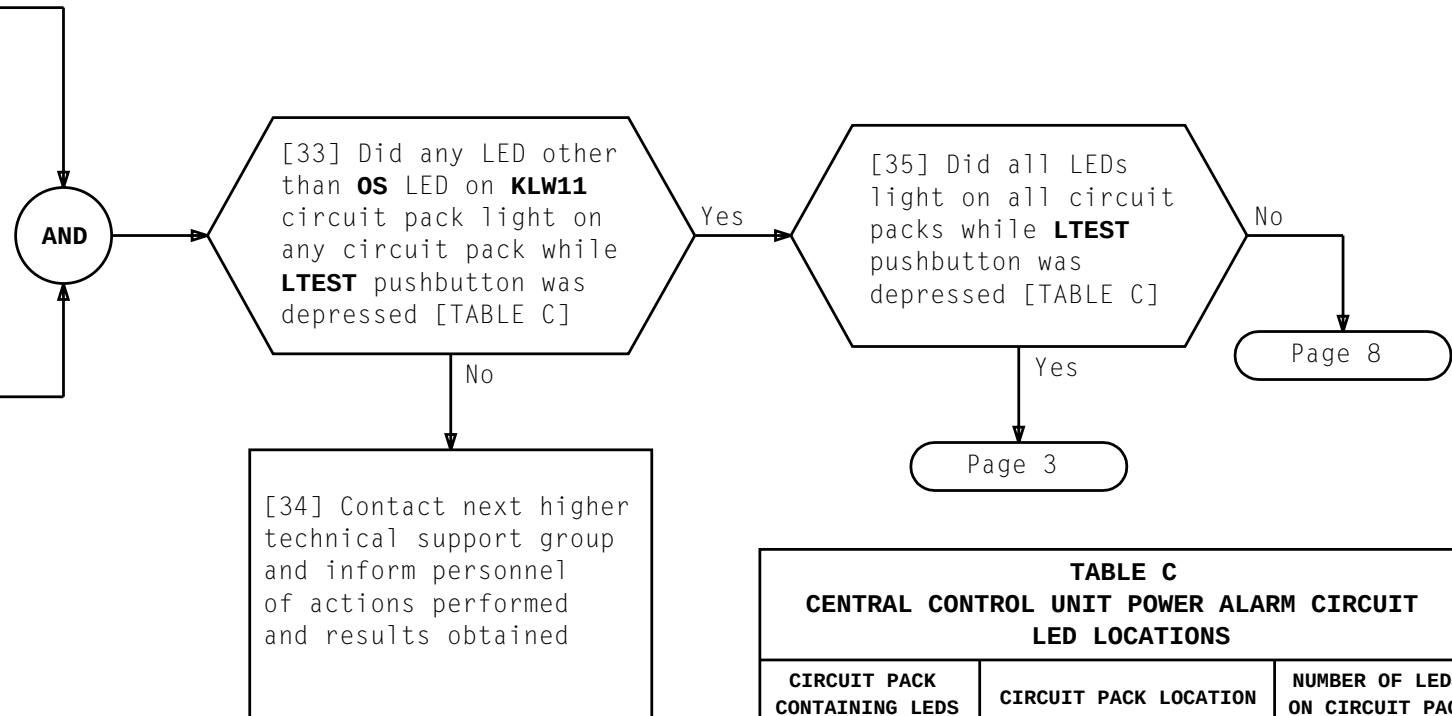
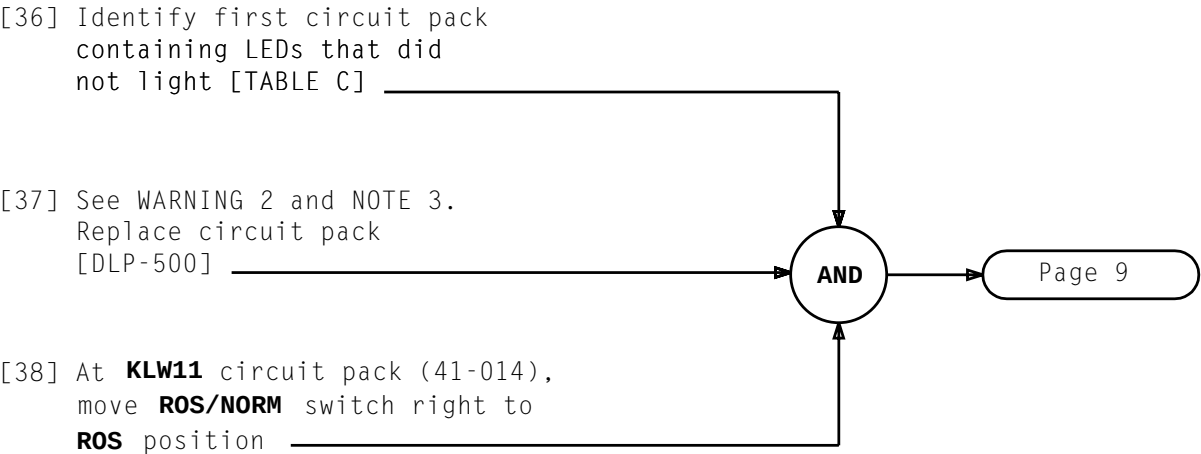


TABLE C CENTRAL CONTROL UNIT POWER ALARM CIRCUIT LED LOCATIONS		
CIRCUIT PACK CONTAINING LEDES	CIRCUIT PACK LOCATION	NUMBER OF LEDES ON CIRCUIT PACK
KLW11	41-014	19
KLW12	58-014	16
KLW3	41-104	1
KLW4	41-112	1
KLW22/ KLW122/ KLW222	41-120	1

**CLEAR MANUAL POWER ALARM CIRCUIT TEST FAILURE, ONE OR MORE
LEDS NOT LIGHTED DURING TEST – CENTRAL CONTROL UNIT**

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NOTE 3

Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 2

A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

**CLEAR MANUAL POWER ALARM CIRCUIT TEST FAILURE, ONE OR MORE
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[39] At **KLW11** circuit pack (41-014),
depress and hold **LTEST**
pushbutton while observing
LEDs on all circuit packs
[TABLE D]

[40] Release **LTEST**
pushbutton

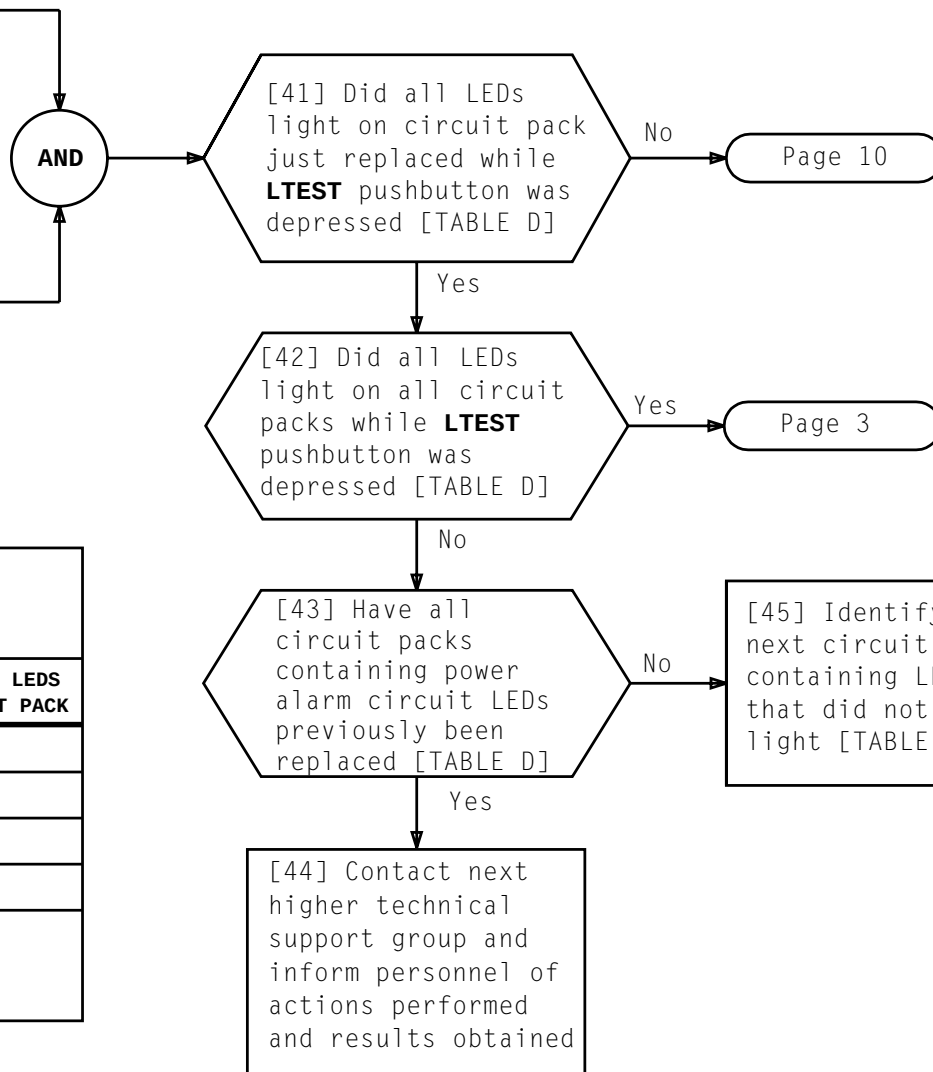


TABLE D CENTRAL CONTROL UNIT POWER ALARM CIRCUIT LED LOCATIONS		
CIRCUIT PACK CONTAINING LEDs	CIRCUIT PACK LOCATION	NUMBER OF LEDs ON CIRCUIT PACK
KLW11	41-014	19
KLW12	58-014	16
KLW3	41-104	1
KLW4	41-112	1
KLW22/ KLW122/ KLW222	41-120	1

**CLEAR MANUAL POWER ALARM CIRCUIT TEST FAILURE, ONE OR MORE
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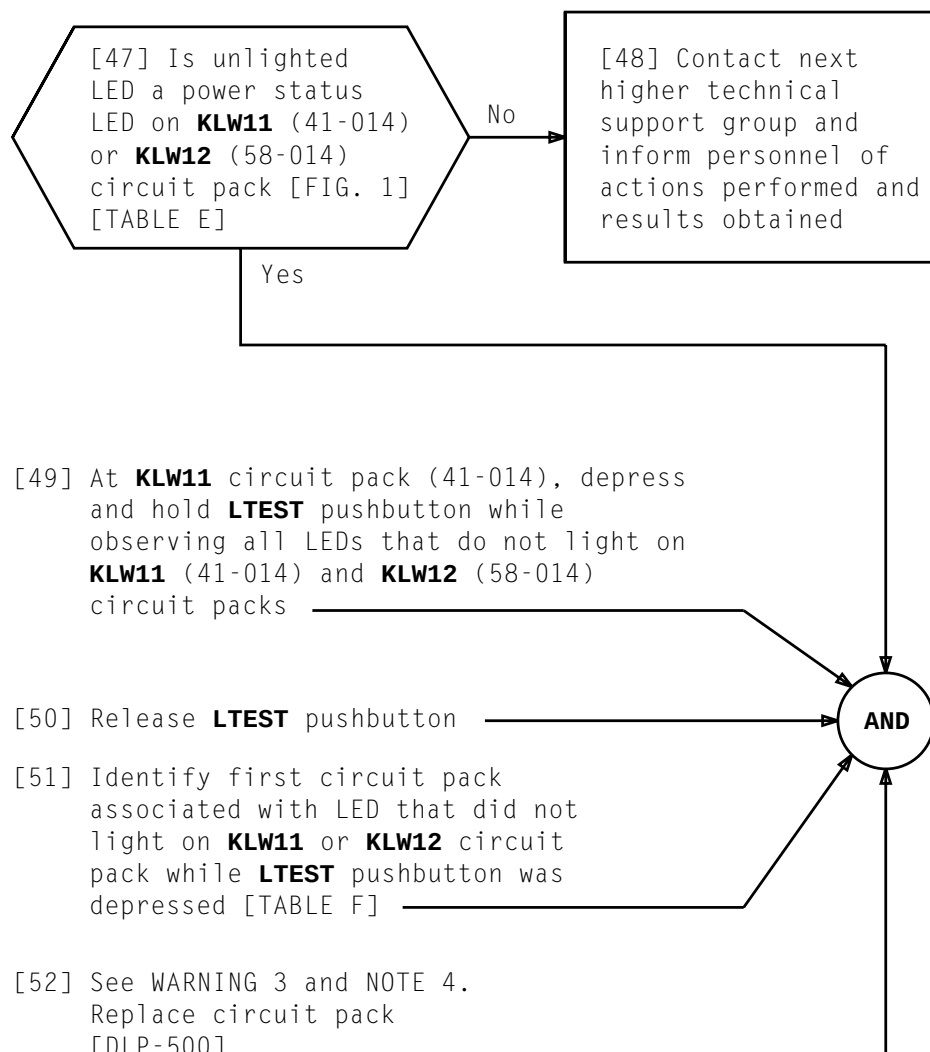


TABLE E KLW11 AND KLW12 CIRCUIT PACK POWER MONITOR LEDs	
CIRCUIT PACK	LEDs
KLW11 (41-014)	POWER BRANCH MA-MG VOLTAGE
	POWER BRANCH MA-MG CURRENT
KLW12 (58-014)	+24V MONITOR 0
	+24V MONITOR 1
	POWER BRANCH SA-SG VOLTAGE
	POWER BRANCH SA-SG CURRENT

NOTE 4
Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 3
A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

**CLEAR MANUAL POWER ALARM CIRCUIT TEST FAILURE, ONE OR MORE
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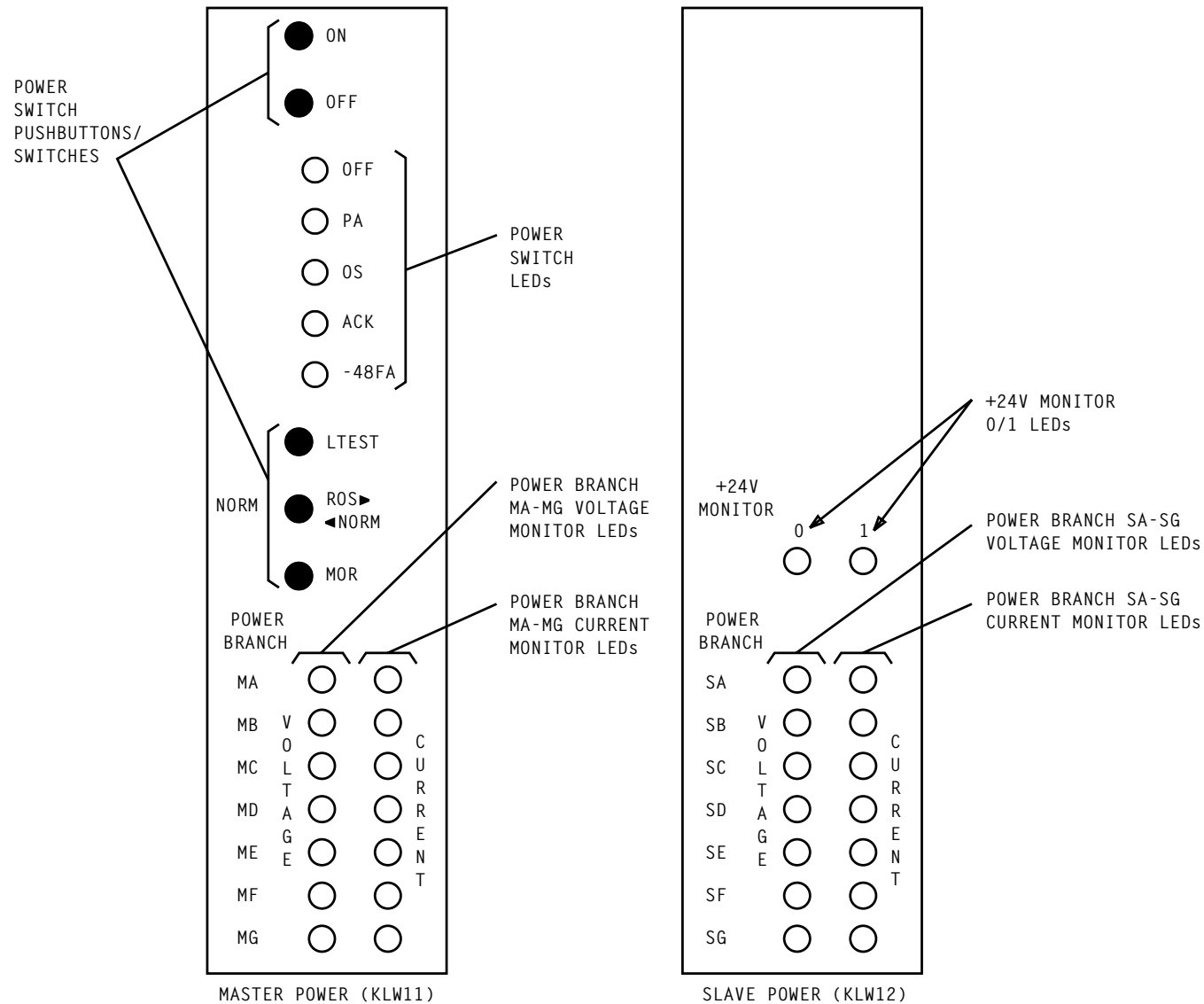


FIG. 1 – Example of LEDs on KLW11 and KLW12 Power Circuit Packs

CLEAR MANUAL POWER ALARM CIRCUIT TEST FAILURE, ONE OR MORE LEDs NOT LIGHTED DURING TEST – CENTRAL CONTROL UNIT

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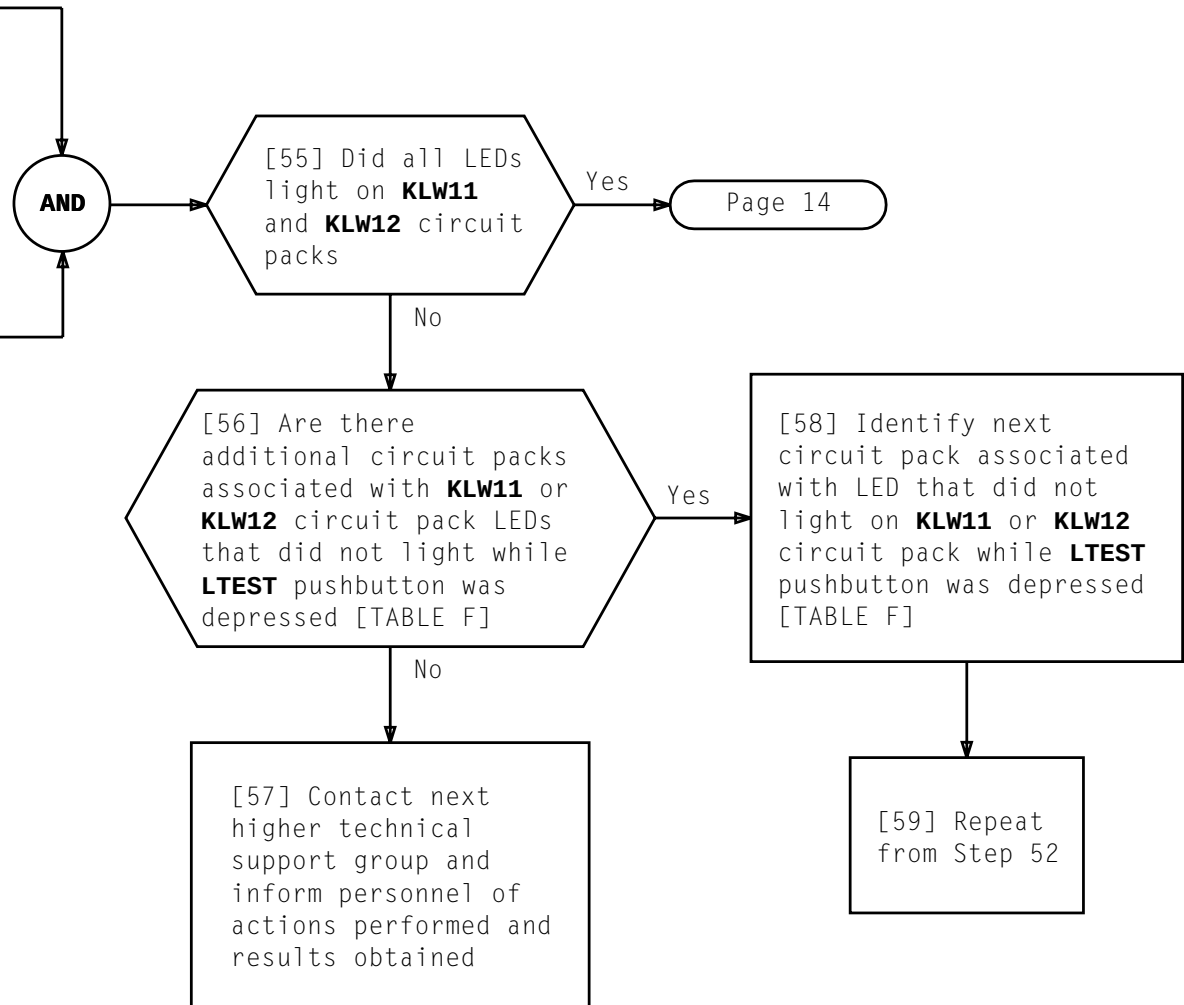
TABLE F CIRCUIT PACKS ASSOCIATED WITH KLW11 AND KLW12 CIRCUIT PACK LEDS		
CIRCUIT PACK CONTAINING LED	LED NOT LIGHTED	CIRCUIT PACKS ASSOCIATED WITH LED NOT LIGHTED
KLW11	VOLTAGE MA CURRENT MA	KLW10/KLW210 (41-030)
	VOLTAGE MB CURRENT MB	KLW9 (41-038), KLW24 (41-062)
	VOLTAGE MC CURRENT MC	KLW8 (41-046), KLW24 (41-062)
	VOLTAGE MD CURRENT MD	KLW6 (41-054)
	VOLTAGE ME CURRENT ME	KLW28 (41-022)
	VOLTAGE MF CURRENT MF	KLW19 (41-070)
	VOLTAGE MG CURRENT MG	KLW6 (41-054)
KLW12	VOLTAGE SA CURRENT SA	KLW13 (58-070), KLW20 (58-062)
	VOLTAGE SB CURRENT SB	KLW21 (58-046)
	VOLTAGE SC CURRENT SC	KLW14 (58-038), UN339 (70-014), UN339 (70-030), UN339 (70-070), UN339 (70-086), UN340 (70-038), UN340 (70-062)
	VOLTAGE SD CURRENT SD	KLW05/KLW105/KLW205 (41-096)
	VOLTAGE SE CURRENT SE	KLW17/KLW117/KLW217 (41-086)
	VOLTAGE SF CURRENT SF	KLW7 (41-078)
	VOLTAGE SG CURRENT SG	KLW05/KLW105/KLW205 (41-096)
	+24V MONITOR 0	UN339 (70-014), UN339 (70-030), UN340 (70-038)
	+24V MONITOR 1	UN339 (70-070), UN339 (70-086), UN340 (70-062)

**CLEAR MANUAL POWER ALARM CIRCUIT TEST FAILURE, ONE OR MORE
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[53] At **KLW11** circuit pack (41-014), move **ROS/NORM** switch right to **ROS** position

[54] At **KLW11** circuit pack (41-014), depress and hold **LTEST** pushbutton while observing all LEDs on **KLW11** (41-014) and **KLW12** (58-014) circuit packs



CLEAR MANUAL POWER ALARM CIRCUIT TEST FAILURE, ONE OR MORE LEDs NOT LIGHTED DURING TEST – CENTRAL CONTROL UNIT

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[60] At **KLW11** circuit pack
(41-014), depress and hold
LTEST pushbutton while
observing LEDs on all
circuit packs [TABLE G]

[61] Release **LTEST**
pushbutton

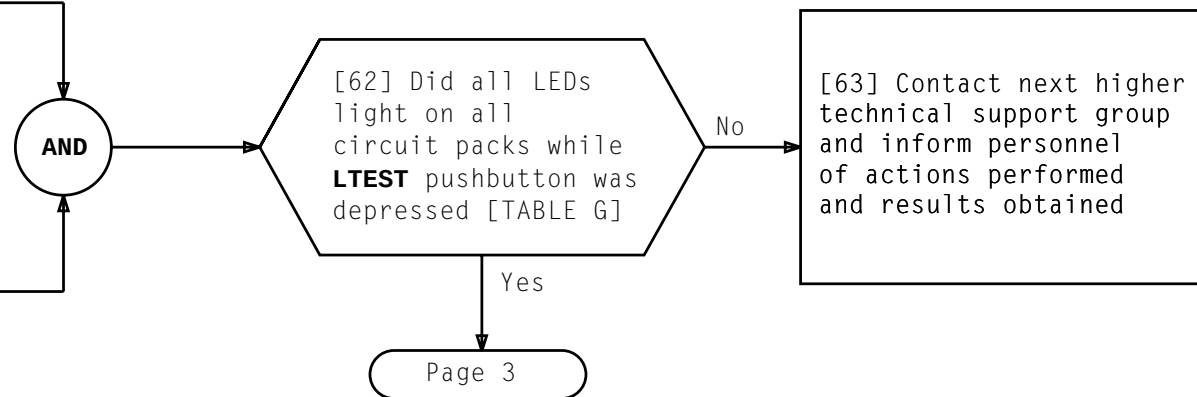
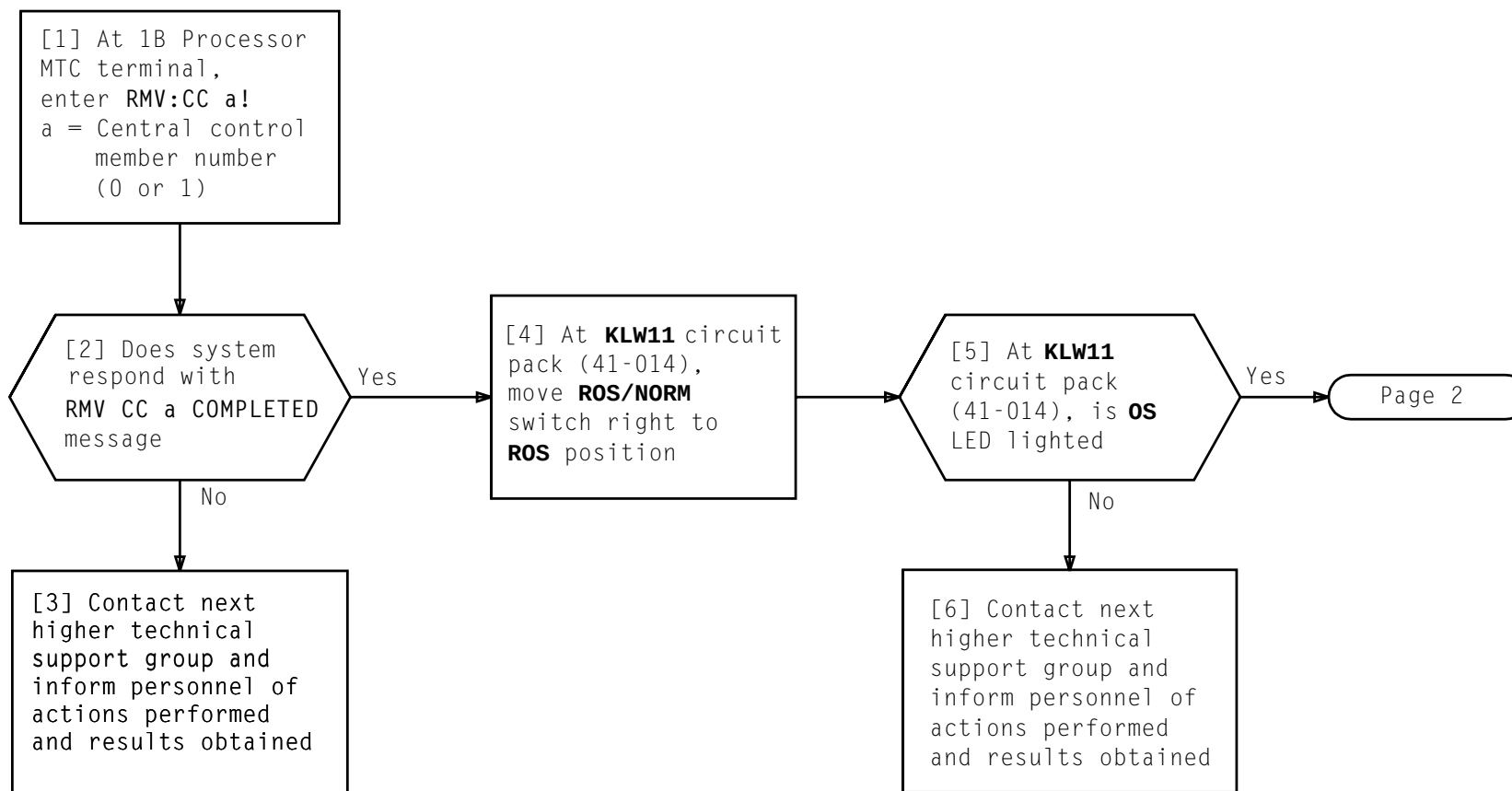


TABLE G CENTRAL CONTROL UNIT POWER ALARM CIRCUIT LED LOCATIONS		
CIRCUIT PACK CONTAINING LEDS	CIRCUIT PACK LOCATION	NUMBER OF LEDS ON CIRCUIT PACK
KLW11	41-014	19
KLW12	58-014	16
KLW3	41-104	1
KLW4	41-112	1
KLW22/ KLW122/ KLW222	41-120	1

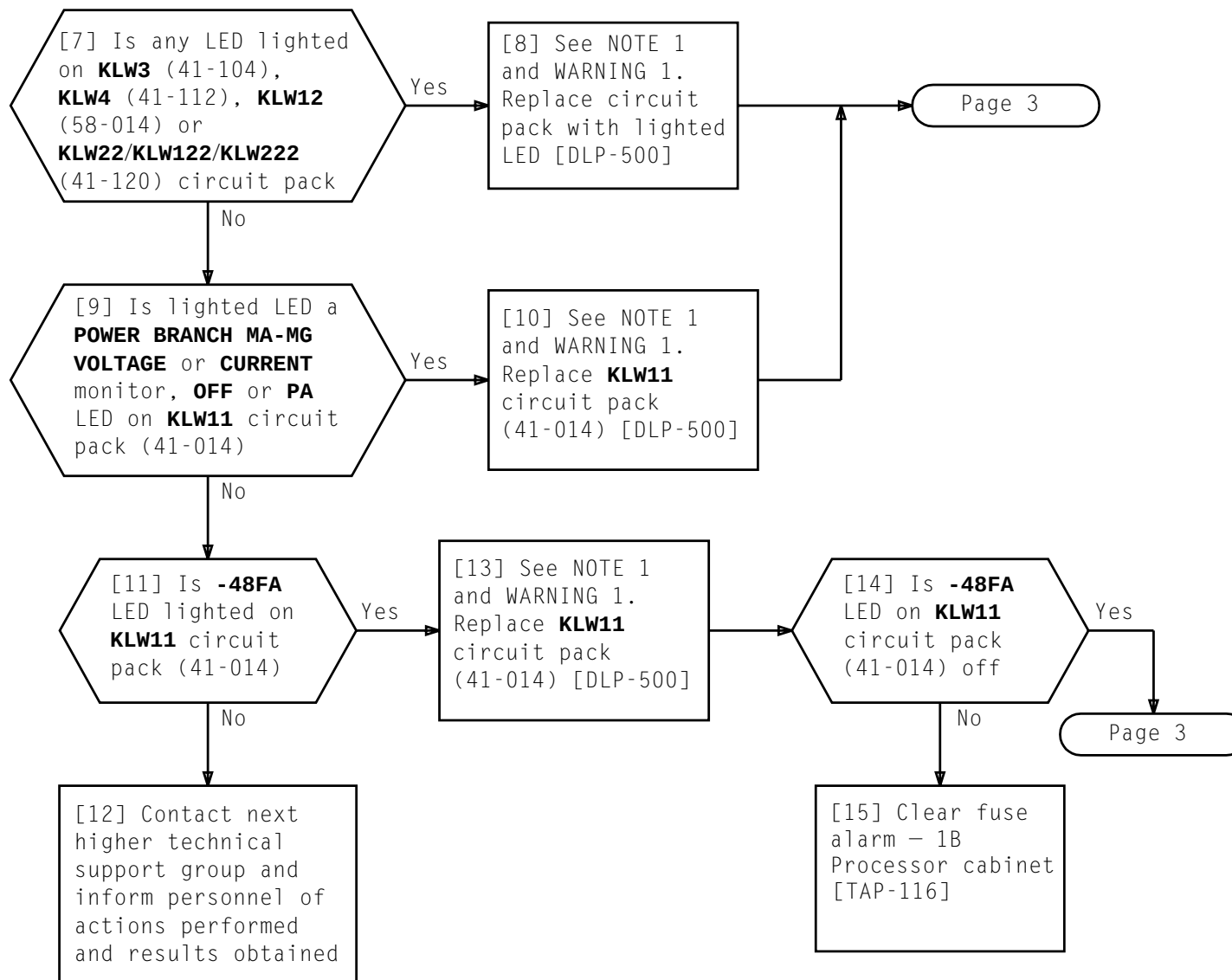
**CLEAR MANUAL POWER ALARM CIRCUIT TEST FAILURE, ONE OR MORE
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CLEAR MANUAL POWER ALARM CIRCUIT TEST FAILURE, ONE OR MORE LEDS WILL NOT EXTINGUISH AFTER TEST – CENTRAL CONTROL UNIT

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NOTE 1
Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 1
A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

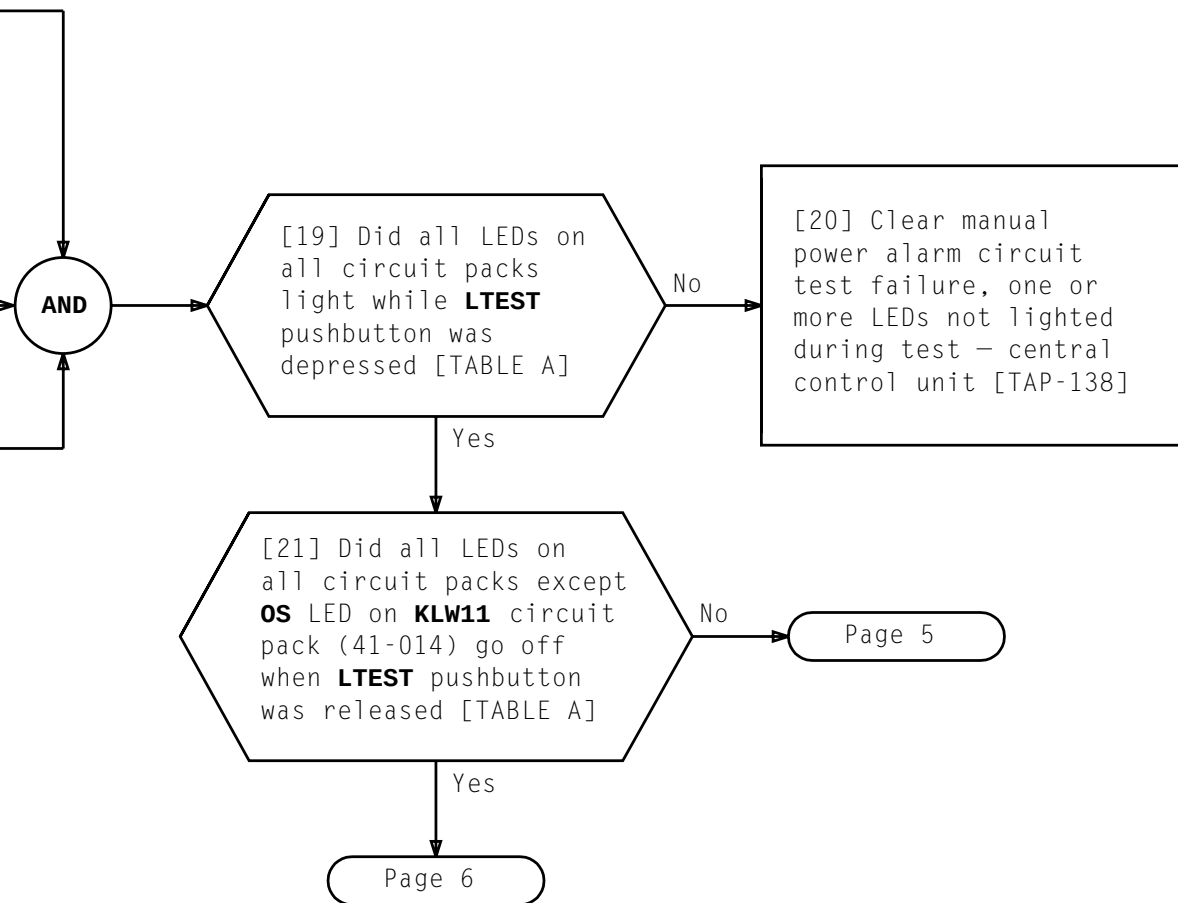
**CLEAR MANUAL POWER ALARM CIRCUIT TEST FAILURE, ONE OR MORE LEDS
WILL NOT EXTINGUISH AFTER TEST – CENTRAL CONTROL UNIT**

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[16] At **KLW11** circuit pack (41-014), move **ROS/NORM** switch right to **ROS** position

[17] At **KLW11** circuit pack (41-014), depress and hold **LTEST** pushbutton while observing LEDs on all circuit packs [TABLE A]

[18] Release **LTEST** pushbutton



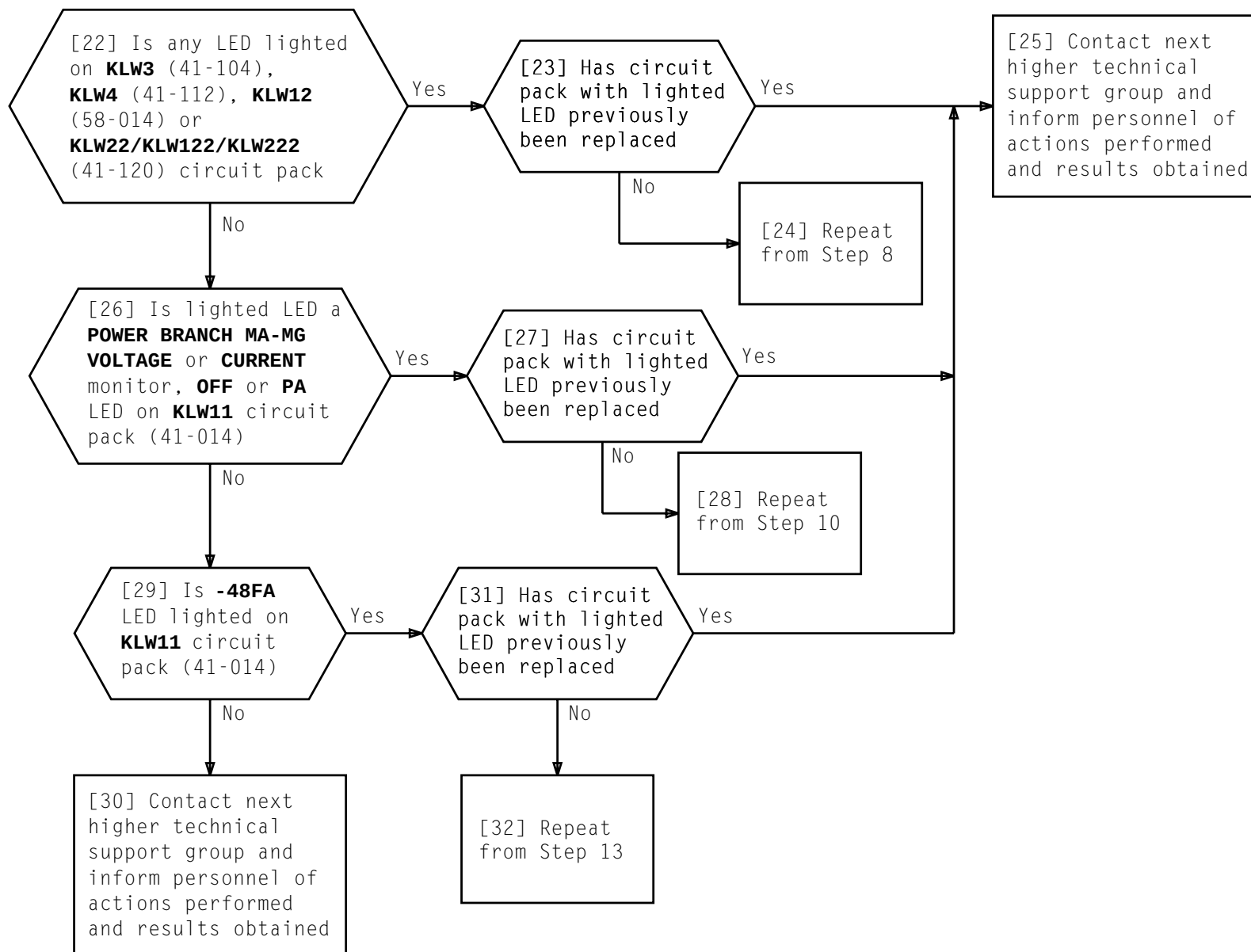
CLEAR MANUAL POWER ALARM CIRCUIT TEST FAILURE, ONE OR MORE LEDs WILL NOT EXTINGUISH AFTER TEST – CENTRAL CONTROL UNIT

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TABLE A CENTRAL CONTROL UNIT POWER ALARM CIRCUIT LED LOCATIONS		
CIRCUIT PACK CONTAINING LEDS	CIRCUIT PACK LOCATION	NUMBER OF LEDS ON CIRCUIT PACK
KLW11	41-014	19
KLW12	58-014	16
KLW3	41-104	1
KLW4	41-112	1
KLW22/ KLW122/ KLW222	41-120	1

**CLEAR MANUAL POWER ALARM CIRCUIT TEST FAILURE, ONE OR MORE LEDS
WILL NOT EXTINGUISH AFTER TEST – CENTRAL CONTROL UNIT**

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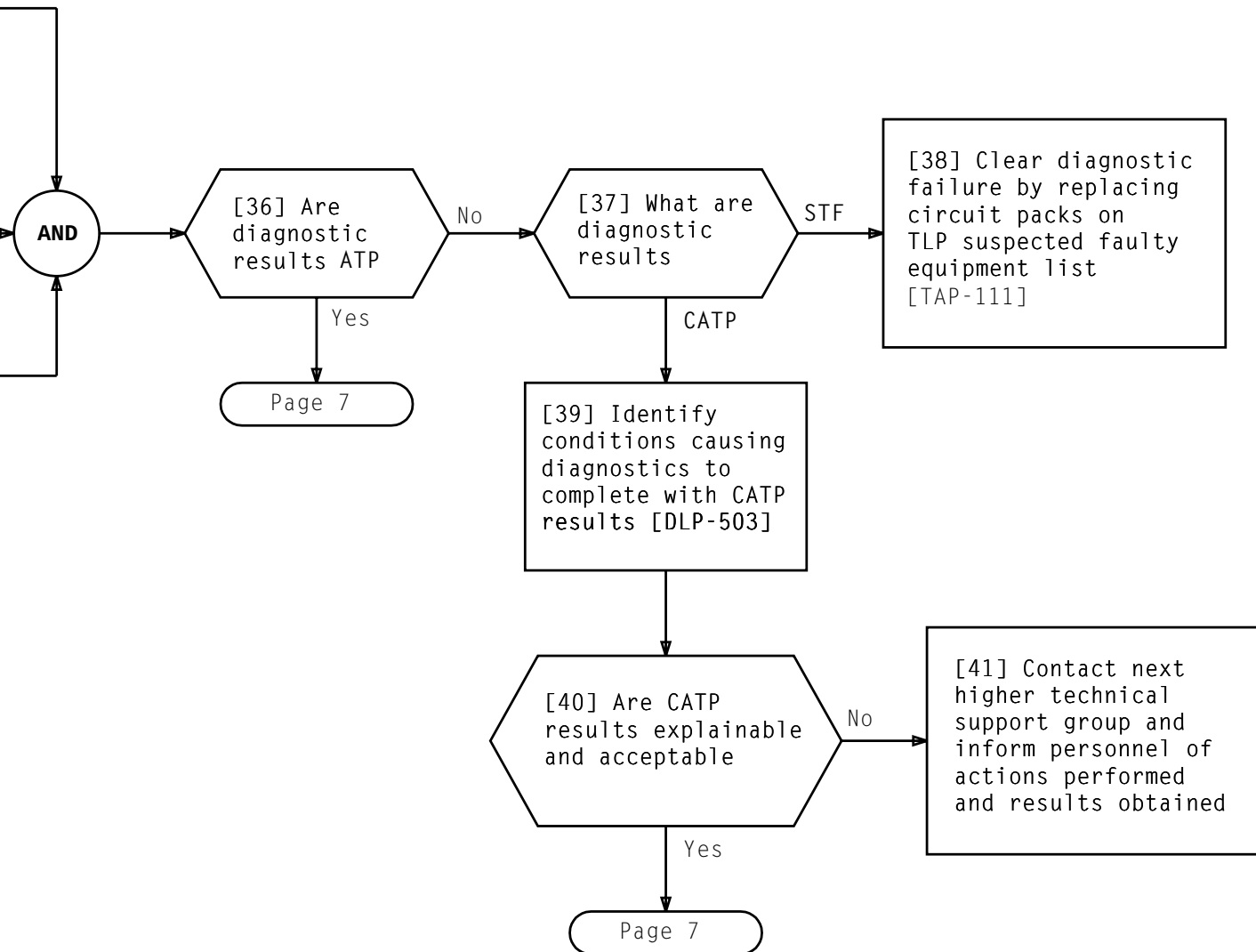
CLEAR MANUAL POWER ALARM CIRCUIT TEST FAILURE, ONE OR MORE LEDS WILL NOT EXTINGUISH AFTER TEST – CENTRAL CONTROL UNIT

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[33] At **KLW11** circuit pack
(41-014), move **ROS/NORM**
switch left to **NORM**
position

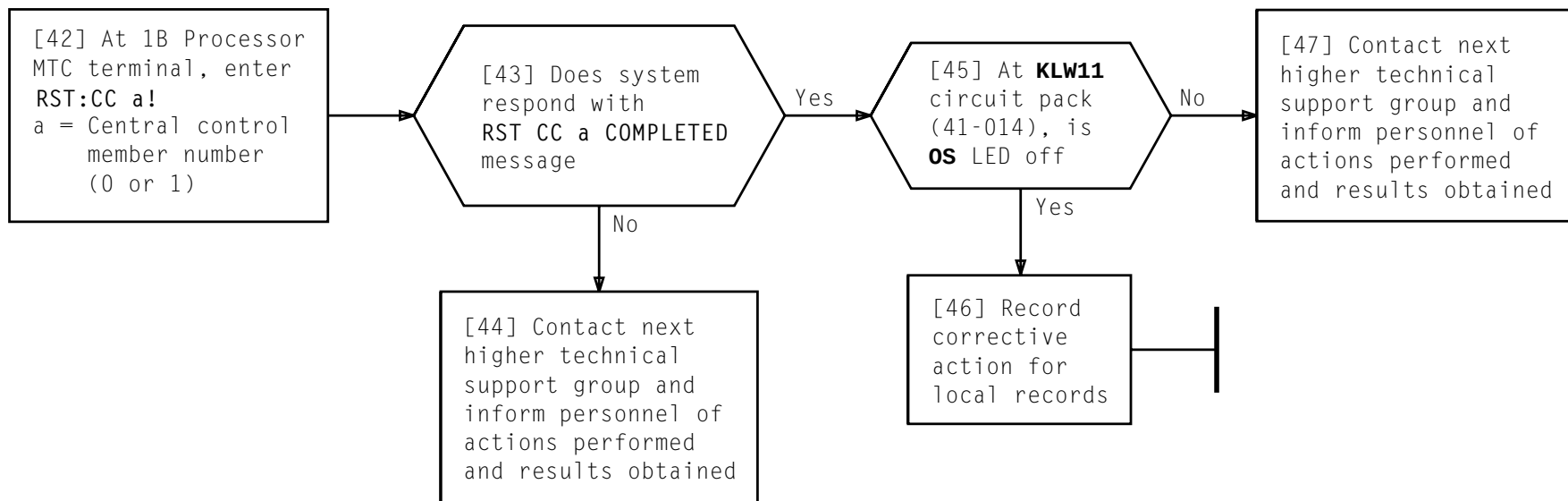
[34] At 1B Processor MTC
terminal, enter
DGN:CC a:TLP!
a = Central control
member number
(0 or 1)

[35] Allow ample time
for diagnostics
to complete



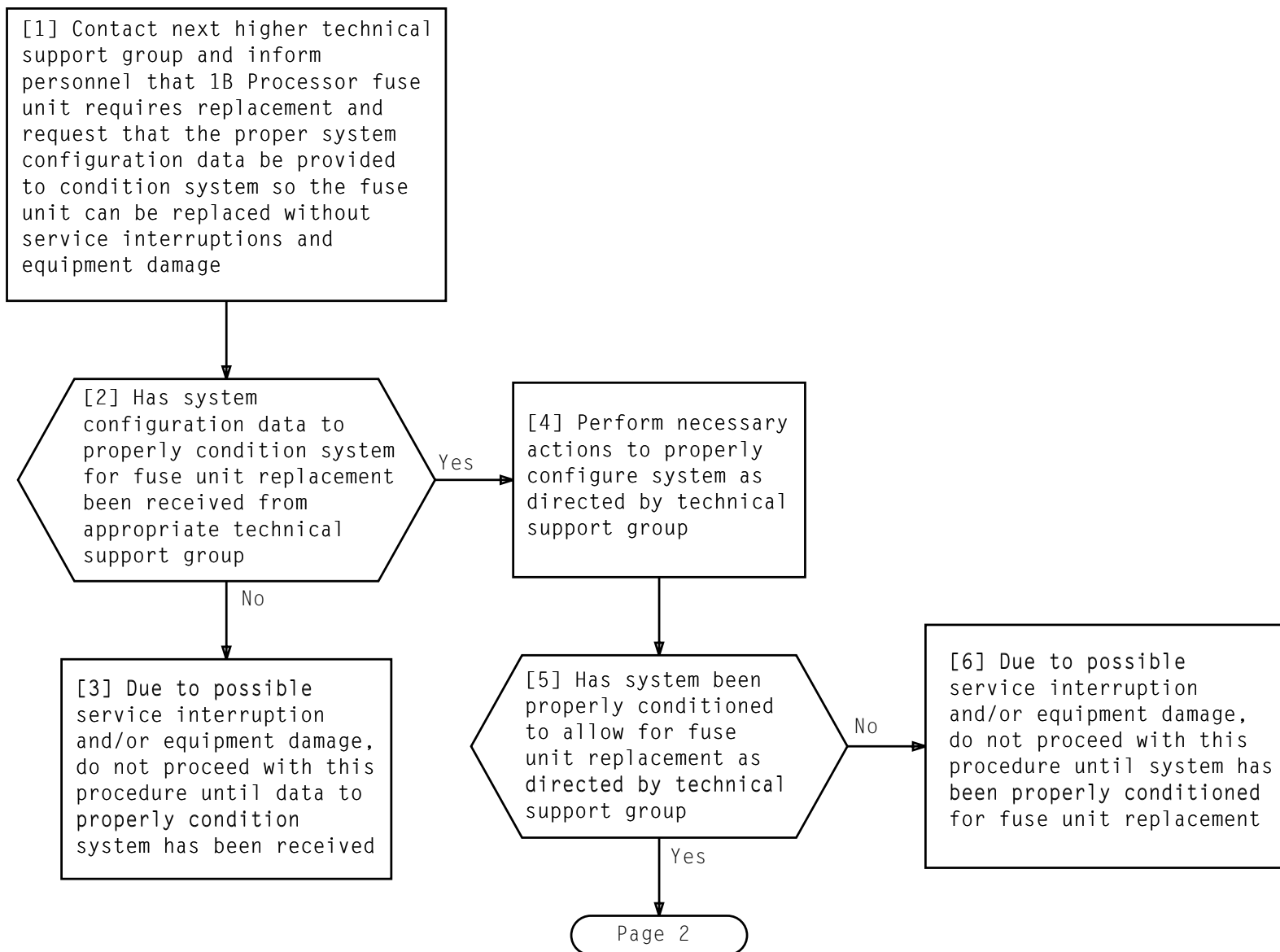
**CLEAR MANUAL POWER ALARM CIRCUIT TEST FAILURE, ONE OR MORE LEDS
WILL NOT EXTINGUISH AFTER TEST – CENTRAL CONTROL UNIT**

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**CLEAR MANUAL POWER ALARM CIRCUIT TEST FAILURE, ONE OR MORE LEDS
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[7] Remove all -48V power from affected side of 1B Processor complex (Bay 0 or 1) by removing the 5 1B Processor 45A fuses in the BDFB frame [TABLE A]

[8] Allow a minimum of 30 minutes after -48V power is removed for filter unit capacitors to fully discharge

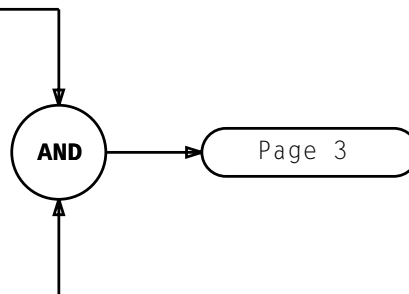


TABLE A			
BDFB FUSES ASSOCIATED WITH 1B PROCESSOR COMPLEX			
FUSE LABEL		FUSE LABEL	
1B PROC BAY 0	048V1A C1	1B PROC BAY 1	148V1B C1
1B PROC BAY 0	048V2A C3	1B PROC BAY 1	148V2B C5
1B PROC BAY 0	048V3A C7	1B PROC BAY 1	148V3B C9
1B PROC BAY 1	148V2A C3	1B PROC BAY 0	048V2B C5
1B PROC BAY 1	148V3A C7	1B PROC BAY 0	048V3B C9

REPLACE FUSE UNIT – 1B PROCESSOR CABINET

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At rear of 1B Processor cabinet (0 or 1)
containing fuse unit (81-000) to be replaced:

[9] Remove 5 pairs of No. 2 gauge power cables
from BDFB frame connected to feed-through
capacitors (**C1-C10**) [TABLE B] [FIG. 1]

[10] Locate connectorized cables **J1** through **J6** on right
back side of fuse unit and note cable name and unit
connector location for later use when connecting
cables to replacement fuse unit [FIG.1]

[11] While depressing tabs at top and bottom of
cable connector, gently pull outward to
remove connectorized cables **J1** through **J6**

[12] Locate connectorized cables **J7** through **J9** on center
back side of fuse unit and note cable name and unit
connector location for later use when connecting
cables to replacement fuse unit [FIG.1]

[13] Using screwdriver, rotate captive screws at top and bottom of
J7 through **J9** connector counterclockwise one full turn
alternating between top and bottom screw until connectorized
cables **J7** through **J9** can be removed from fuse unit

[14] Locate connectorized cable **J10** on center back side of fuse unit
and note cable name and unit connector location for later use
when connecting cable to replacement fuse unit [FIG.1]

[15] Turn **J10** connector center handle counterclockwise
and gently pull outward to remove
J10 cable connector from fuse unit

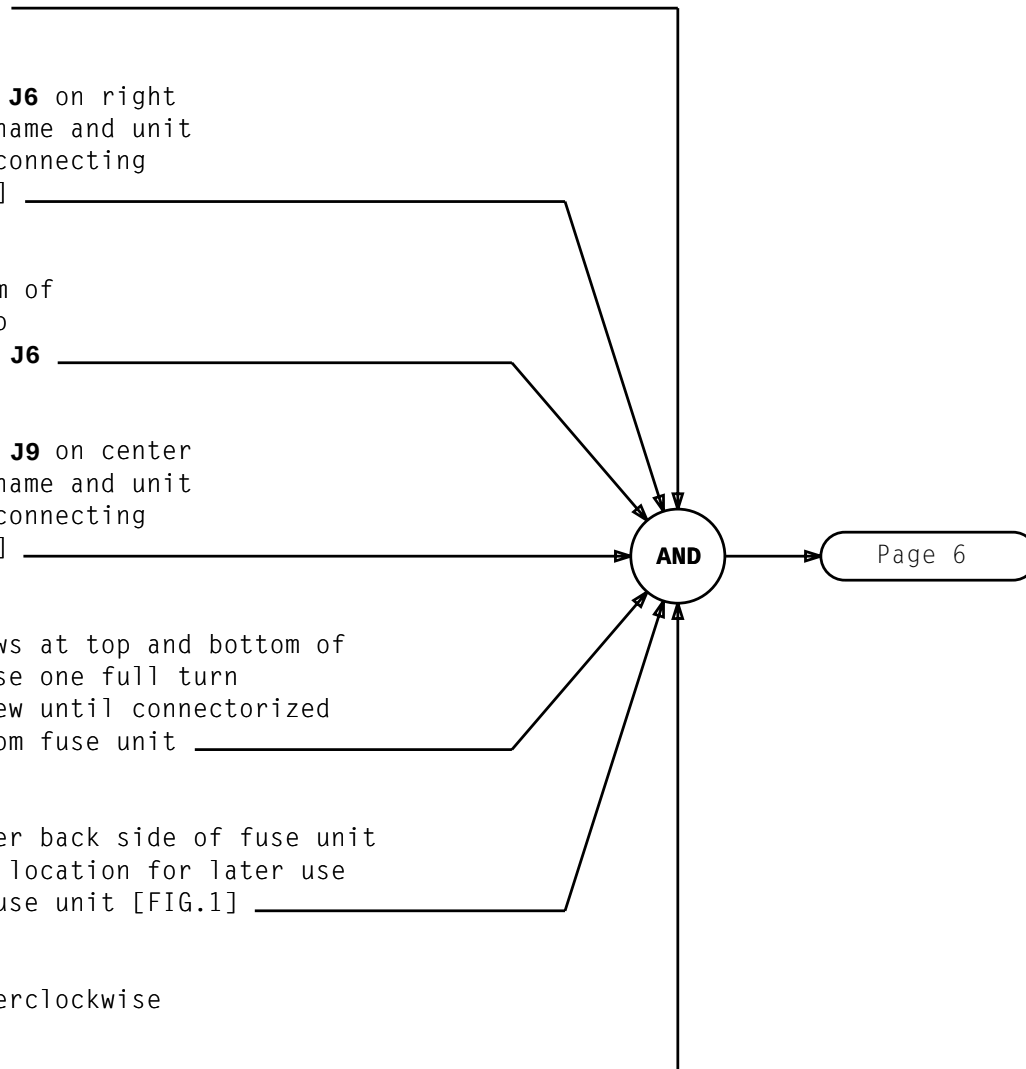
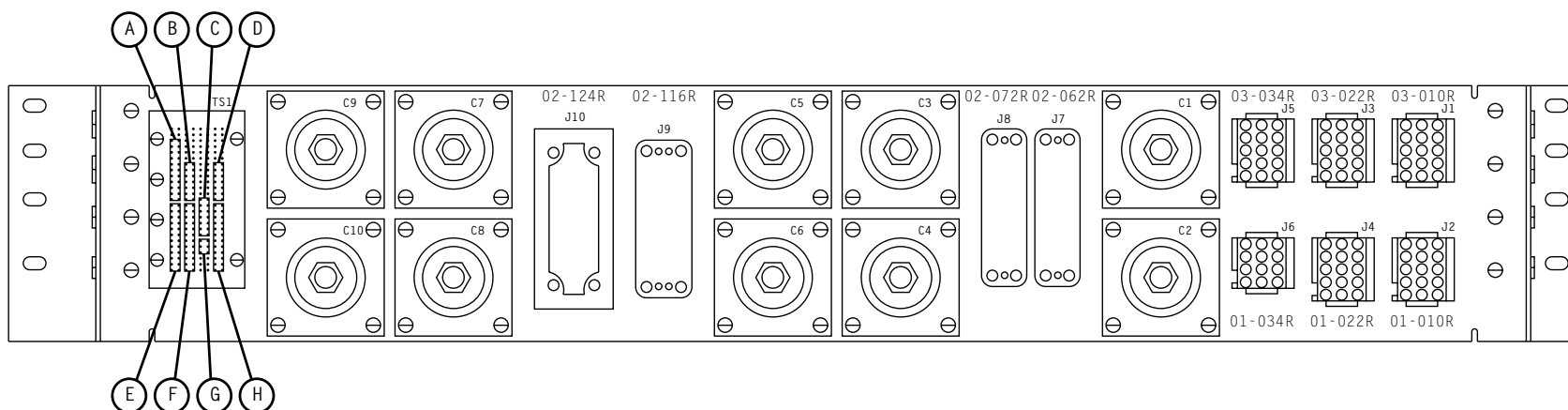


TABLE B 1B PROCESSOR COMPLEX FEED-THROUGH CAPACITORS/POWER CABLE DATA				
1B PROCESSOR CABINET	FEED-THROUGH CAPACITOR			POWER CABLE COLOR
	IDENTIFICATION	LOCATION	POLARITY	
0	C1	082-050R	Fused	(1) RED
	C2	080-050R	Return	(1) RED
	C3	082-086R	Fused	(2) RED
	C4	080-086R	Return	(2) RED
	C5	082-102R	Fused	(2) BLUE
	C6	080-102R	Return	(2) BLUE
	C7	082-142R	Fused	(3) RED
	C8	080-142R	Return	(3) RED
	C9	082-152R	Fused	(3) BLUE
	C10	080-152R	Return	(3) BLUE
1	C1	182-050R	Fused	(1) BLUE
	C2	180-050R	Return	(1) BLUE
	C3	182-086R	Fused	(4) RED
	C4	180-086R	Return	(4) RED
	C5	182-102R	Fused	(4) BLUE
	C6	180-102R	Return	(4) BLUE
	C7	182-142R	Fused	(5) RED
	C8	180-142R	Return	(5) RED
	C9	182-152R	Fused	(5) BLUE
	C10	180-152R	Return	(5) BLUE

REPLACE FUSE UNIT – 1B PROCESSOR CABINET

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TS1 CABLE GROUPS		
FIGURE REFERENCE	Cable Group Identifier	
	Cabinet 0	Cabinet 1
A	20G276	20G277
B	20G302	20G303
C	20G267	20G268
D	20G301	20G301
E	20G269	20G270
F	20G271	20G272
G	20G275	20G275
H	20G273	20G274

J7 THRU J10 CABLE GROUP IDENTIFIERS		
FIGURE REFERENCE	Cable Group Identifier	
	Cabinet 0	Cabinet 1
J7	G6	G15
J8	G7	G16
J9	G9	G18
J10	G8	G17

J1 THRU J6 CABLE GROUP IDENTIFIERS		
FIGURE REFERENCE	Cable Group Identifier	
	Cabinet 0	Cabinet 1
J1	G3	G12
J2	G4	G13
J3	G19	G20
J4	G2	G11
J5	G5	G14
J6	G1	G10

FIG. 1 – Sample Layout of 1B Processor Cabinet Fuse Unit (Rear View)

At rear of 1B Processor cabinet (0 or 1) containing fuse unit (81-000) to be replaced:

[16] Locate **TS1** internal and office alarm cables on left back side of fuse unit and note cable name and **TS1** connector location for later use when connecting cables to replacement fuse unit [FIG.1]

[17] Using orange stick or equivalent non-metallic tool, release cable retainers and gently pull outward to remove **TS1** internal and office alarm cables from fuse unit

At front of 1B Processor cabinet (0 or 1) containing fuse unit (81-000) to be replaced:

[18] Open fuse unit cover (Bezel)

[19] Inside fuse unit cover (Bezel), locate cable connector connected to 328A LED circuit card, release connector retainer and gently pull downward to remove cable connector from LED circuit card

[20] On right side of fuse unit, remove fuse unit screw securing fuse unit cover (Bezel) ground wire to cabinet

[21] On each side of fuse unit cover (Bezel), remove hinge screw while ensuring both compression washers are not lost and lift off fuse unit cover (Bezel)

[22] At fan controller assembly (77-000), release latches securing controller assembly to cabinet, remove fan controller assembly from cabinet and store in safe place while fuse unit is being replaced

AND

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[23] Obtain piece of cloth or antistatic plastic and cover area below fan controller assembly to prevent debris from falling into circuit packs below work area

At front of 1B Processor cabinet (0 or 1) containing fuse unit (81-000) to be replaced:

[24] Remove remaining screws securing fuse unit to cabinet

[25] See NOTES 1 and 2. Carefully slide fuse unit forward and remove unit from front of cabinet

[26] Safely store defective fuse unit for shipment back to the factory for repair

[27] Check fuse unit mounting area in cabinet and ensure no cabinet wiring is in the path of fuse unit to be installed

[28] See NOTES 1 and 2. Lift replacement fuse unit, insert unit in cabinet mounting area and slide unit into cabinet until unit is completely seated against cabinet mounting supports

[29] See NOTE 3. Using screws previously removed, secure fuse unit to cabinet mounting supports

AND

Page 8

NOTES

1. It is recommended that two people be used to remove/install fuse unit. The fuse unit will have to be moved to both the left and right while being removed/installed to provide clearance for screw heads on the fuse unit framing
2. Care must be used to ensure that no other cabinet wiring is in the path of the fuse unit as the unit is being removed/installed
3. Do not tighten fuse unit mounting screw used to connect fuse unit cover (Bezel) ground wire to cabinet

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[30] Obtain fuse unit cover (Bezel) previously removed and secure to cabinet using hinge screws and compression washers previously removed

[31] Remove fuse unit mounting screw not completely tightened and secure fuse unit cover (Bezel) ground wire to cabinet

[32] Inside fuse unit cover (Bezel), connect cable to 328A LED circuit card connector and ensure retainer is latched

[33] Close fuse unit cover (Bezel)

[34] Carefully remove cloth or antistatic plastic placed below work area to keep debris from falling into circuit packs

[35] Obtain fan controller assembly previously removed, align assembly onto slide mechanism in cabinet, slide assembly into cabinet and secure assembly to cabinet using latches

At rear of 1B Processor cabinet (0 or 1) containing fuse unit (81-000) previously replaced:

[36] Locate **TS1** internal and office alarm cables previously removed and using orange stick or equivalent non-metallic tool (if necessary) secure cable connectors to retainers in proper **TS1** locations [FIG. 1]

AND

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At rear of 1B Processor cabinet (0 or 1) containing fuse unit (81-000) previously replaced:

[37] Locate **J10** connectorized cable, mate with **J10** connector on fuse unit and secure connection by rotating **J10** connector center handle clockwise until cable connector is firmly seated _____

[38] Locate **J7** through **J9** connectorized cables, mate with **J7** through **J9** connectors on fuse unit and secure connections by rotating captive screw at top and bottom of cable connectors clockwise one full turn alternating between top and bottom screw until cable connector is firmly seated _____

[39] Locate **J1** through **J6** connectorized cables, mate with **J1** through **J6** connectors on fuse unit and ensure retainers are latched _____

[40] Connect 5 pairs of No. 2 gauge power cables from BDFB frame to feed-through capacitors (**C1-C10**) [TABLE B] [FIG. 1] _____

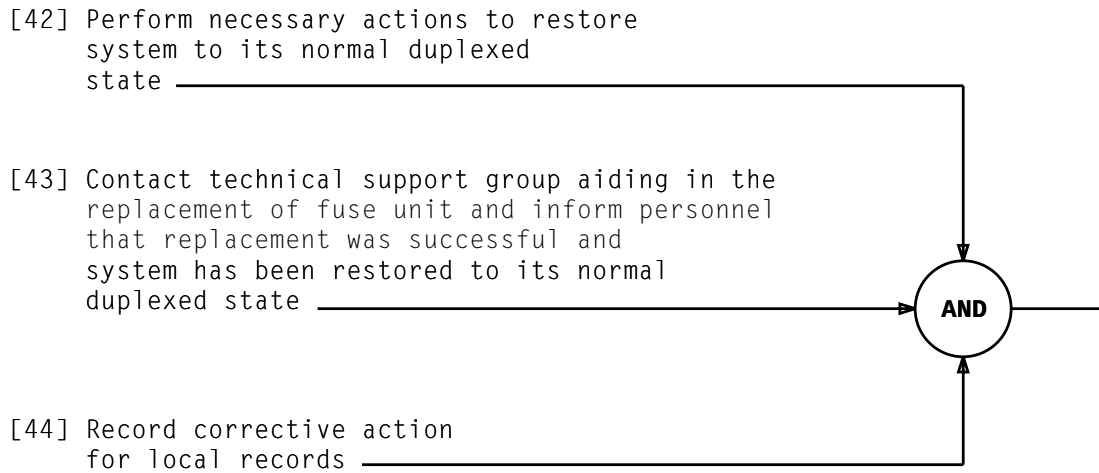
[41] Restore all -48V power to affected side of 1B Processor Complex (Bay 0 or 1) by charging capacitors and replacing the 5 1B Processor 45 Amp fuses previously removed from the BDFB frame [TABLE A] [DLP-540] _____

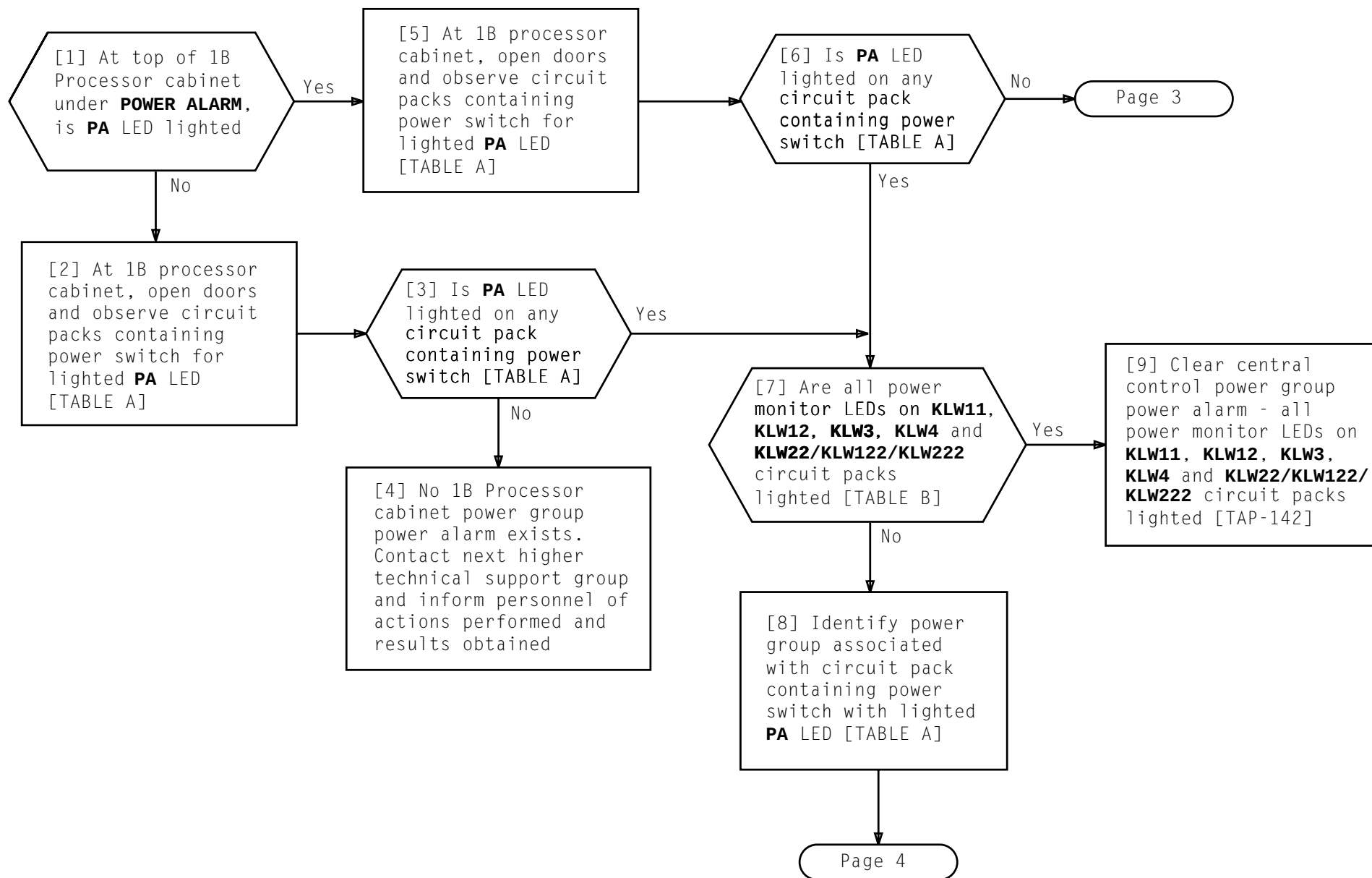
AND

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IDENTIFY AND CLEAR POWER GROUP POWER ALARM – POWER SWITCH PA LED LIGHTED IN 1B PROCESSOR CABINET

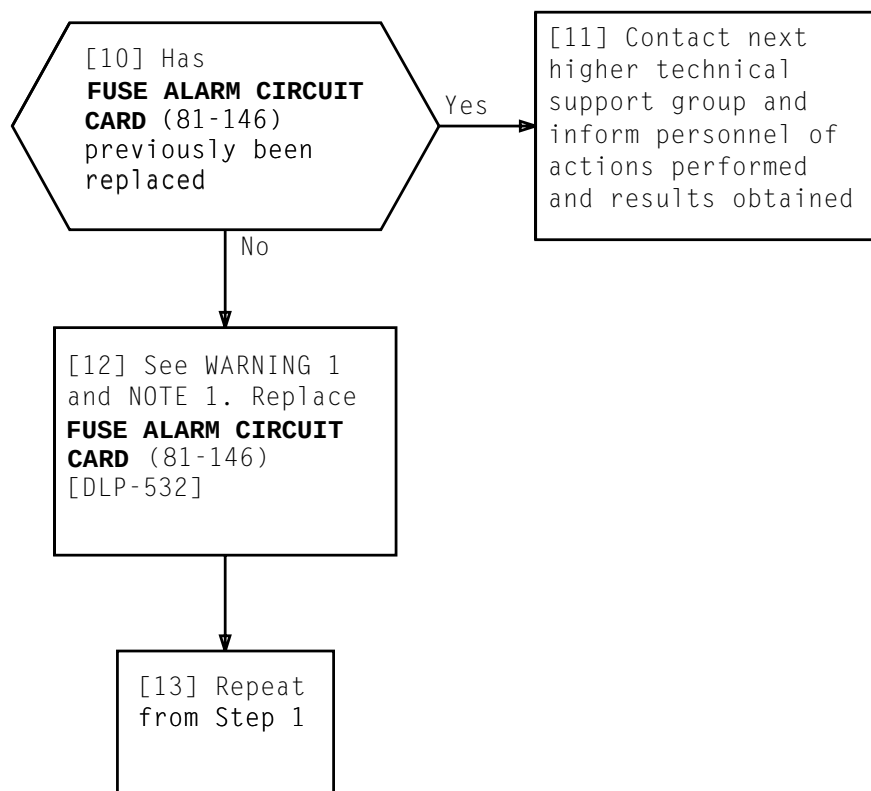
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TABLE A POWER GROUP CIRCUIT PACKS CONTAINING POWER SWITCH		
CIRCUIT PACK CONTAINING POWER SWITCH		ASSOCIATED POWER GROUP
IDENTIFIER	LOCATION	
KLW11	41-014	CC
KLW18	58-120	AUI
KLW25	58-086	MUP
KLW1	24-006 thru 24-078 24-104 thru 24-176	CS
KLW26	24-086	
KLW27	24-096	
KLW2	41-128 thru 41-176	PS
KLW15	58-168	SSD
KLW23	58-030	XPWR

TABLE B POWER MONITOR LEDS ON KLW11, KLW12, KLW3, KLW4 AND KLW22/KLW122 CIRCUIT PACKS		
CIRCUIT PACK		POWER MONITOR LEDS
IDENTIFIER	LOCATION	
KLW11	41-014	PA
		POWER BRANCH MA-MG VOLTAGE
		POWER BRANCH MA-MG CURRENT
KLW12	58-014	PA
		POWER BRANCH SA-SG VOLTAGE
		POWER BRANCH SA-SG CURRENT
		+24V MONITOR 0/1
KLW3	41-104	PA
KLW4	41-112	PA
KLW22/ KLW122/ KLW222	41-120	PA

**IDENTIFY AND CLEAR POWER GROUP POWER ALARM – POWER SWITCH PA
LED LIGHTED IN 1B PROCESSOR CABINET**

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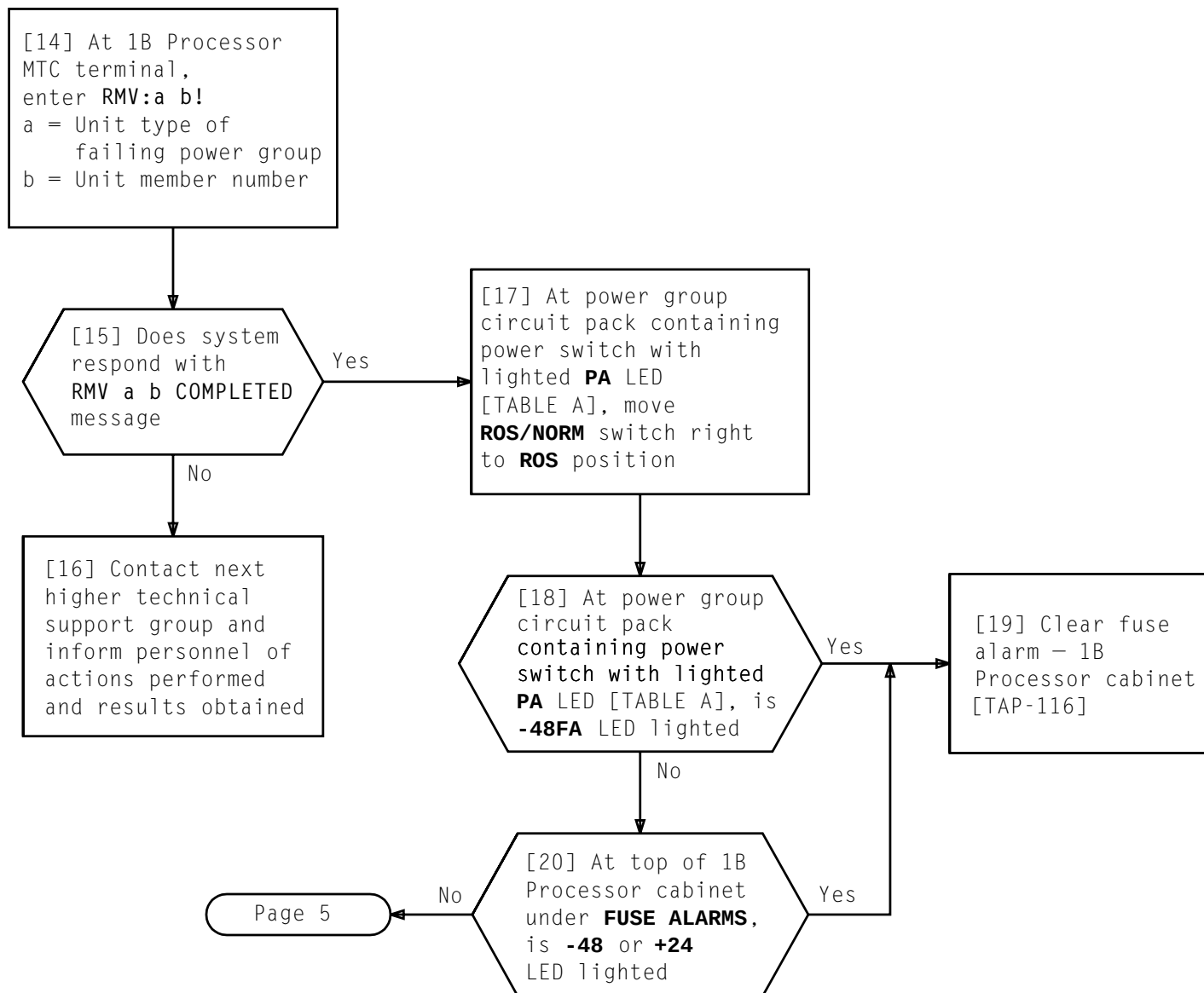


NOTE 1
Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding.

WARNING 1
A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

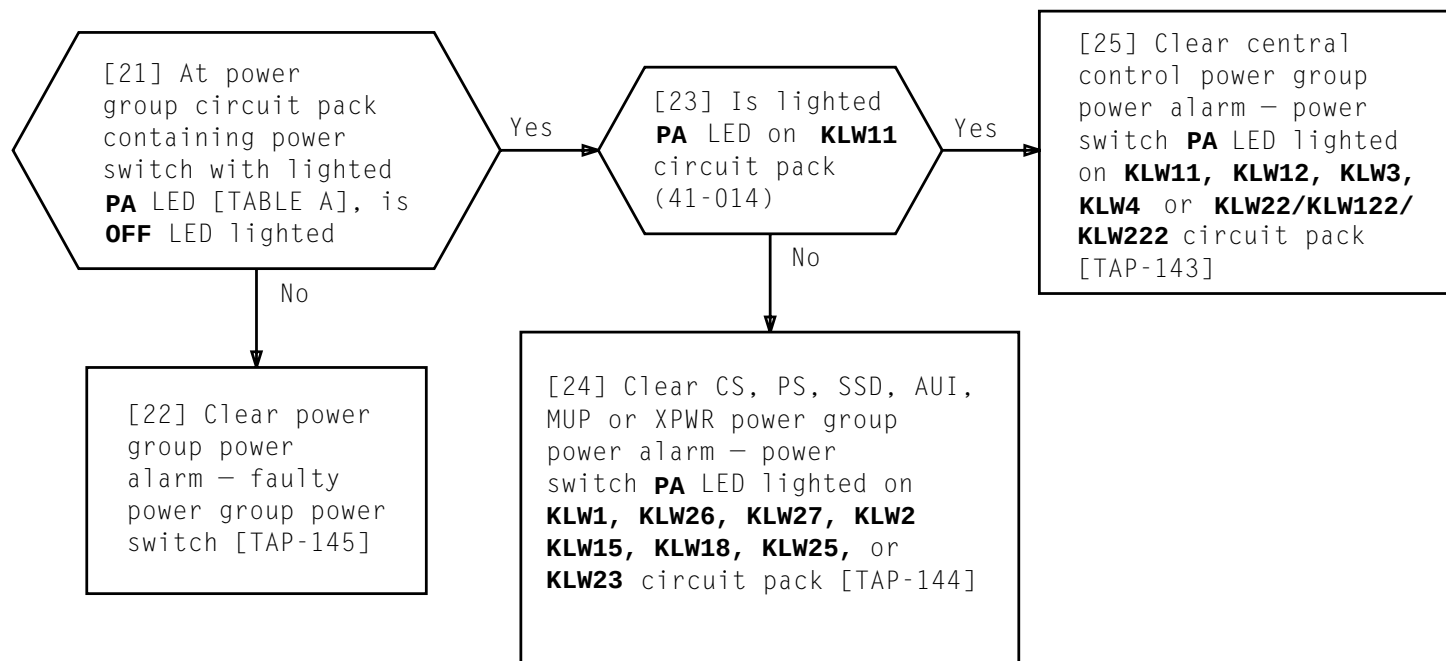
IDENTIFY AND CLEAR POWER GROUP POWER ALARM — POWER SWITCH PA LED LIGHTED IN 1B PROCESSOR CABINET

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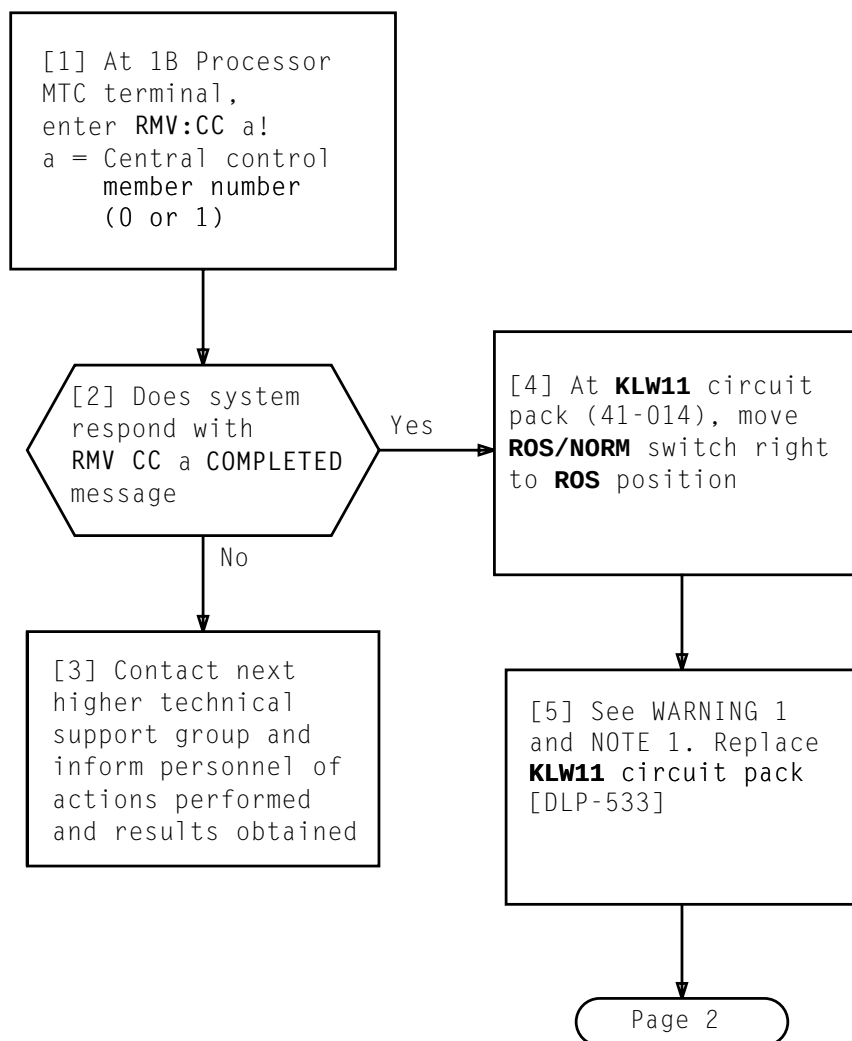
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IDENTIFY AND CLEAR POWER GROUP POWER ALARM – POWER SWITCH PA LED LIGHTED IN 1B PROCESSOR CABINET

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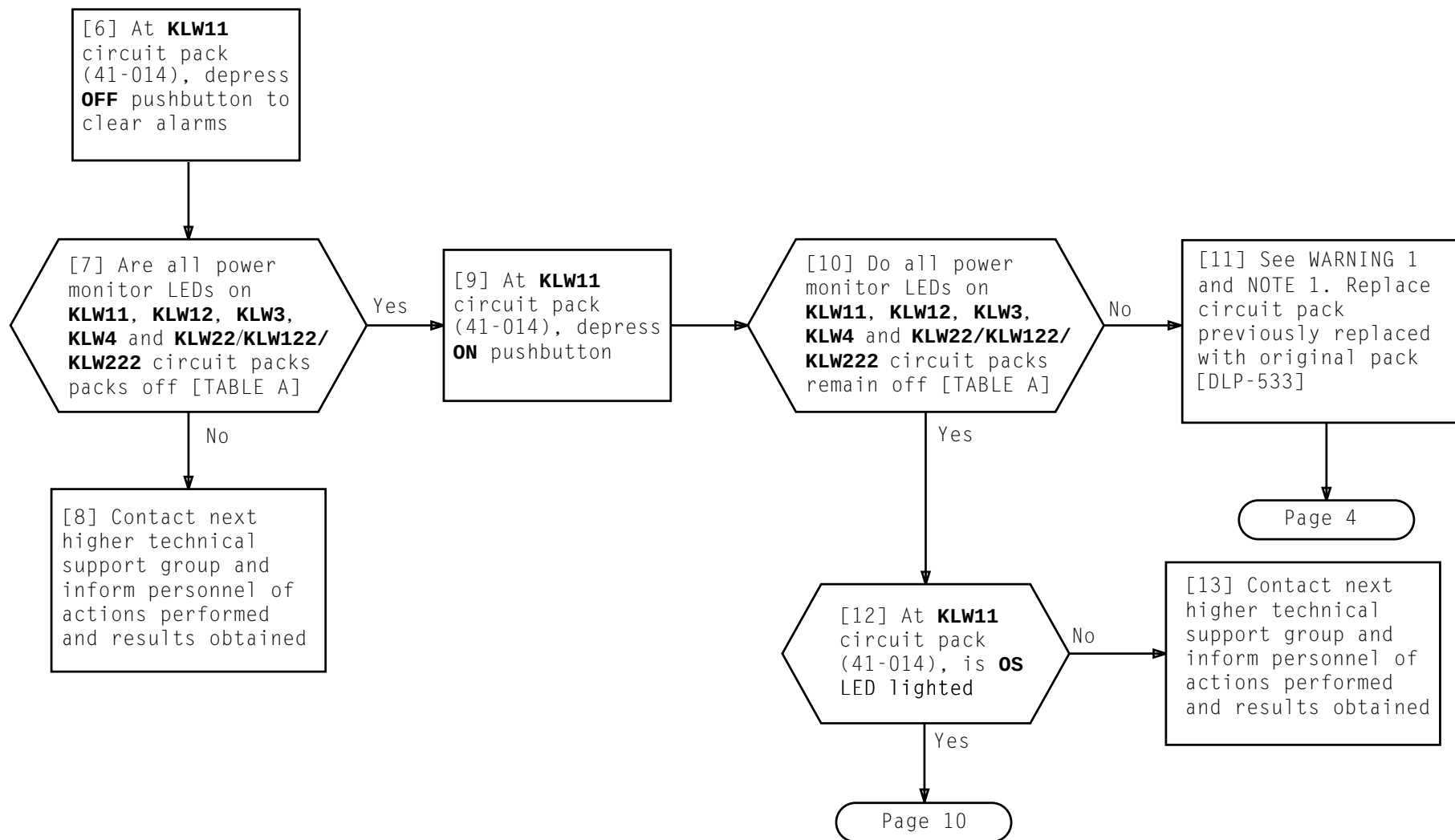


NOTE 1
Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 1
A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

CLEAR CENTRAL CONTROL POWER GROUP POWER ALARM – ALL POWER MONITOR LEDs ON K LW11, K LW12, K LW3, K LW4 AND K LW22/K LW122/K LW222 CIRCUIT PACKS LIGHTED

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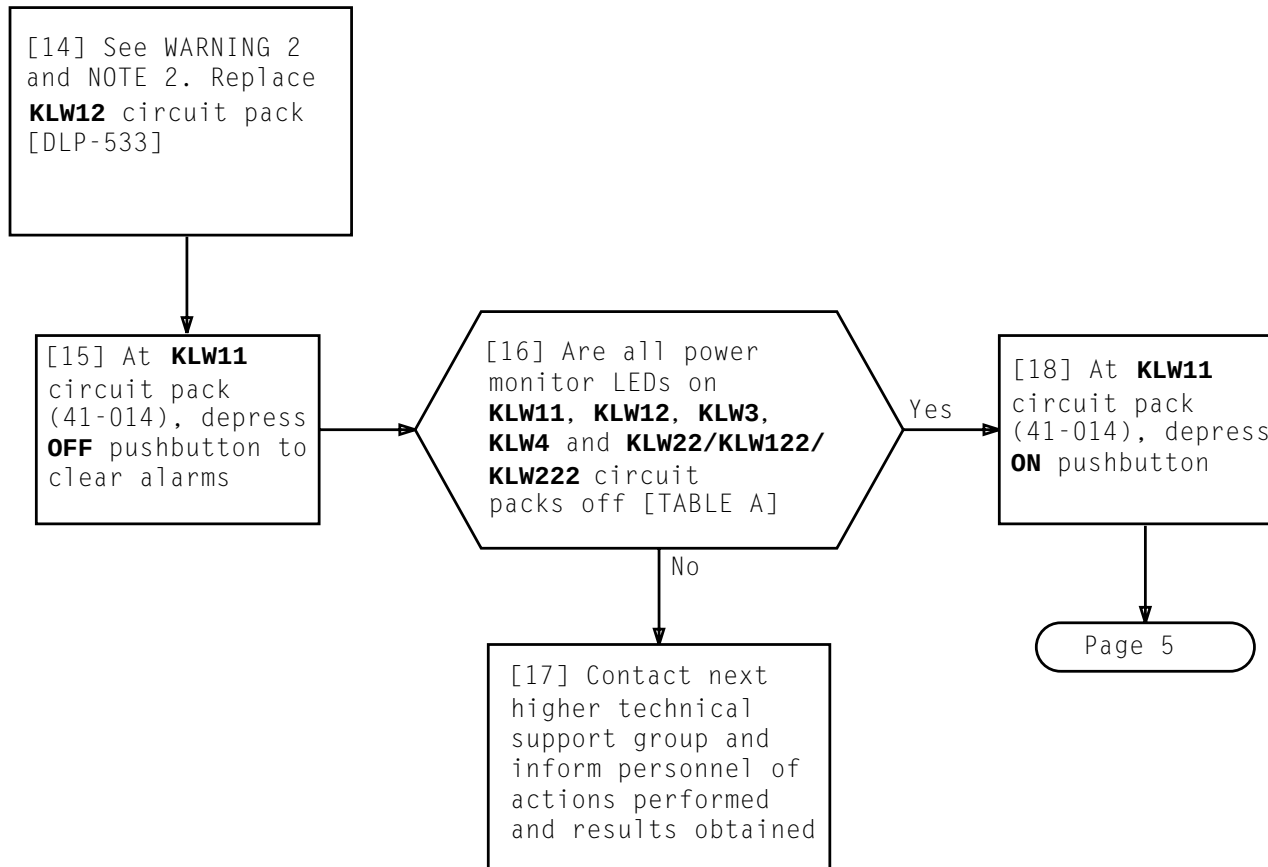
CLEAR CENTRAL CONTROL POWER GROUP POWER ALARM – ALL POWER MONITOR LEDs ON KWL11, KWL12, KWL3, KWL4 AND KWL22/KWL122/KWL222 CIRCUIT PACKS LIGHTED

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TABLE A POWER MONITOR LEDS ON KLW11, KLW12, KLW3, KLW4 AND KLW22/KLW122 CIRCUIT PACKS		
CIRCUIT PACK		POWER MONITOR LEDS
IDENTIFIER	LOCATION	
KLW11	41-014	PA
		POWER BRANCH MA-MG VOLTAGE
		POWER BRANCH MA-MG CURRENT
KLW12	58-014	PA
		POWER BRANCH SA-SG VOLTAGE
		POWER BRANCH SA-SG CURRENT
		+24V MONITOR 0/1
KLW3	41-104	PA
KLW4	41-112	PA
KLW22/ KLW122/ KLW222	41-120	PA

**CLEAR CENTRAL CONTROL POWER GROUP POWER ALARM – ALL POWER
MONITOR LEDs ON KLW11, KLW12, KLW3, KLW4 AND KLW22/KLW122/KLW222
CIRCUIT PACKS LIGHTED**

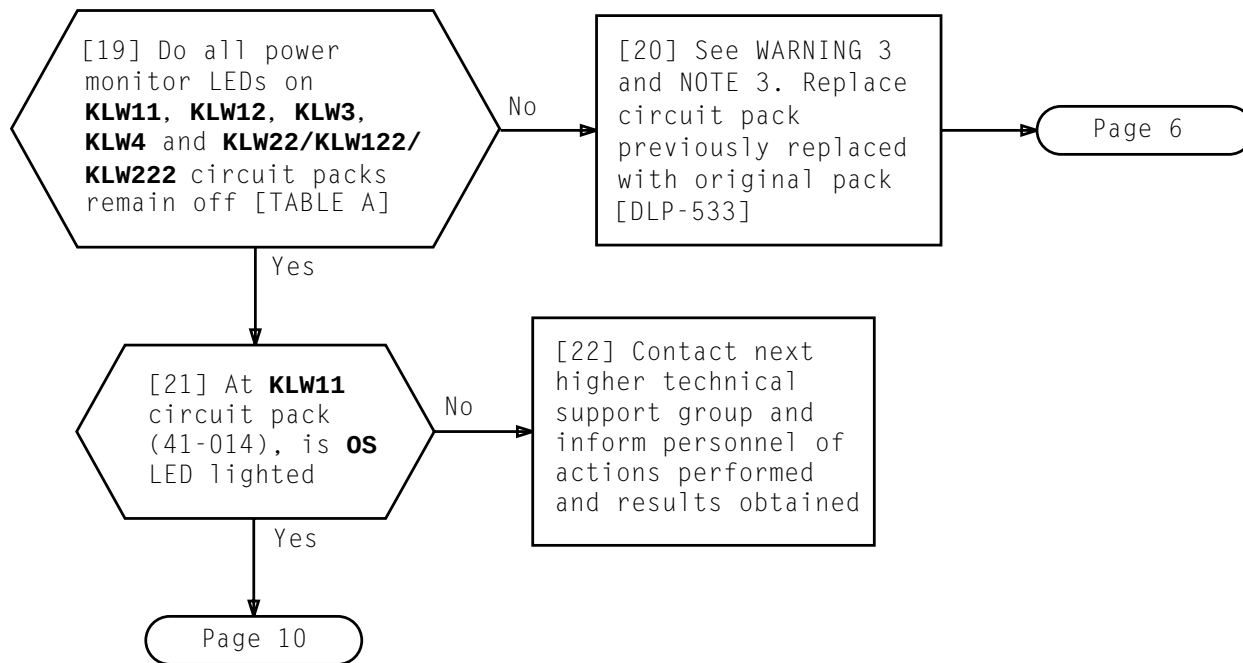
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NOTE 2
Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 2
A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

CLEAR CENTRAL CONTROL POWER GROUP POWER ALARM – ALL POWER MONITOR LEDs ON KLW11, KLW12, KLW3, KLW4 AND KLW22/KLW122/KLW222 CIRCUIT PACKS LIGHTED



NOTE 3
Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 3
A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

CLEAR CENTRAL CONTROL POWER GROUP POWER ALARM – ALL POWER MONITOR LEDs ON KLW11, KLW12, KLW3, KLW4 AND KLW22/KLW122/KLW222 CIRCUIT PACKS LIGHTED

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[23] Identify first
UN339 circuit pack
[TABLE B]

[24] See WARNING 3 and
NOTE 3. Replace
UN339 circuit pack
[DLP-533]

[25] At **KLW11**
circuit pack
(41-014), depress
OFF pushbutton to
clear alarms

AND

[26] Are all power
monitor LEDs on
KLW11, KLW12, KLW3,
KLW4 and **KLW22/KLW122/**
KLW222 circuit packs
off [TABLE A]

Yes

[28] At **KLW11**
circuit pack
(41-014), depress
ON pushbutton

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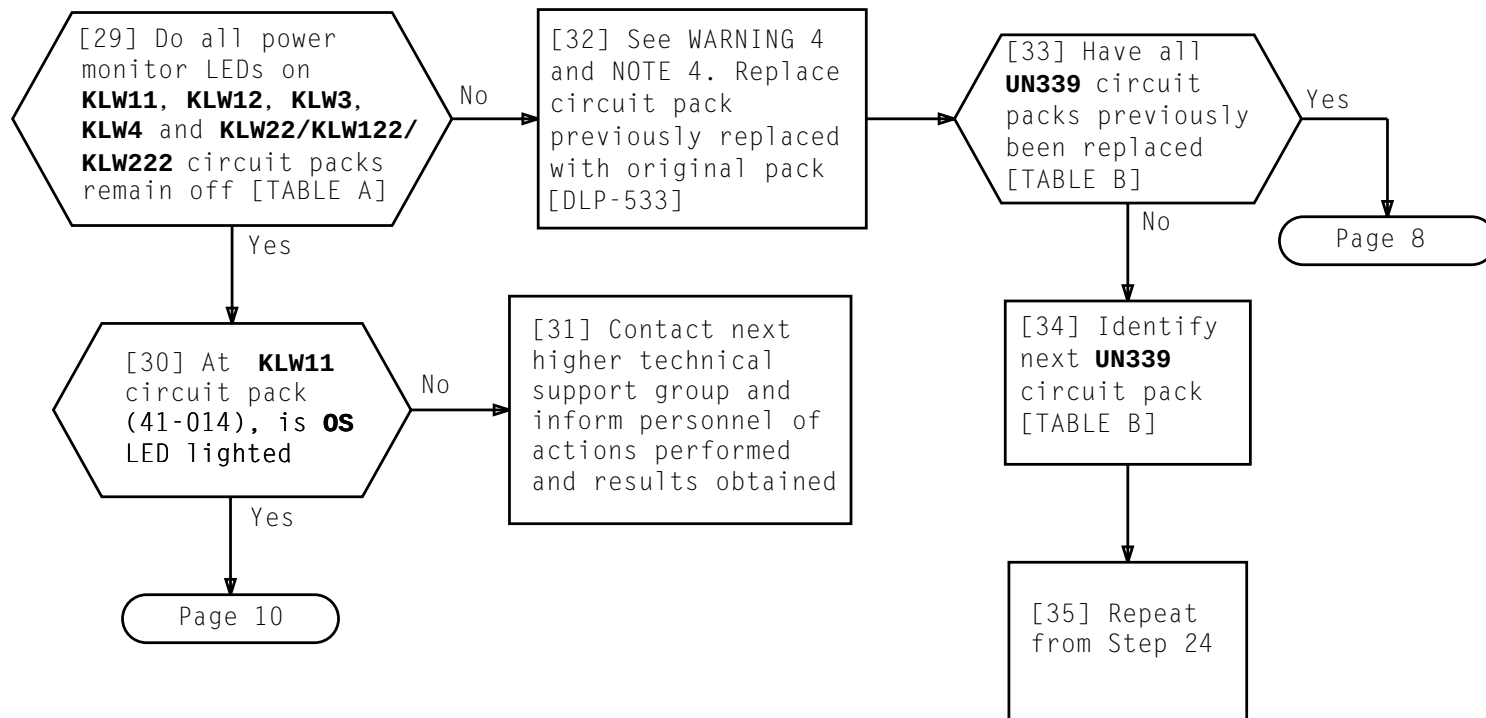
No

[27] Contact next
higher technical
support group and
inform personnel of
actions performed
and results obtained

TABLE B UN339 CIRCUIT PACKS	
CIRCUIT PACK	
NAME	LOCATION
UN339	70-014
	70-030
	70-070
	70-086

**CLEAR CENTRAL CONTROL POWER GROUP POWER ALARM – ALL POWER
MONITOR LEDs ON KLW11, KLW12, KLW3, KLW4 AND KLW22/KLW122/KLW222
CIRCUIT PACKS LIGHTED**

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NOTE 4
Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 4
A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

CLEAR CENTRAL CONTROL POWER GROUP POWER ALARM – ALL POWER MONITOR LEDs ON K LW11, K LW12, K LW3, K LW4 AND K LW22/K LW122/K LW222 CIRCUIT PACKS LIGHTED

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[36] Identify first
UN340 circuit pack
[TABLE C]

[37] See WARNING 4 and
NOTE 4. Replace
UN340 circuit pack
[DLP-533]

[38] At **KLW11**
circuit pack
(41-014), depress
OFF pushbutton to
clear alarms

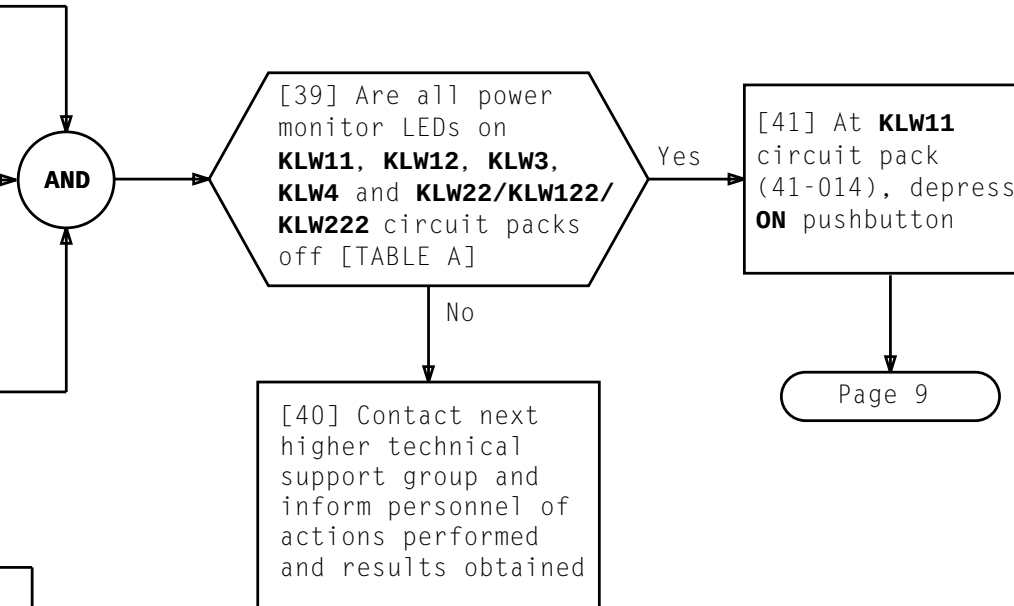
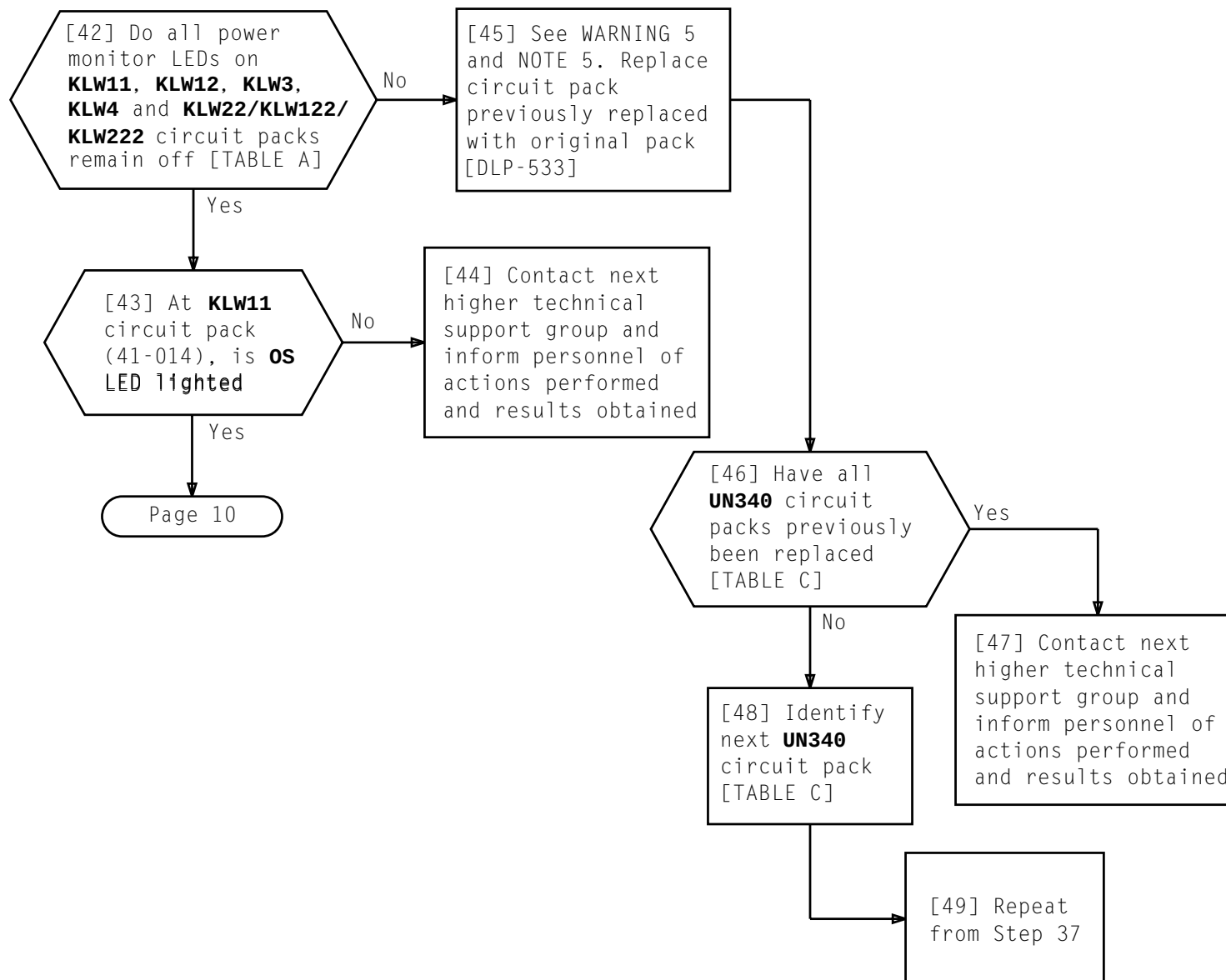


TABLE C UN340 CIRCUIT PACKS	
CIRCUIT PACK	
NAME	LOCATION
UN340	70-038
	70-062

**CLEAR CENTRAL CONTROL POWER GROUP POWER ALARM – ALL POWER
MONITOR LEDs ON KLW11, KLW12, KLW3, KLW4 AND KLW22/KLW122/KLW222
CIRCUIT PACKS LIGHTED**

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NOTE 5
Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

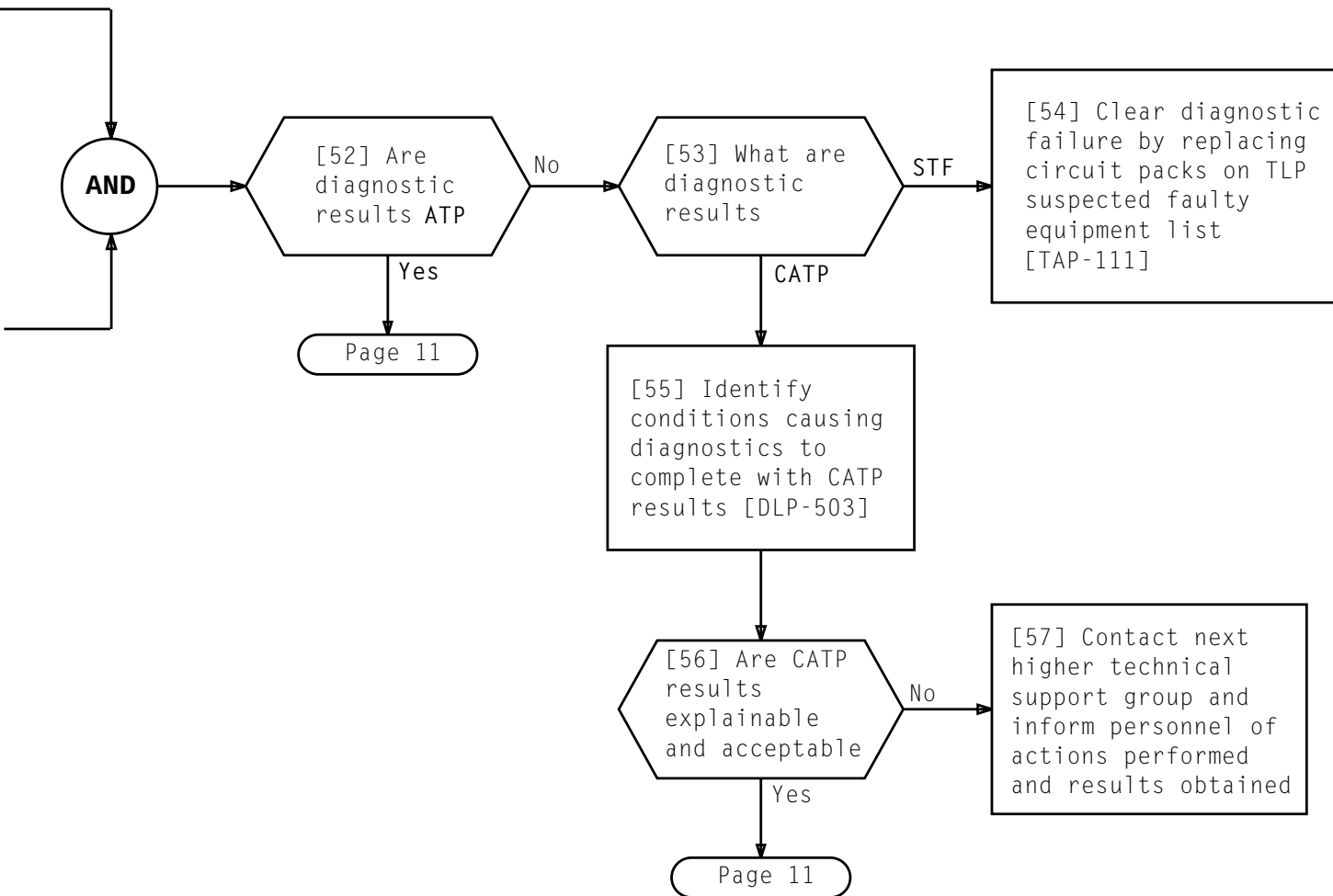
WARNING 5
A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

CLEAR CENTRAL CONTROL POWER GROUP POWER ALARM – ALL POWER MONITOR LEDs ON KLOW11, KLOW12, KLOW3, KLOW4 AND KLOW22/KLOW122/KLOW222 CIRCUIT PACKS LIGHTED

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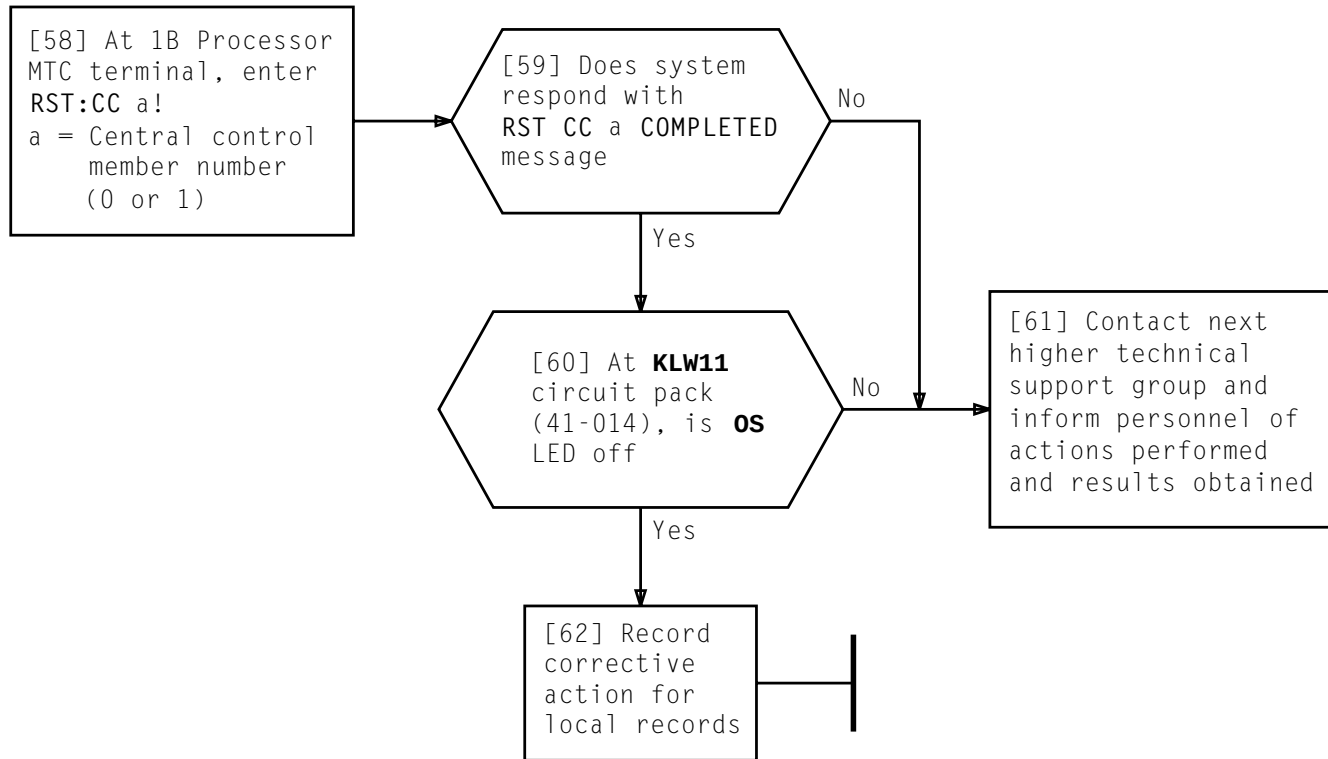
[50] At **KLW11** circuit pack (41-014), move **ROS/NORM** switch left to **NORM** position

[51] Allow ample time for diagnostics to complete



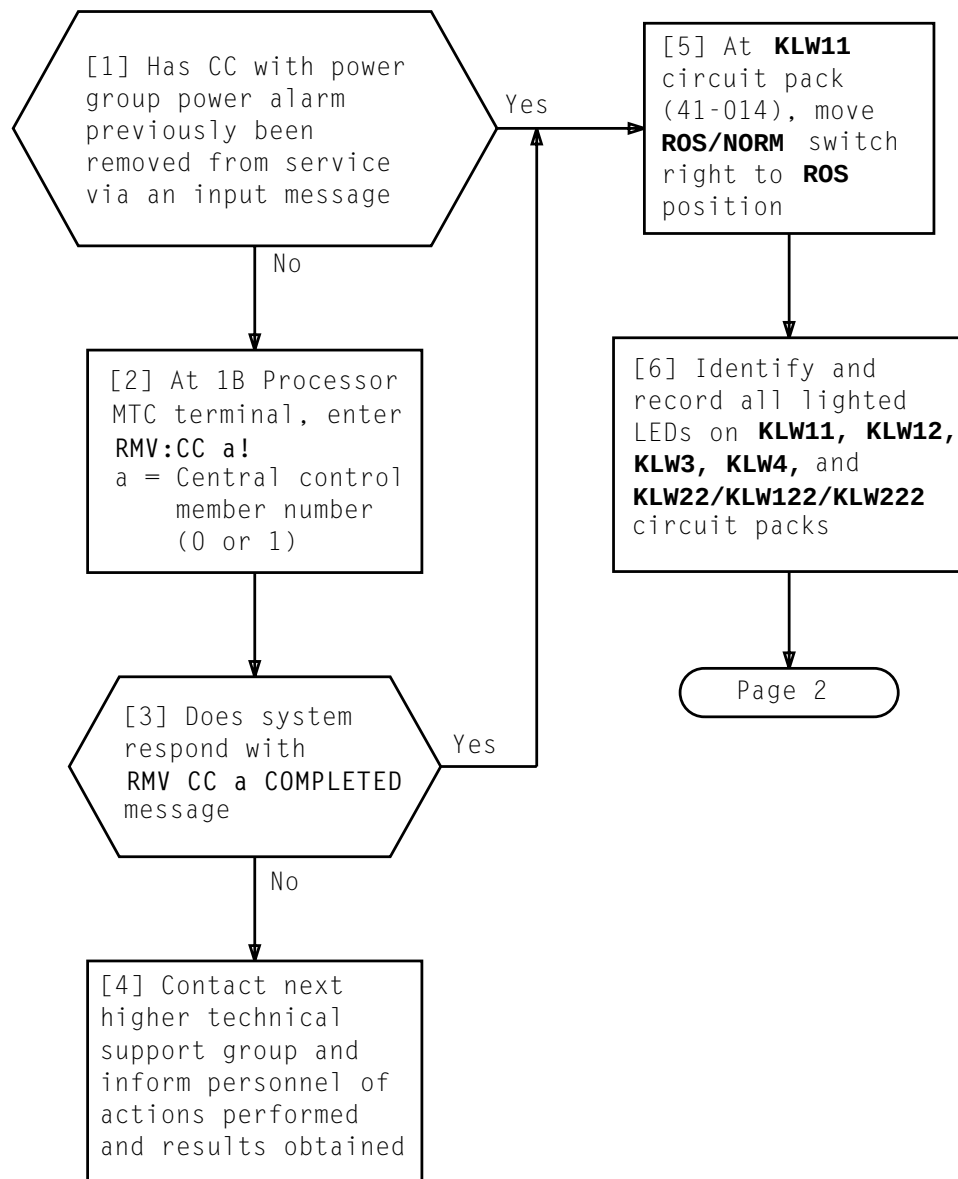
CLEAR CENTRAL CONTROL POWER GROUP POWER ALARM – ALL POWER MONITOR LEDs ON KLW11, KLW12, KLW3, KLW4 AND KLW22/KLW122/KLW222 CIRCUIT PACKS LIGHTED

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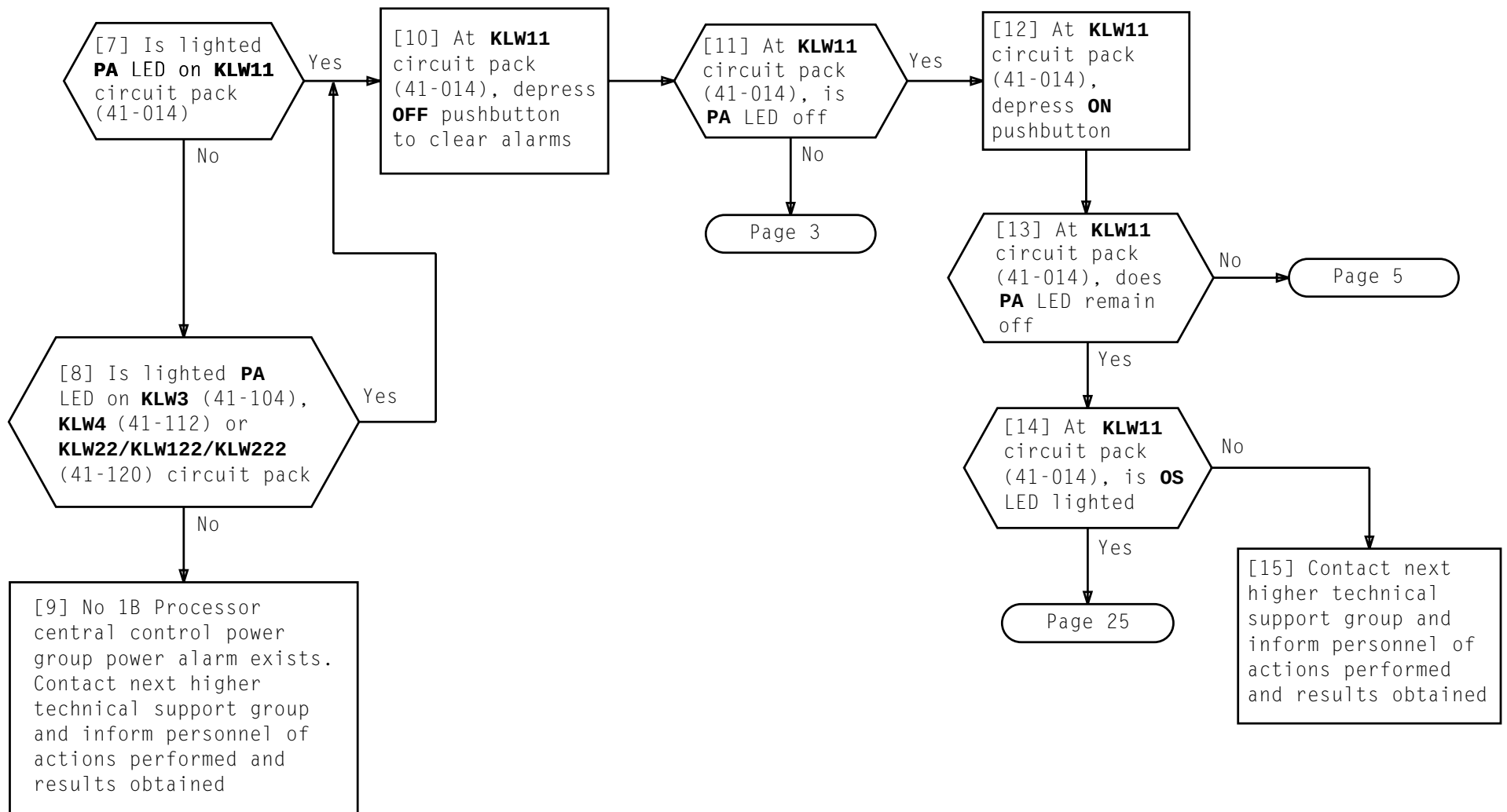
CLEAR CENTRAL CONTROL POWER GROUP POWER ALARM – ALL POWER MONITOR LEDs ON K LW11, K LW12, K LW3, K LW4 AND K LW22/K LW122/K LW222 CIRCUIT PACKS LIGHTED

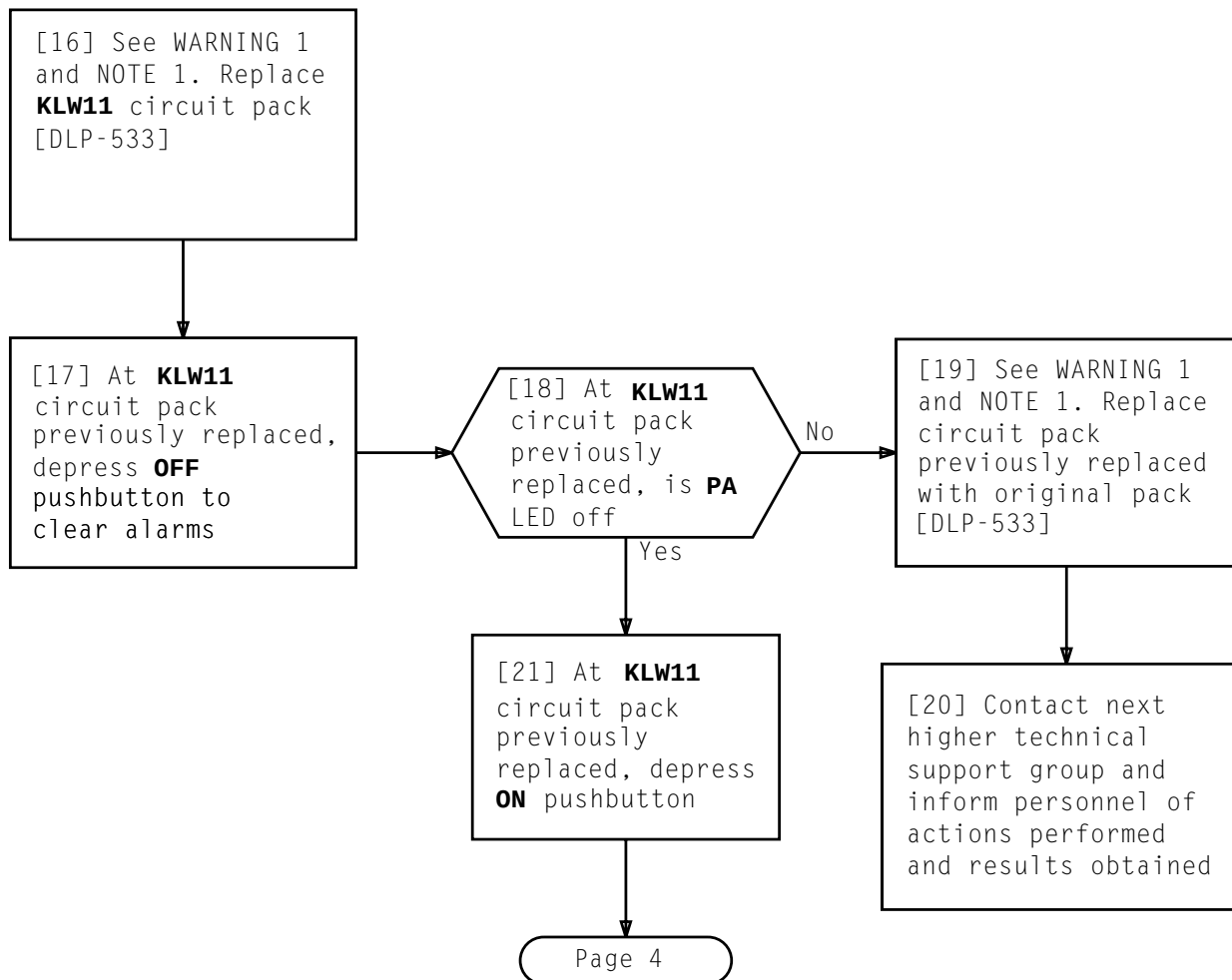
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CLEAR CENTRAL CONTROL POWER GROUP POWER ALARM - POWER SWITCH PA LED LIGHTED ON K LW11, K LW12, K LW3, K LW4 OR K LW22/K LW122/K LW222 CIRCUIT PACK

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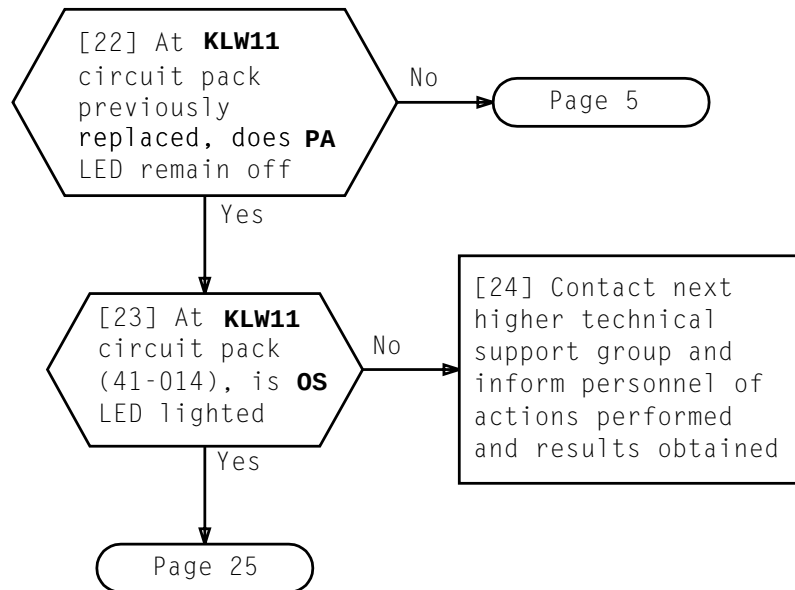


NOTE 1
Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 1
A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

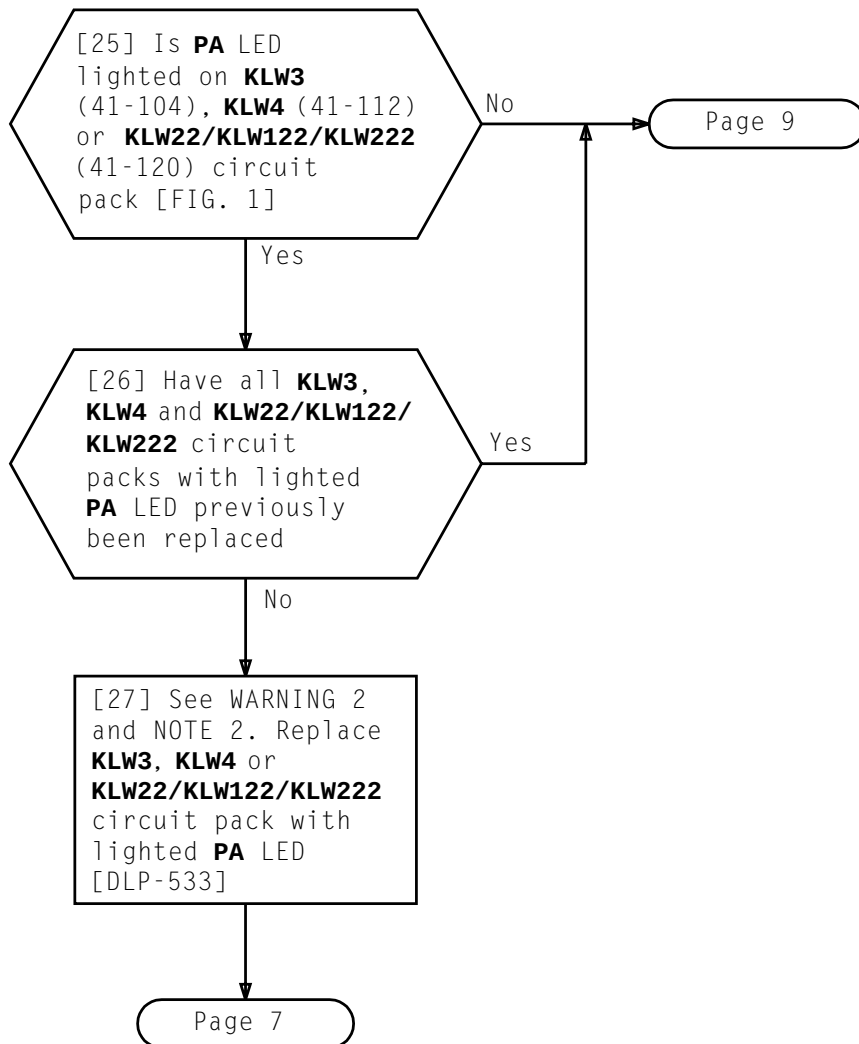
CLEAR CENTRAL CONTROL POWER GROUP POWER ALARM - POWER SWITCH PA LED LIGHTED ON KWL11, KWL12, KWL3, KWL4 OR KWL22/KWL122/KWL222 CIRCUIT PACK

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CLEAR CENTRAL CONTROL POWER GROUP POWER ALARM - POWER SWITCH PA LED LIGHTED ON KWL11, KWL12, KWL3, KWL4 OR KWL22/KWL122/KWL222 CIRCUIT PACK

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NOTE 2
Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 2
A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

CLEAR CENTRAL CONTROL POWER GROUP POWER ALARM - POWER SWITCH PA LED LIGHTED ON KWL11, KWL12, KWL3, KWL4 OR KWL22/KWL122/KWL222 CIRCUIT PACK

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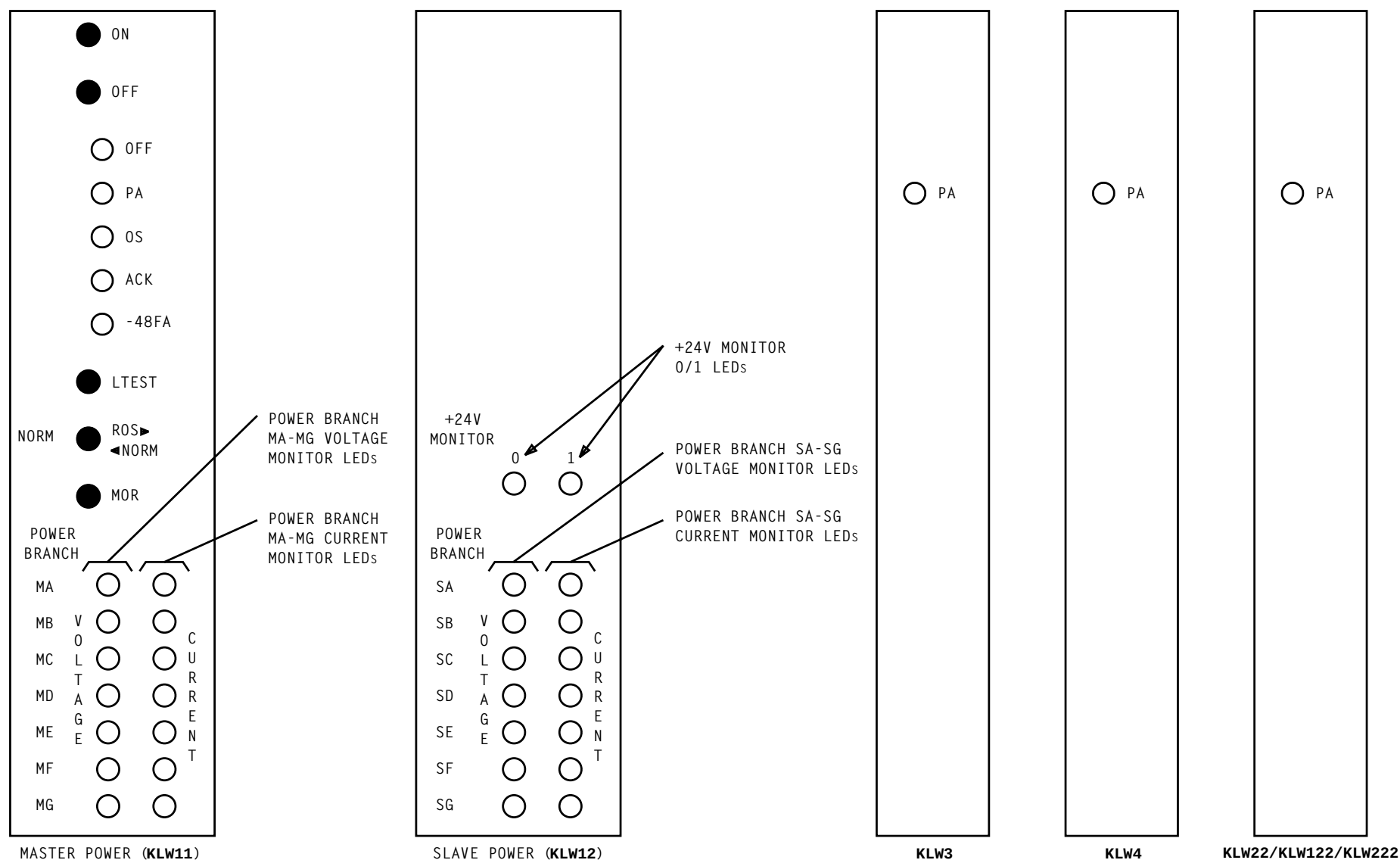
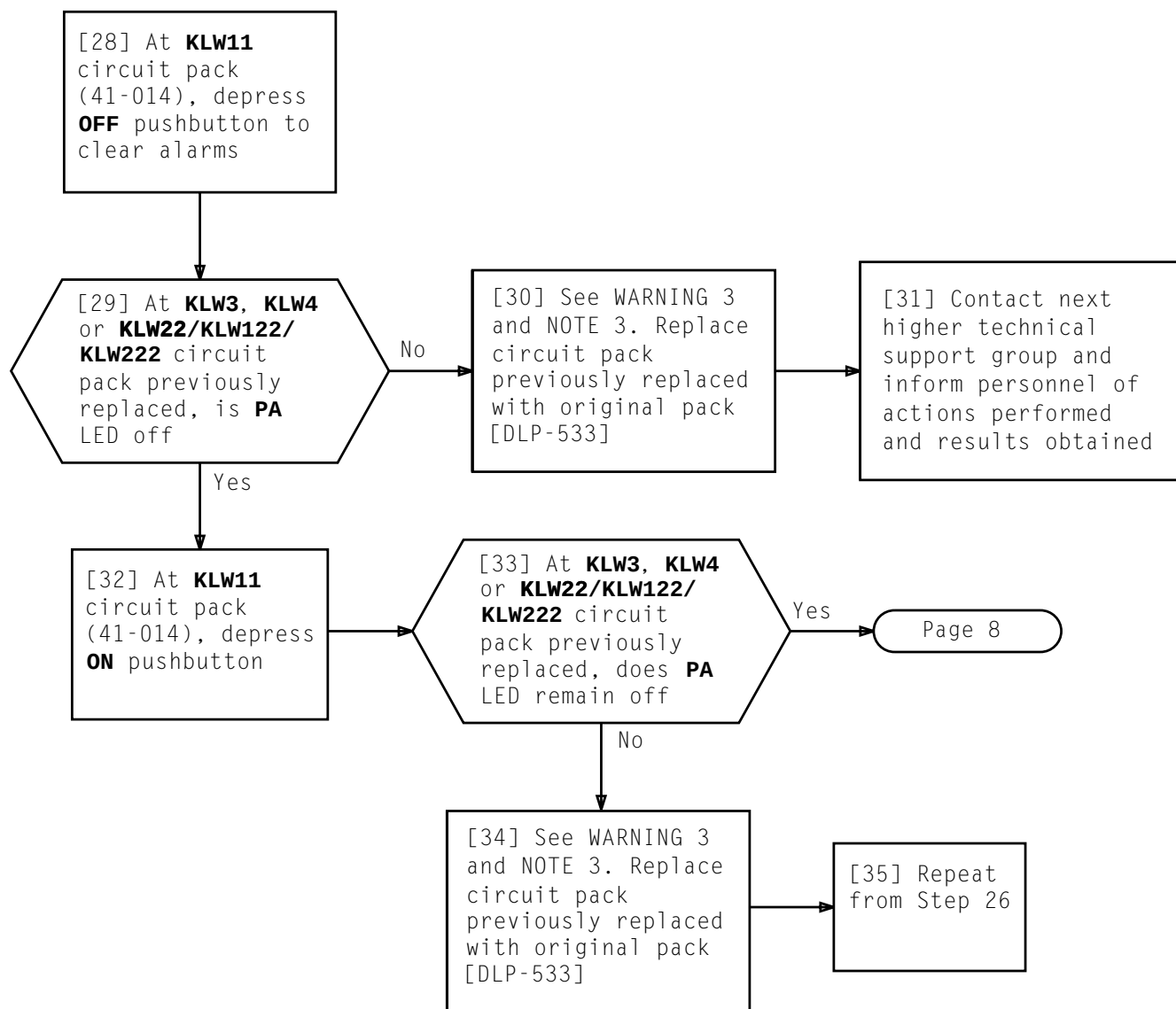


FIG. 1 – Example of Power Monitor LEDs on KWL11, KWL12, KWL3, KWL4 and KWL22/KWL122/KWL222 Circuit Packs

CLEAR CENTRAL CONTROL POWER GROUP POWER ALARM - POWER SWITCH PA LED LIGHTED ON KWL11, KWL12, KWL3, KWL4 OR KWL22/KWL122/KWL222 CIRCUIT PACK

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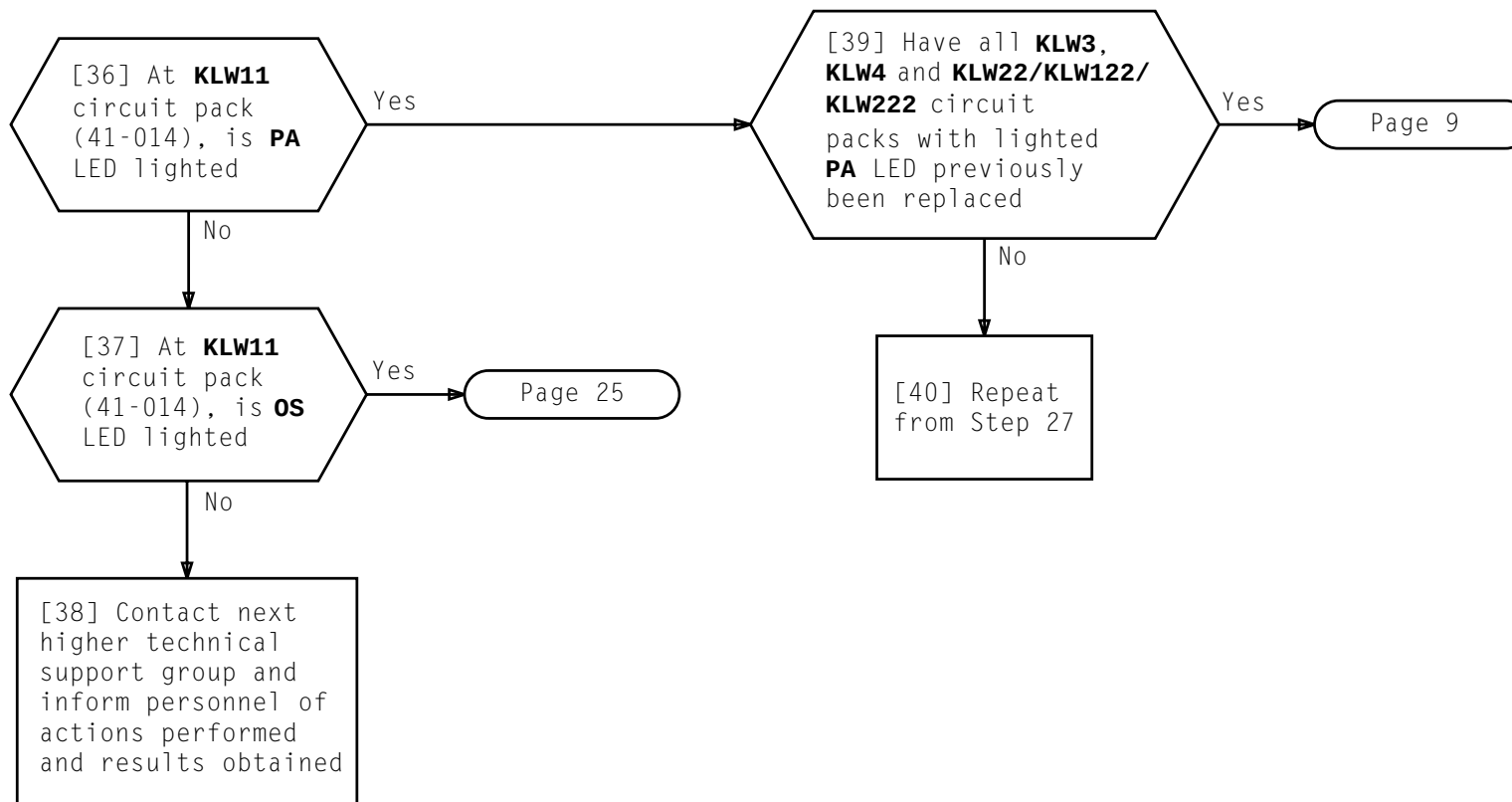


NOTE 3
Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 3
A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

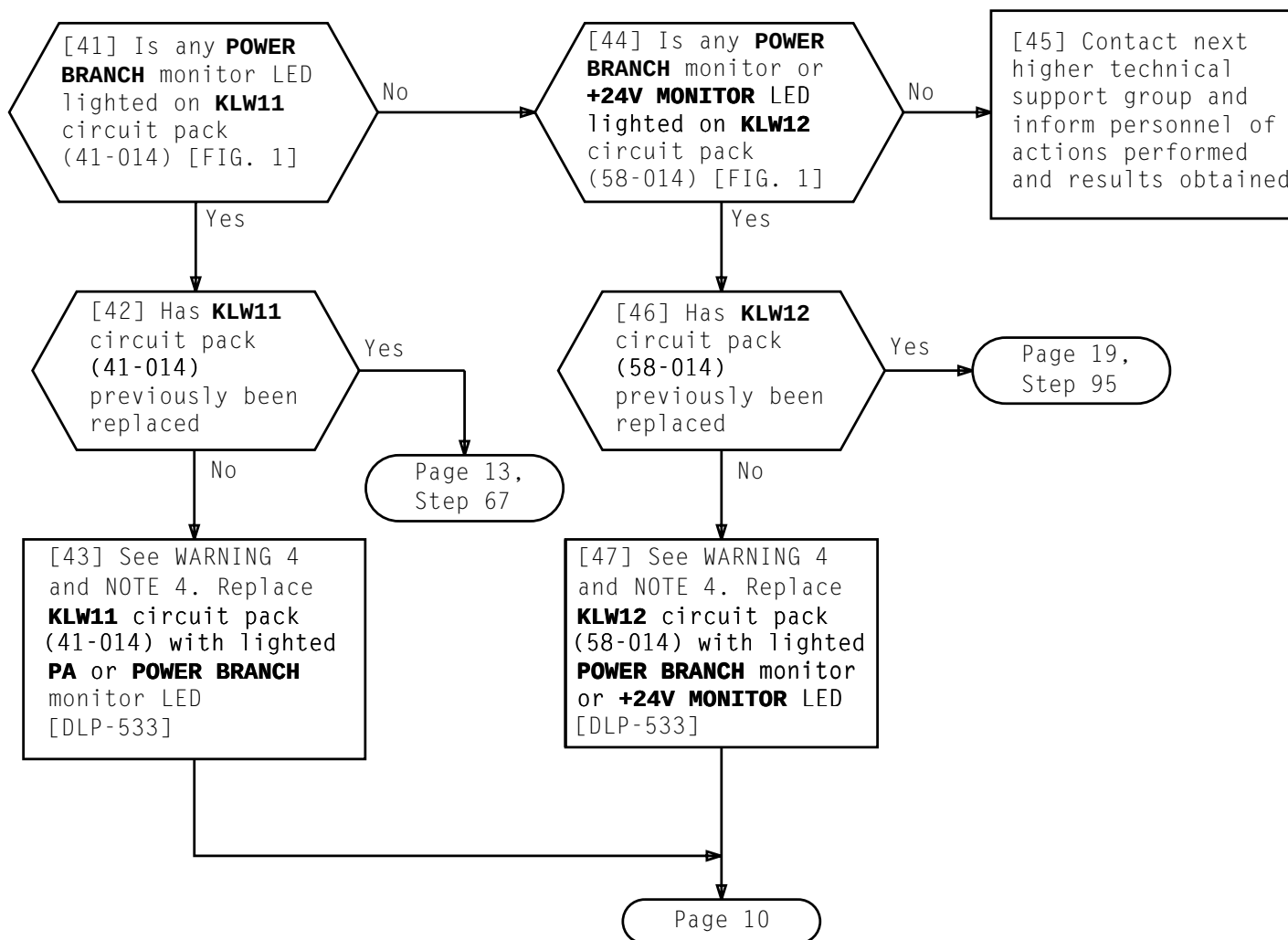
CLEAR CENTRAL CONTROL POWER GROUP POWER ALARM - POWER SWITCH PA LED LIGHTED ON KWL11, KWL12, KWL3, KWL4 OR KWL22/KWL122/KWL222 CIRCUIT PACK

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CLEAR CENTRAL CONTROL POWER GROUP POWER ALARM - POWER SWITCH PA LED LIGHTED ON K LW11, K LW12, K LW3, K LW4 OR K LW22/K LW122/K LW222 CIRCUIT PACK

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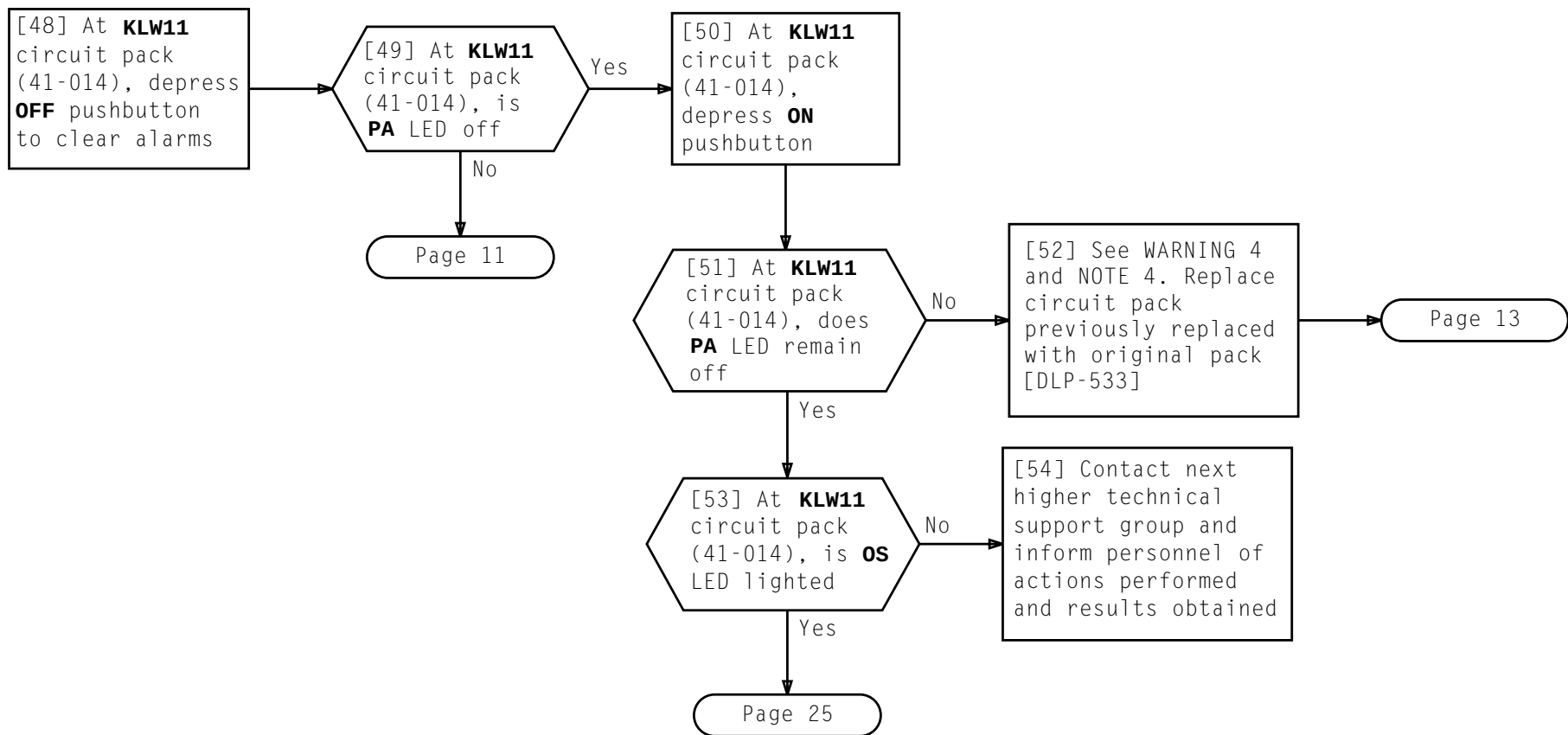


NOTE 4
Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 4
A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

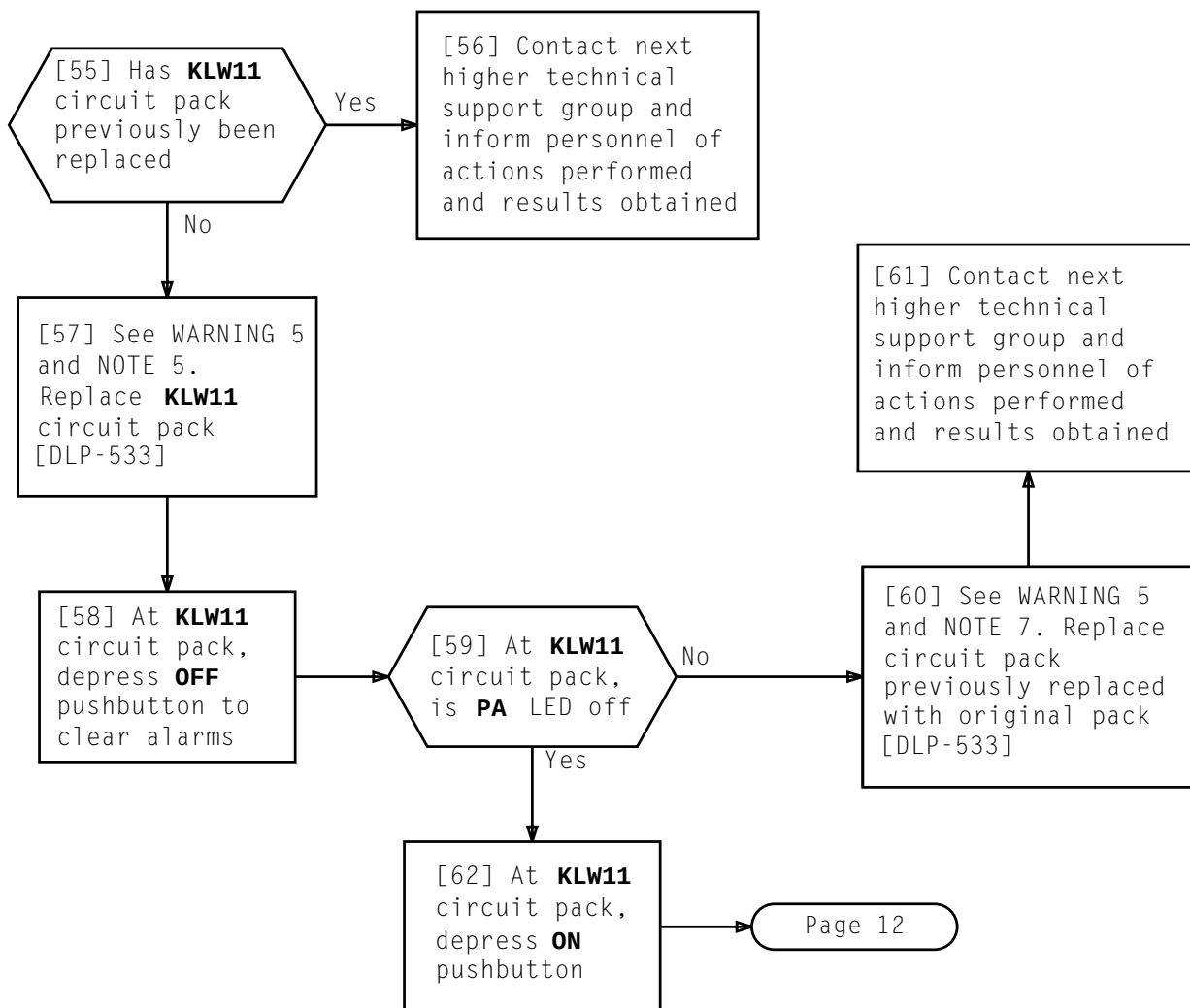
CLEAR CENTRAL CONTROL POWER GROUP POWER ALARM - POWER SWITCH PA LED LIGHTED ON KWL11, KWL12, KWL3, KWL4 OR KWL22/KWL122/KWL222 CIRCUIT PACK

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CLEAR CENTRAL CONTROL POWER GROUP POWER ALARM - POWER SWITCH PA LED LIGHTED ON KLW11, KLW12, KLW3, KLW4 OR KLW22/KLW122/KLW222 CIRCUIT PACK

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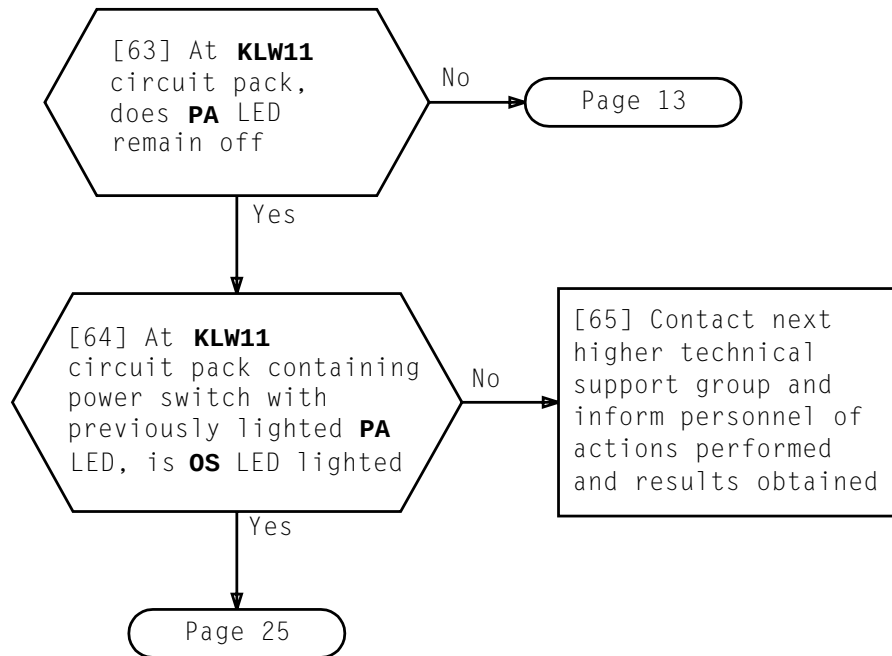


NOTE 5
Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 5
A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

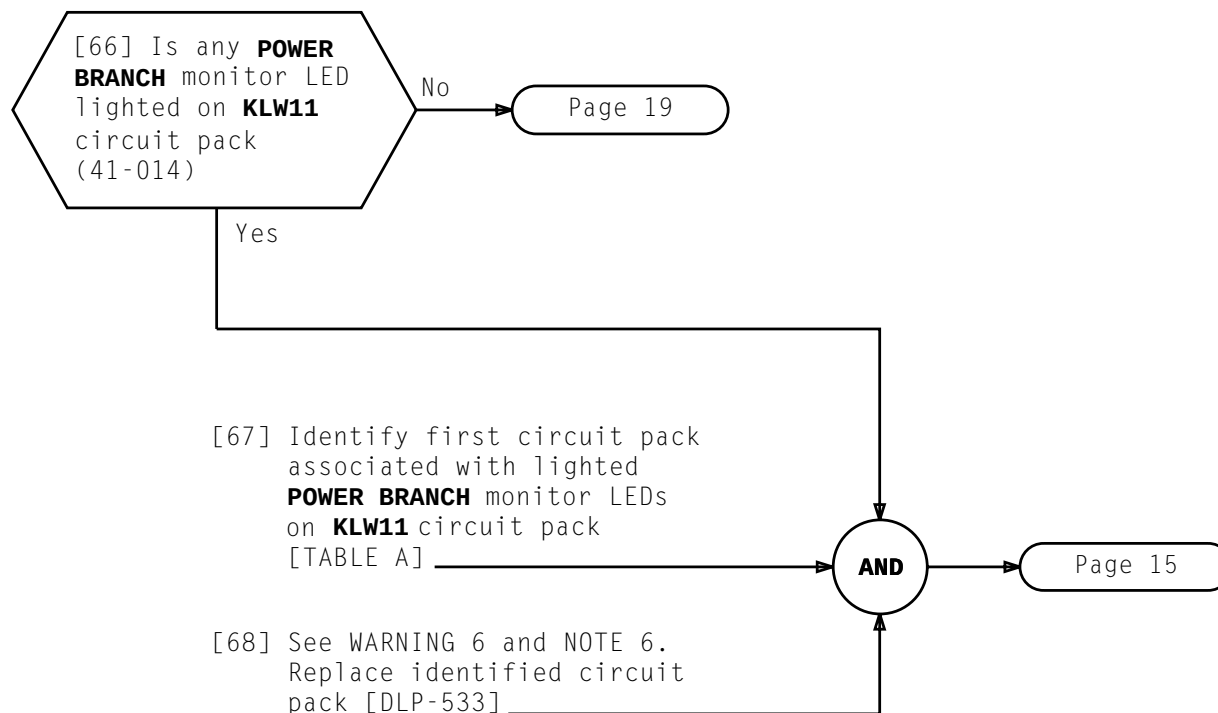
CLEAR CENTRAL CONTROL POWER GROUP POWER ALARM - POWER SWITCH PA LED LIGHTED ON KWL11, KWL12, KWL3, KWL4 OR KWL22/KWL122/KWL222 CIRCUIT PACK

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CLEAR CENTRAL CONTROL POWER GROUP POWER ALARM - POWER SWITCH PA LED LIGHTED ON KWL11, KWL12, KWL3, KWL4 OR KWL22/KWL122/KWL222 CIRCUIT PACK

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NOTE 6
Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 6
A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

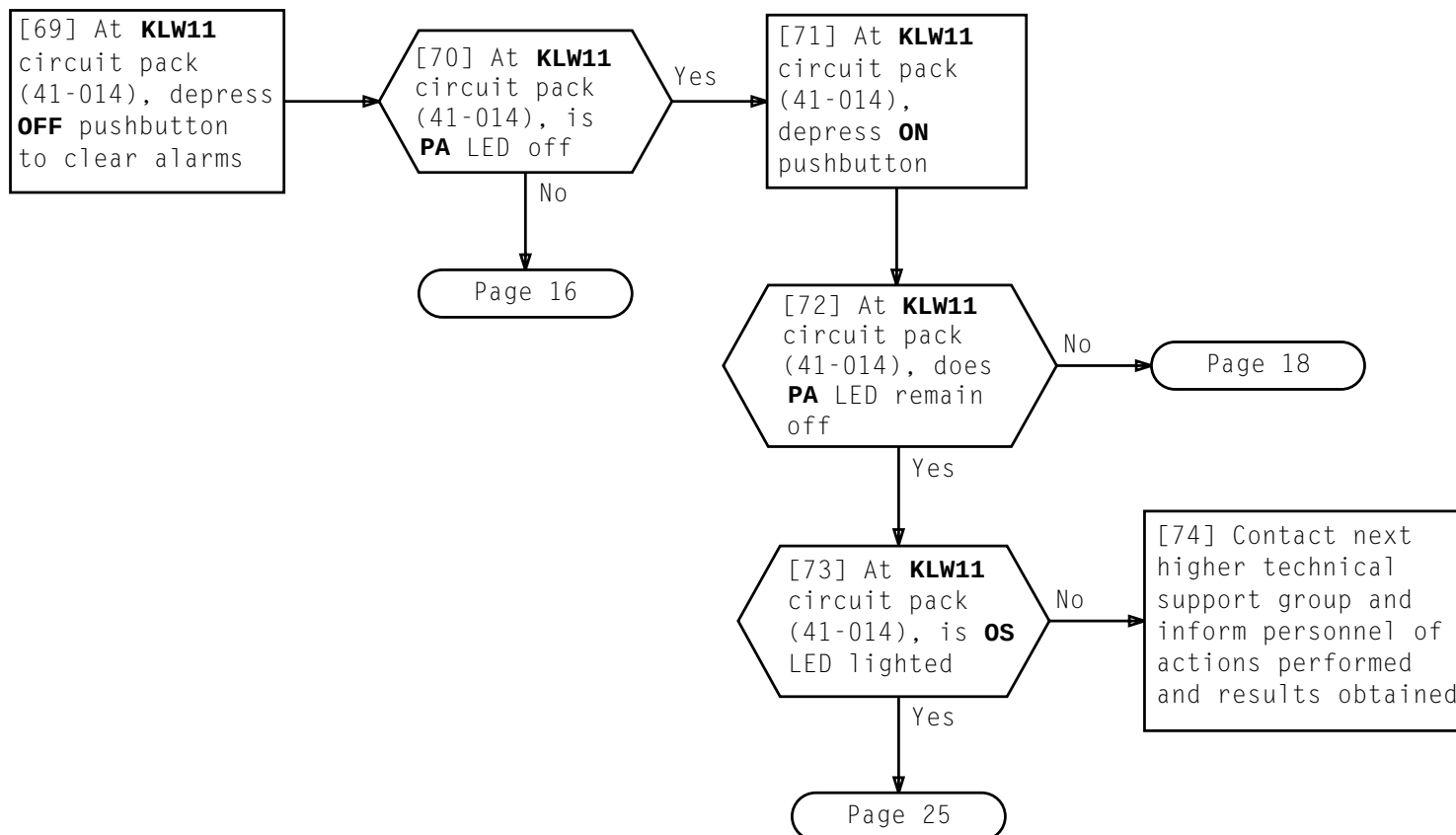
CLEAR CENTRAL CONTROL POWER GROUP POWER ALARM - POWER SWITCH PA LED LIGHTED ON K LW11, K LW12, K LW3, K LW4 OR K LW22/K LW122/K LW222 CIRCUIT PACK

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TABLE A CIRCUIT PACKS ASSOCIATED WITH K LW11 CIRCUIT PACK LEDs		
CIRCUIT PACK CONTAINING LED	LIGHTED LED	CIRCUIT PACKS ASSOCIATED WITH LIGHTED LEDs
K LW11	VOLTAGE MA CURRENT MA	K LW10/K LW210 (41-030)
	VOLTAGE MB CURRENT MB	K LW9 (41-038), K LW24 (41-062)
	VOLTAGE MC CURRENT MC	K LW8 (41-046), K LW24 (41-062)
	VOLTAGE MD CURRENT MD	K LW6 (41-054)
	VOLTAGE ME CURRENT ME	K LW28 (41-022)
	VOLTAGE MF CURRENT MF	K LW19 (41-070)
	VOLTAGE MG CURRENT MG	K LW6 (41-054)

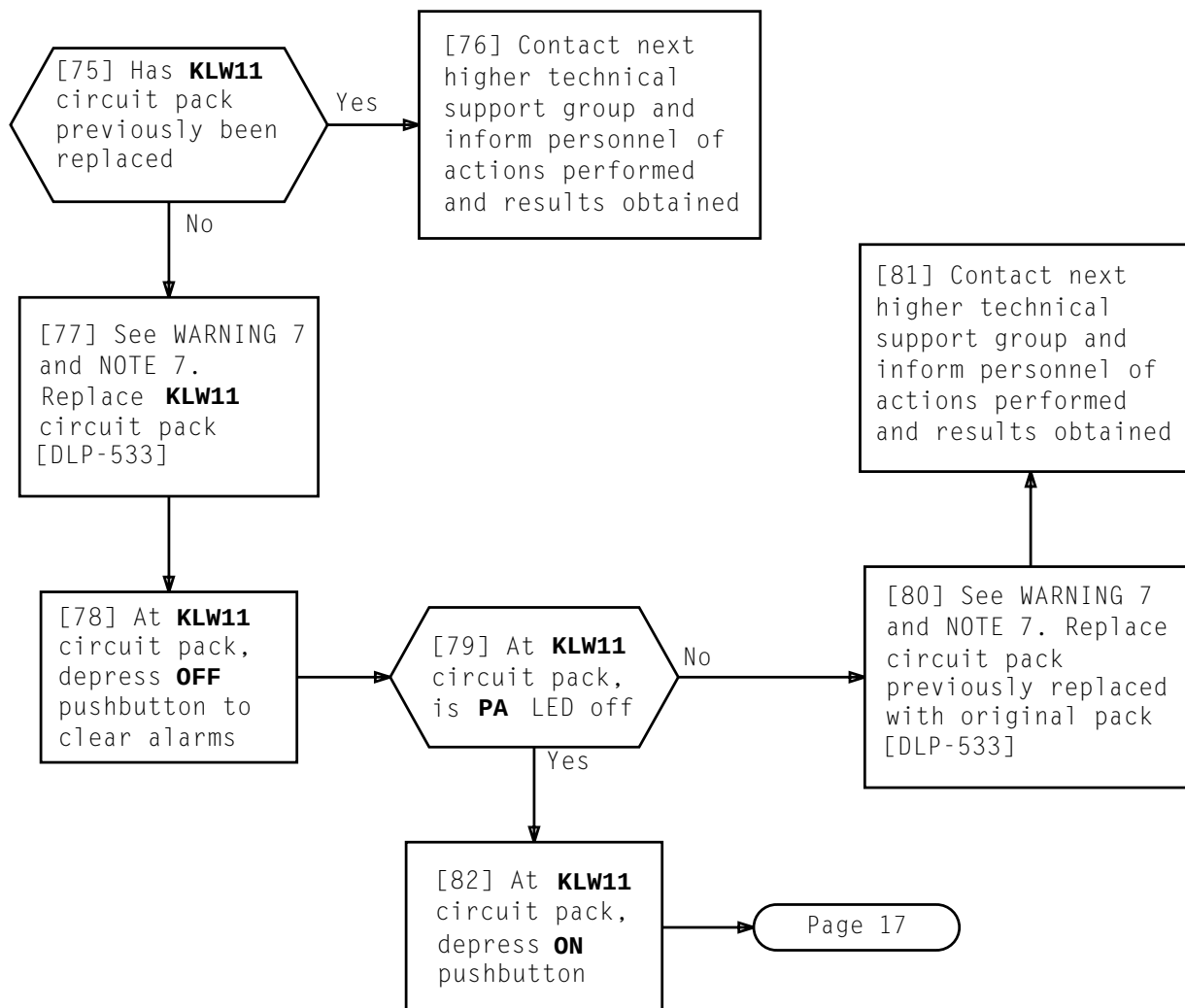
**CLEAR CENTRAL CONTROL POWER GROUP POWER ALARM - POWER SWITCH PA
LED LIGHTED ON K LW11, K LW12, K LW3, K LW4 OR K LW22/K LW122/K LW222
CIRCUIT PACK**

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CLEAR CENTRAL CONTROL POWER GROUP POWER ALARM - POWER SWITCH PA LED LIGHTED ON KLW11, KLW12, KLW3, KLW4 OR KLW22/KLW122/KLW222 CIRCUIT PACK

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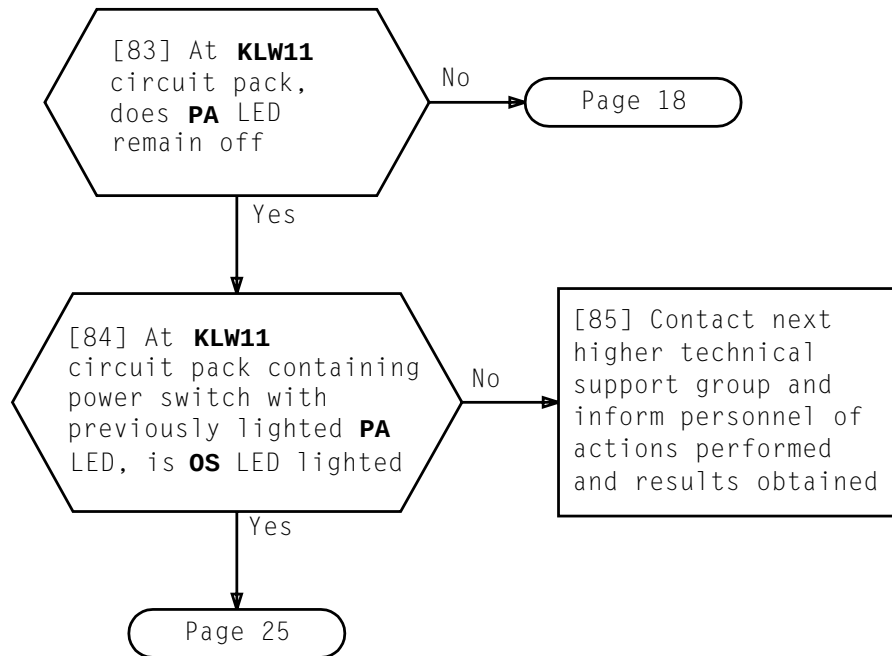


NOTE 7
Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 7
A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

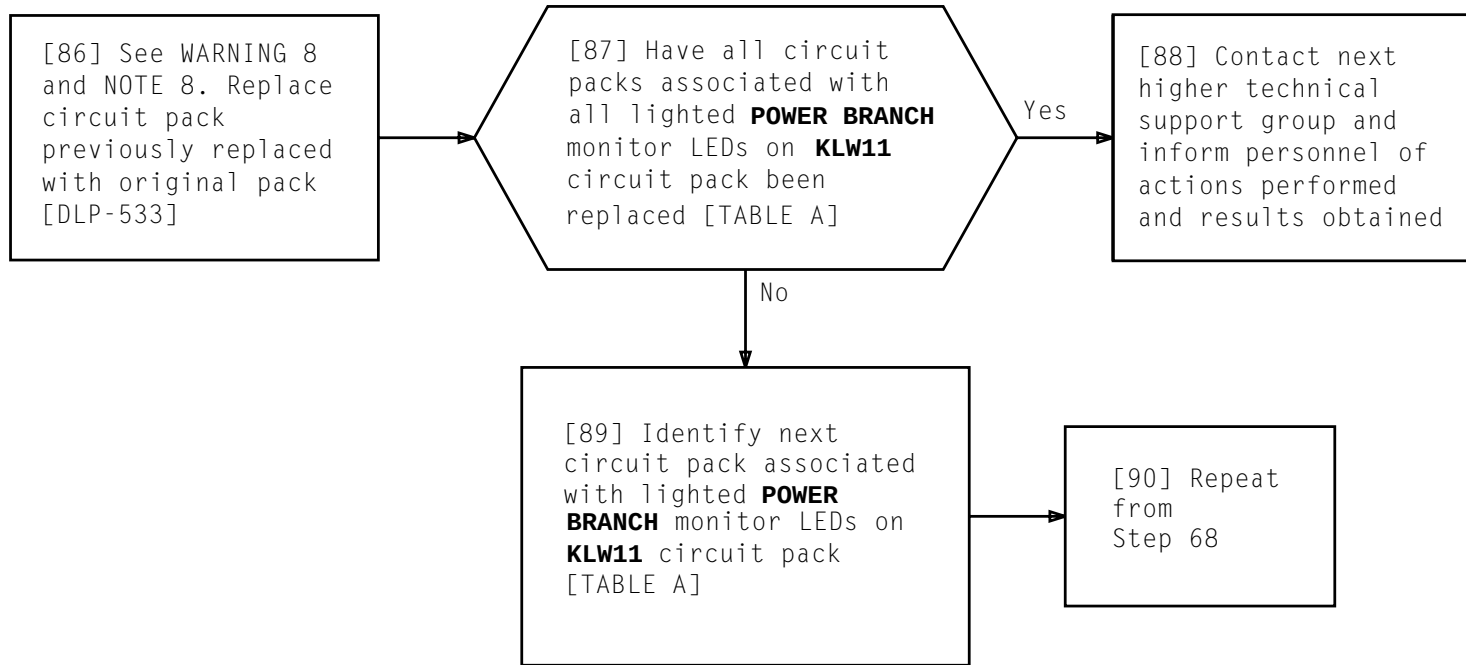
CLEAR CENTRAL CONTROL POWER GROUP POWER ALARM - POWER SWITCH PA LED LIGHTED ON KWL11, KWL12, KWL3, KWL4 OR KWL22/KWL122/KWL222 CIRCUIT PACK

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CLEAR CENTRAL CONTROL POWER GROUP POWER ALARM - POWER SWITCH PA LED LIGHTED ON KWL11, KWL12, KWL3, KWL4 OR KWL22/KWL122/KWL222 CIRCUIT PACK

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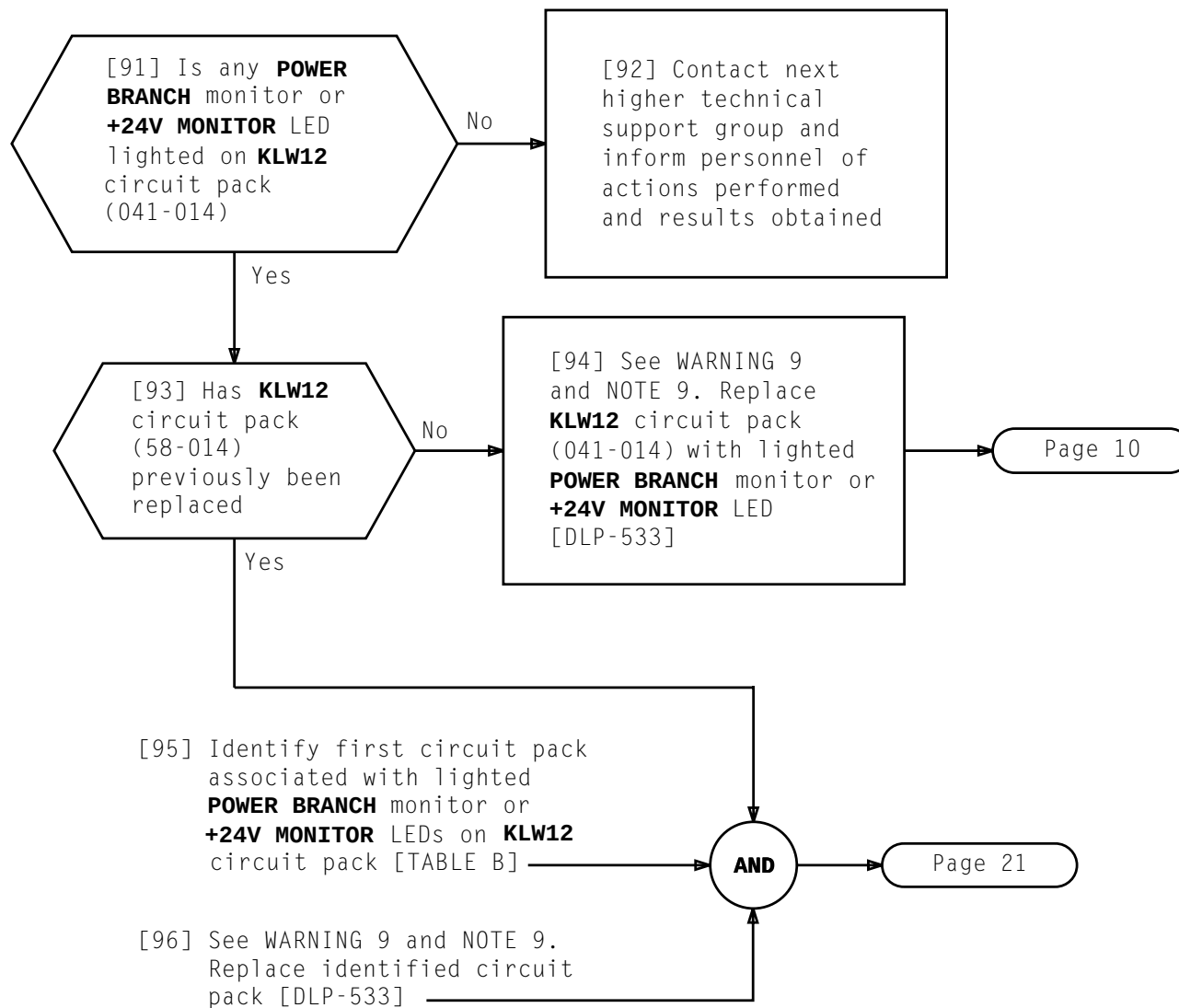


NOTE 8
Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 8
A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

CLEAR CENTRAL CONTROL POWER GROUP POWER ALARM - POWER SWITCH PA LED LIGHTED ON K LW11, K LW12, K LW3, K LW4 OR K LW22/K LW122/K LW222 CIRCUIT PACK

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NOTE 9
Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 9
A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

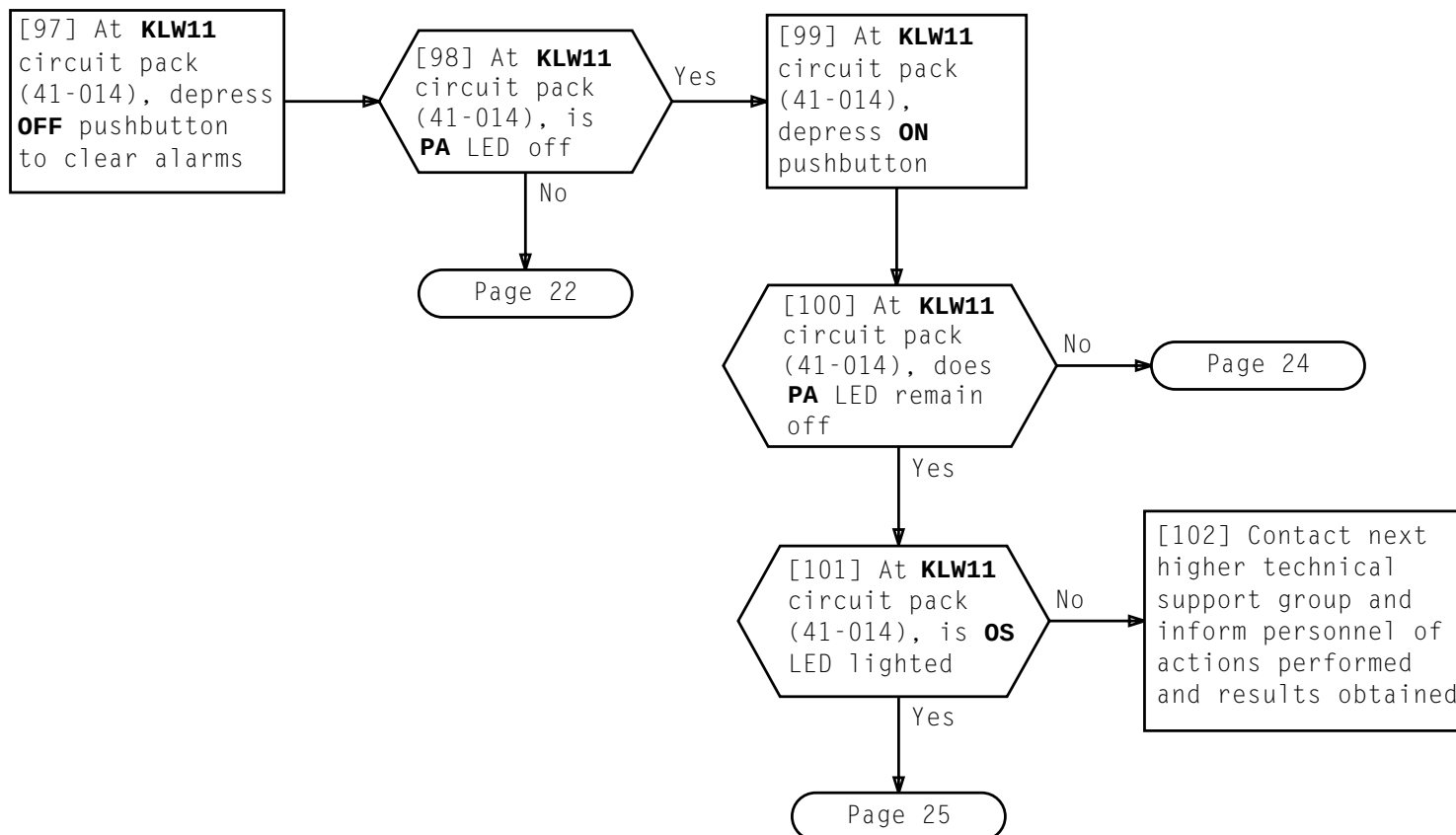
CLEAR CENTRAL CONTROL POWER GROUP POWER ALARM - POWER SWITCH PA LED LIGHTED ON KLV11, KLV12, KLV3, KLV4 OR KLV22/KLV122/KLV222 CIRCUIT PACK

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TABLE B CIRCUIT PACKS ASSOCIATED WITH K LW12 CIRCUIT PACK LEDs		
CIRCUIT PACK CONTAINING LED	LIGHTED LED	CIRCUIT PACKS ASSOCIATED WITH LIGHTED LEDs
K LW12	VOLTAGE MA CURRENT SA	K LW13 (58-070), K LW20 (58-062)
	VOLTAGE SB CURRENT SB	K LW21 (58-046)
	VOLTAGE SC CURRENT SC	K LW14 (58-038), UN339 (70-014), UN339 (70-030), UN339 (70-070), UN339 (70-086), UN340 (70-038), UN340 (70-062)
	VOLTAGE SD CURRENT SD	K LW05/K LW105/K LW205 (41-096)
	VOLTAGE SE CURRENT SE	K LW17/K LW117/K LW217 (41-086)
	VOLTAGE SF CURRENT SF	K LW07 (41-078)
	VOLTAGE SG CURRENT SG	K LW05/K LW105/K LW205 (41-096)
	+24V MONITOR 0	UN339 (70-014), UN339 (70-030), UN340 (70-038)
	+24V MONITOR 1	UN339 (70-070), UN339 (70-086), UN340 (70-062)

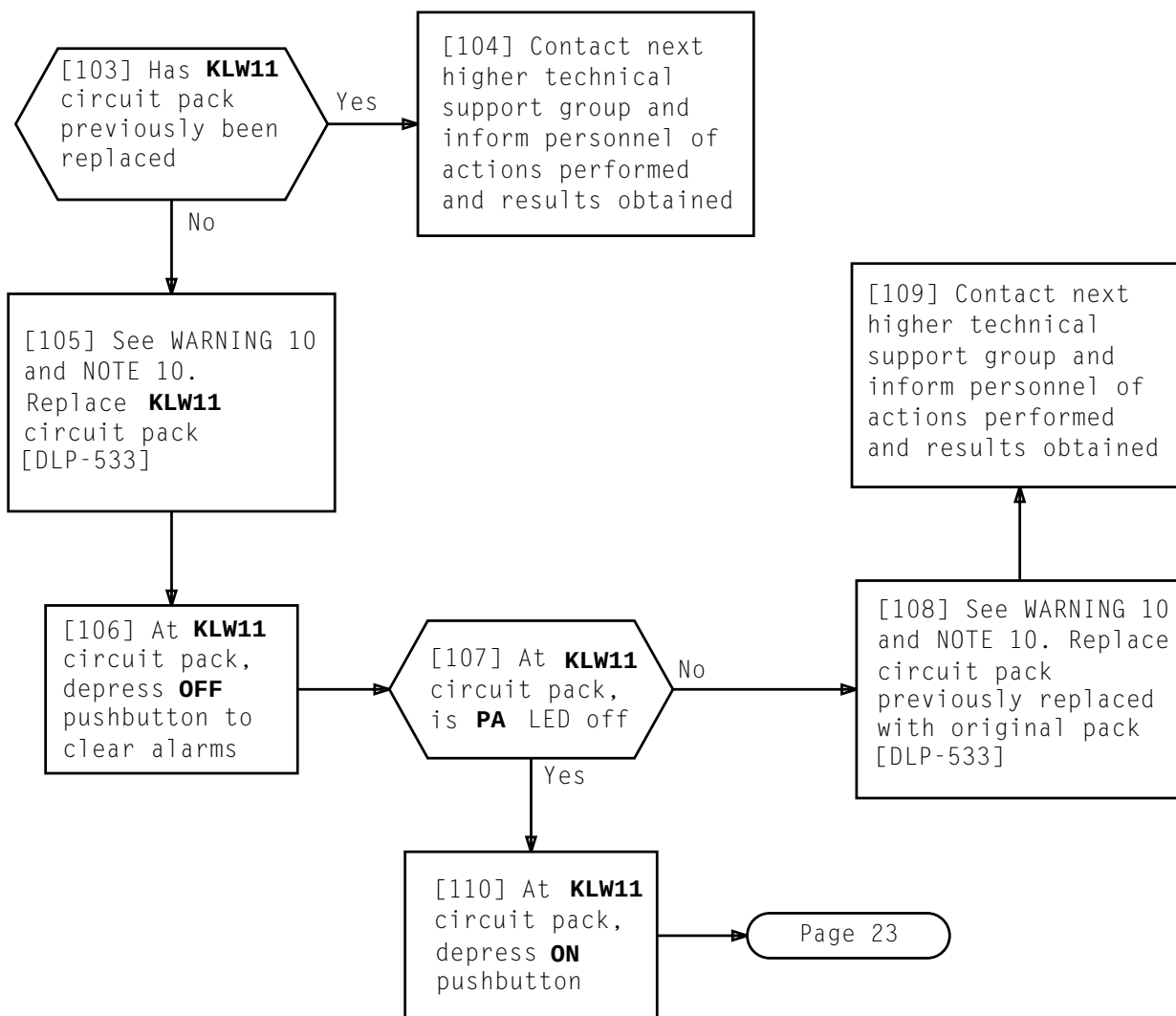
**CLEAR CENTRAL CONTROL POWER GROUP POWER ALARM - POWER SWITCH PA
LED LIGHTED ON K LW11, K LW12, K LW3, K LW4 OR K LW22/K LW122/K LW222
CIRCUIT PACK**

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CLEAR CENTRAL CONTROL POWER GROUP POWER ALARM - POWER SWITCH PA LED LIGHTED ON KWL11, KWL12, KWL3, KWL4 OR KWL22/KWL122/KWL222 CIRCUIT PACK

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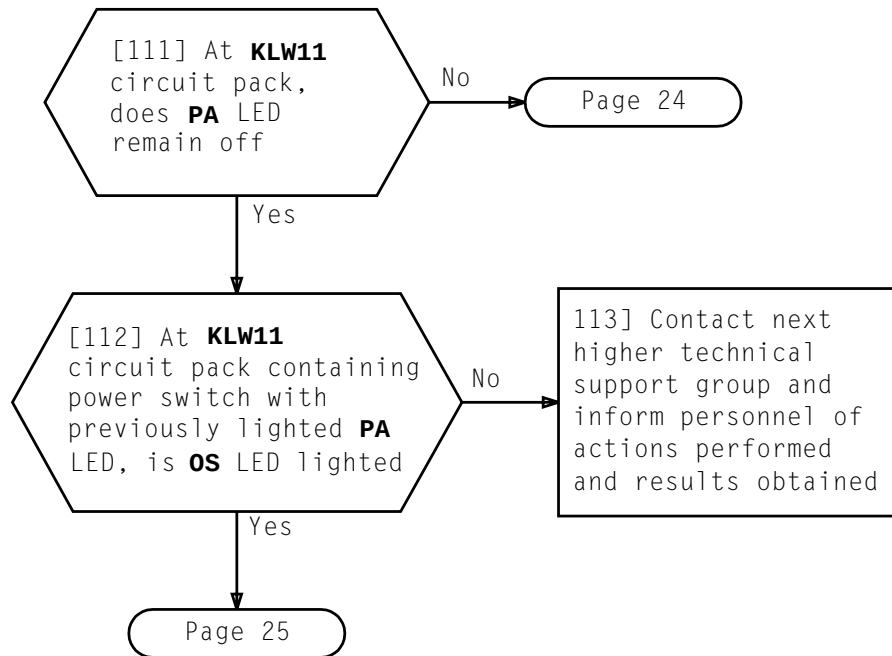


NOTE 10
Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 10
A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

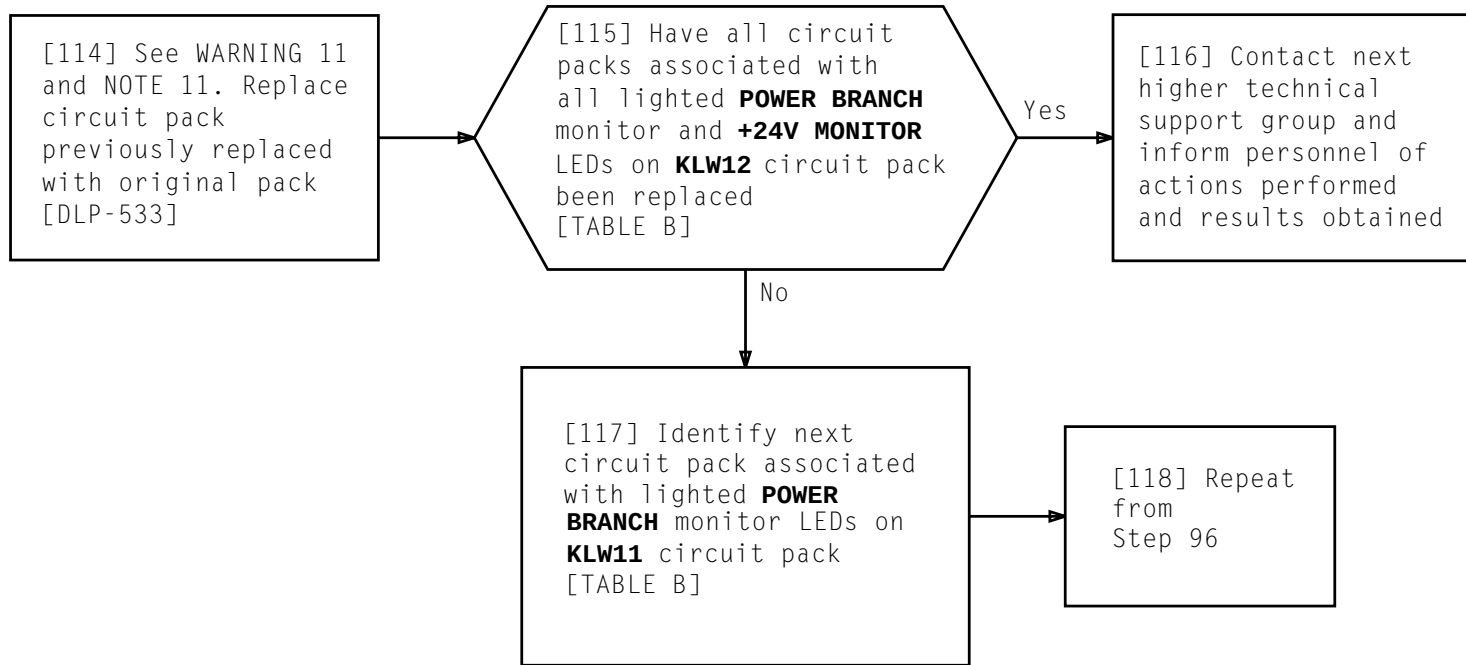
CLEAR CENTRAL CONTROL POWER GROUP POWER ALARM - POWER SWITCH PA LED LIGHTED ON KWL11, KWL12, KWL3, KWL4 OR KWL22/KWL122/KWL222 CIRCUIT PACK

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CLEAR CENTRAL CONTROL POWER GROUP POWER ALARM - POWER SWITCH PA LED LIGHTED ON KWL11, KWL12, KWL3, KWL4 OR KWL22/KWL122/KWL222 CIRCUIT PACK

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NOTE 11
Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

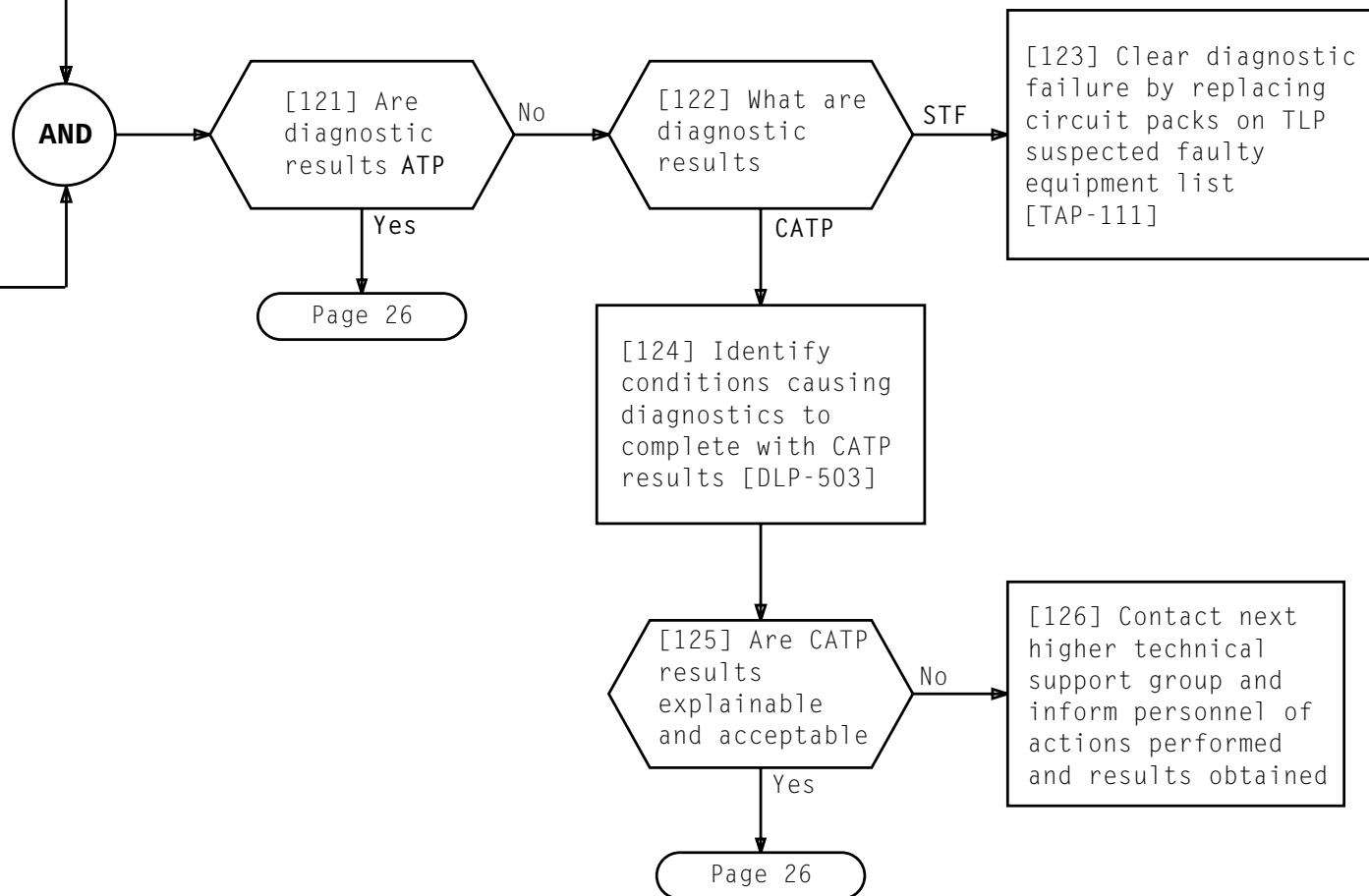
WARNING 11
A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

CLEAR CENTRAL CONTROL POWER GROUP POWER ALARM - POWER SWITCH PA LED LIGHTED ON KLV11, KLV12, KLV3, KLV4 OR KLV22/KLV122/KLV222 CIRCUIT PACK

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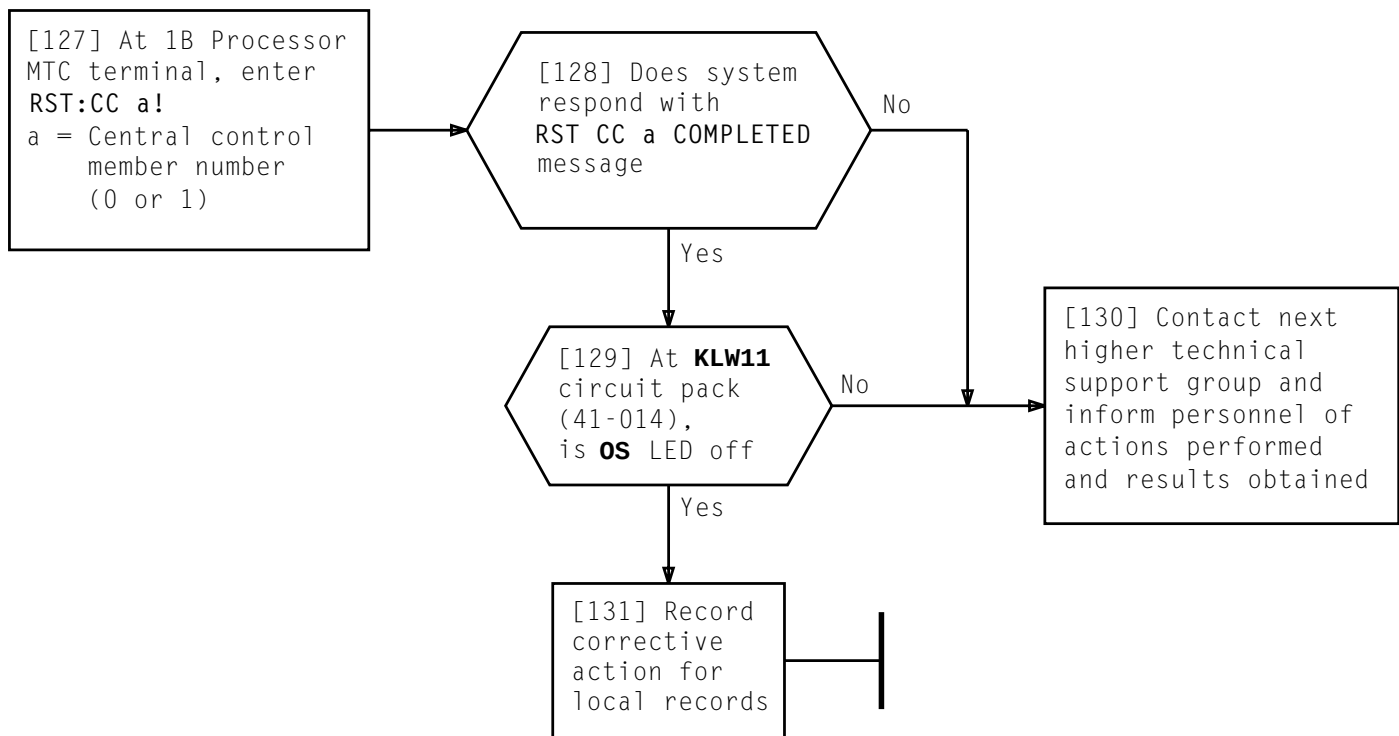
[119] At **KLW11** circuit pack (41-014), move **ROS/NORM** switch left to **NORM** position

[120] Allow ample time for diagnostics to complete



CLEAR CENTRAL CONTROL POWER GROUP POWER ALARM - POWER SWITCH PA LED LIGHTED ON KLW11, KLW12, KLW3, KLW4 OR KLW22/KLW122/KLW222 CIRCUIT PACK

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CLEAR CENTRAL CONTROL POWER GROUP POWER ALARM - POWER SWITCH PA LED LIGHTED ON K LW11, K LW12, K LW3, K LW4 OR K LW22/K LW122/K LW222 CIRCUIT PACK

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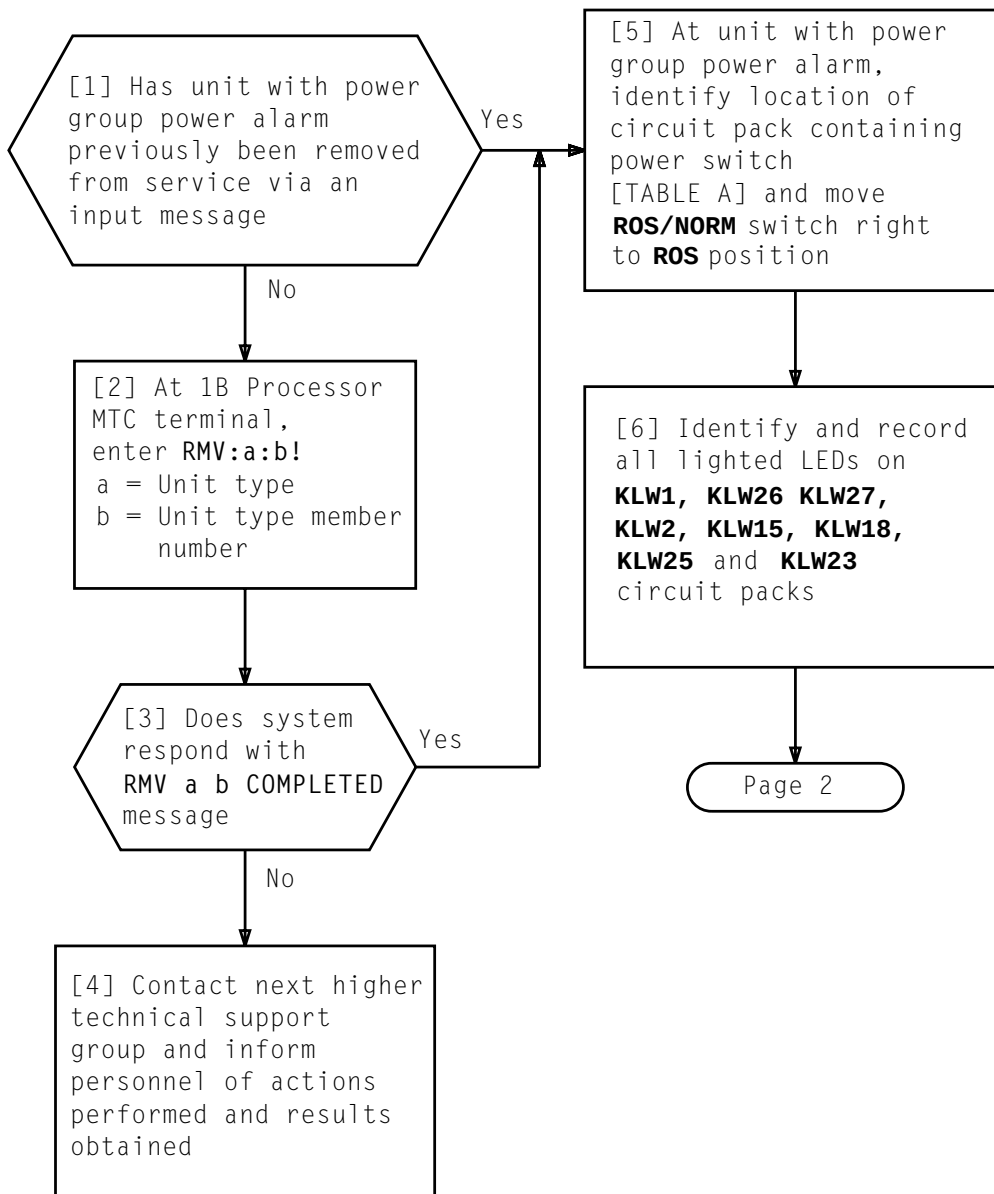
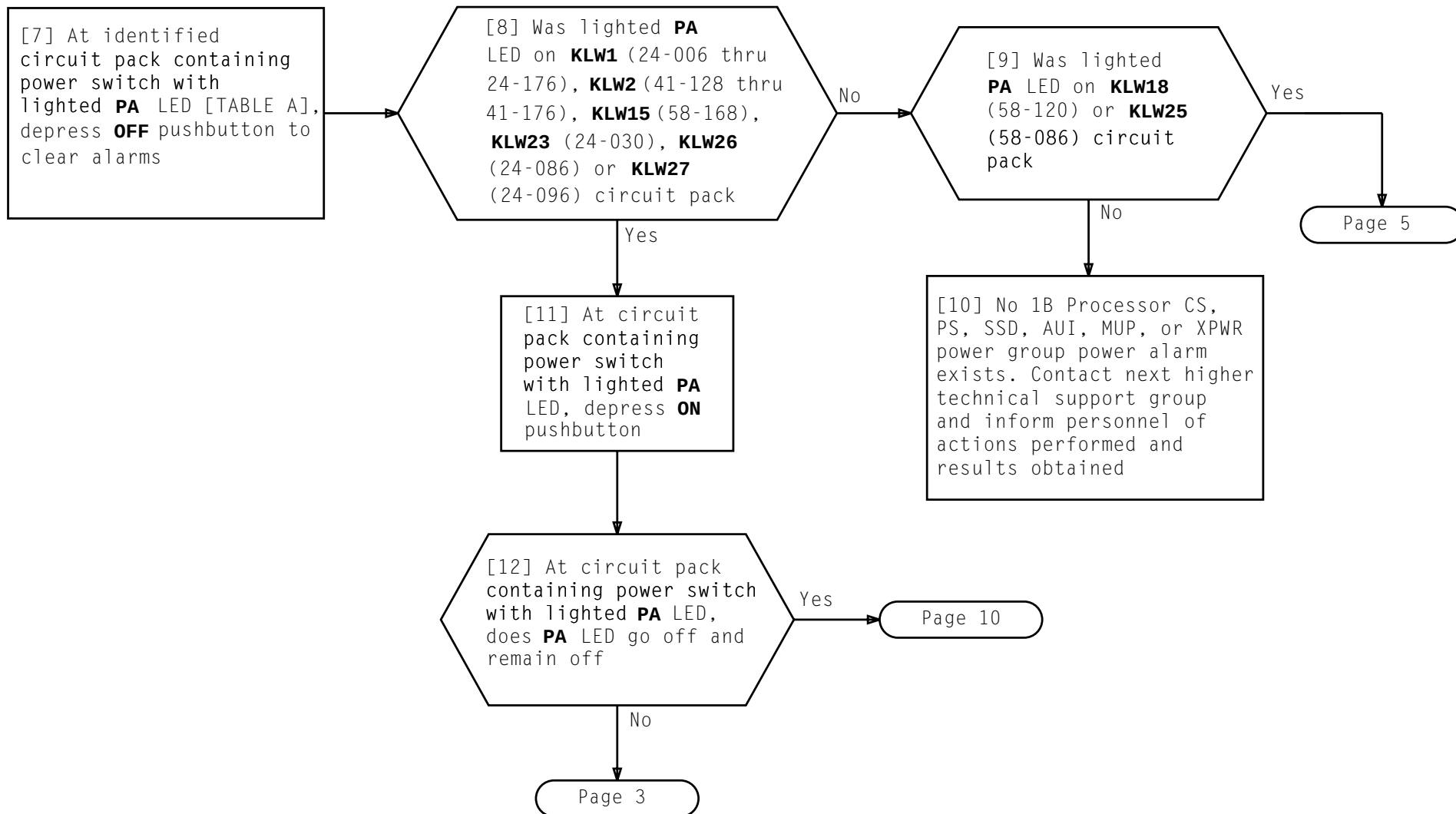


TABLE A POWER GROUP CIRCUIT PACKS CONTAINING POWER SWITCH		
CIRCUIT PACK CONTAINING POWER SWITCH		ASSOCIATED POWER GROUP
IDENTIFIER	LOCATION	
K LW18	58-120	AUI
K LW25	58-086	MUP
K LW1	24-006 thru 24-078 24-104 thru 24-176	CS
K LW26	24-086	
K LW27	24-096	
K LW2	41-128 thru 41-176	PS
K LW15	58-168	SSD
K LW23	58-030	XPWR

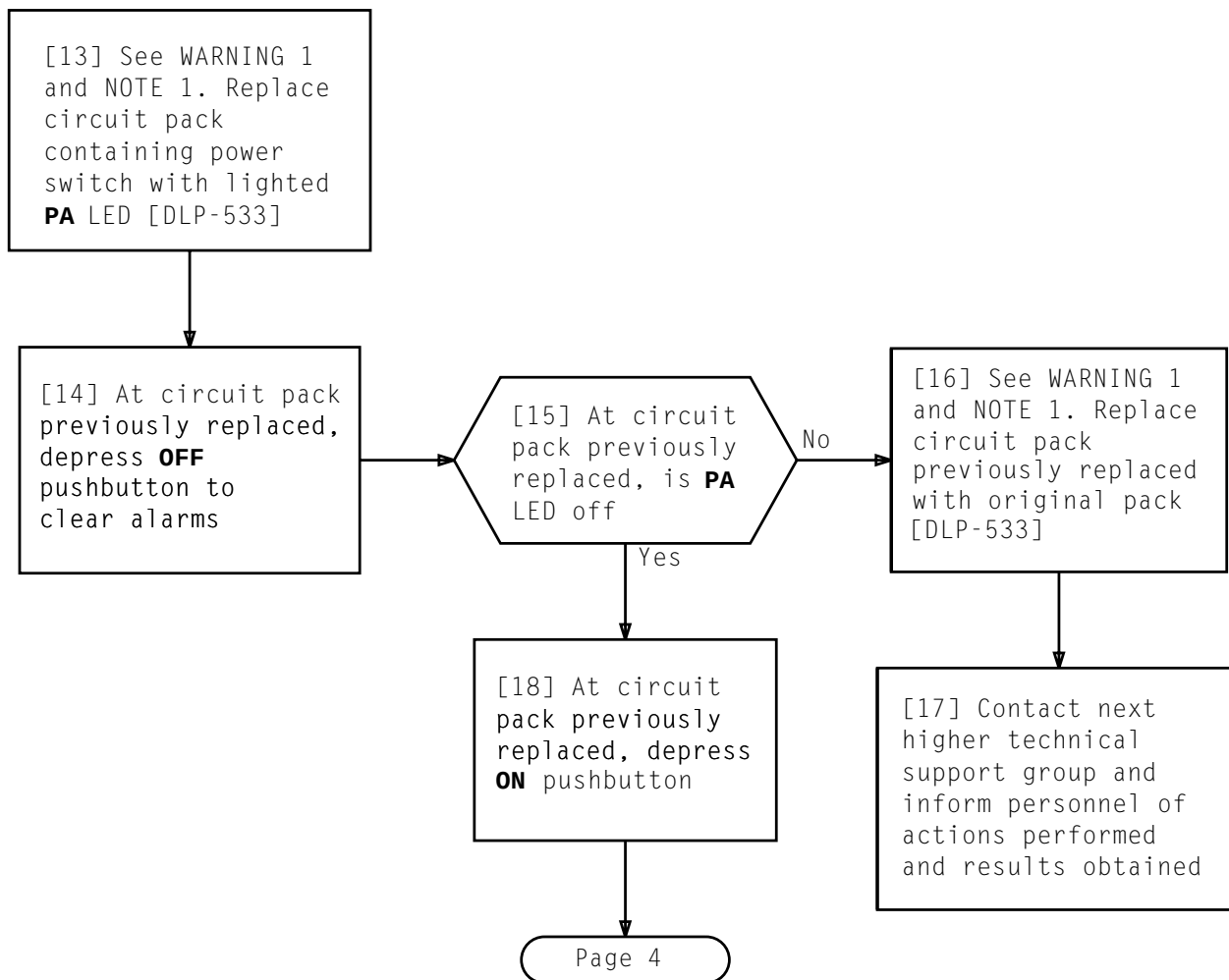
CLEAR CS, PS, SSD, AUI, MUP, OR XPWR POWER GROUP POWER ALARM - POWER SWITCH PA LED LIGHTED ON K LW1, K LW26, K LW27, K LW2, K LW15, K LW18, K LW25 OR K LW23 CIRCUIT PACK

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**CLEAR CS, PS, SSD, AUI, MUP OR XPWR POWER GROUP POWER ALARM -
POWER SWITCH PA LED LIGHTED ON KLW1, KLW26, KLW27, KLW2, KLW15,
KLW18, KLW25 OR KLW23 CIRCUIT PACK**

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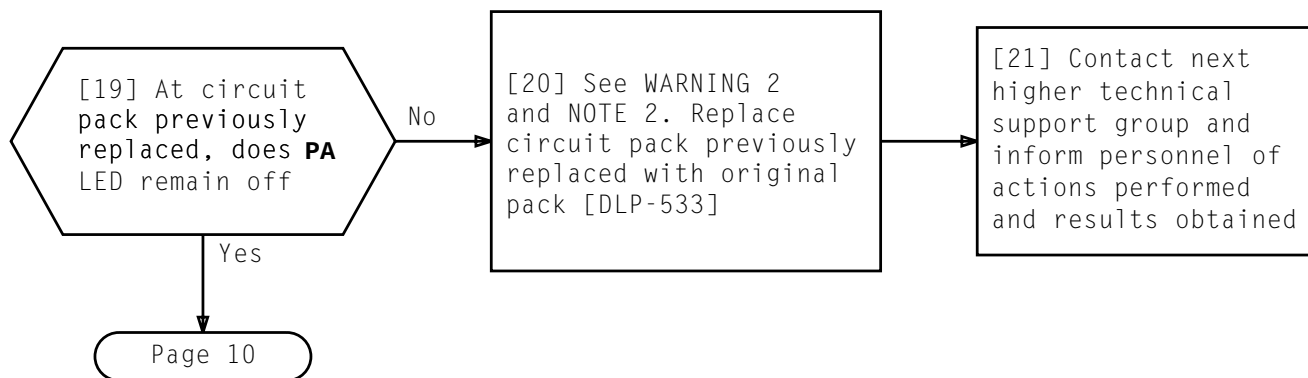


NOTE 1
Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 1
A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

CLEAR CS, PS, SSD, AUI, MUP, OR XPWR POWER GROUP POWER ALARM - POWER SWITCH PA LED LIGHTED ON K LW1, K LW26, K LW27, K LW2, K LW15, K LW18, K LW25 OR K LW23 CIRCUIT PACK

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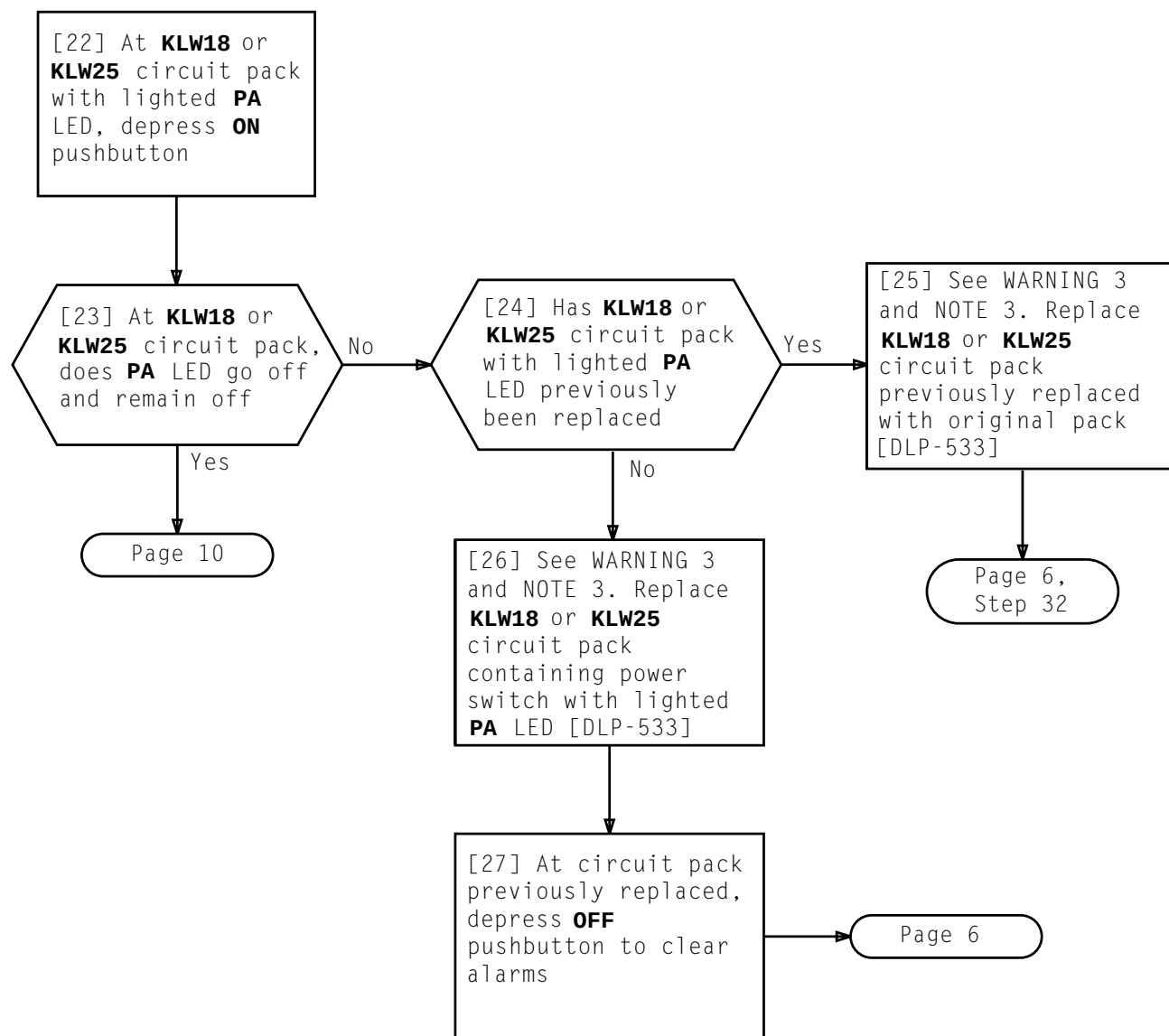


NOTE 2
Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 2
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CLEAR CS, PS, SSD, AUI, MUP, OR XPWR POWER GROUP POWER ALARM - POWER SWITCH PA LED LIGHTED ON KLW1, KLW26, KLW27, KLW2, KLW15, KLW18, KLW25 OR KLW23 CIRCUIT PACK

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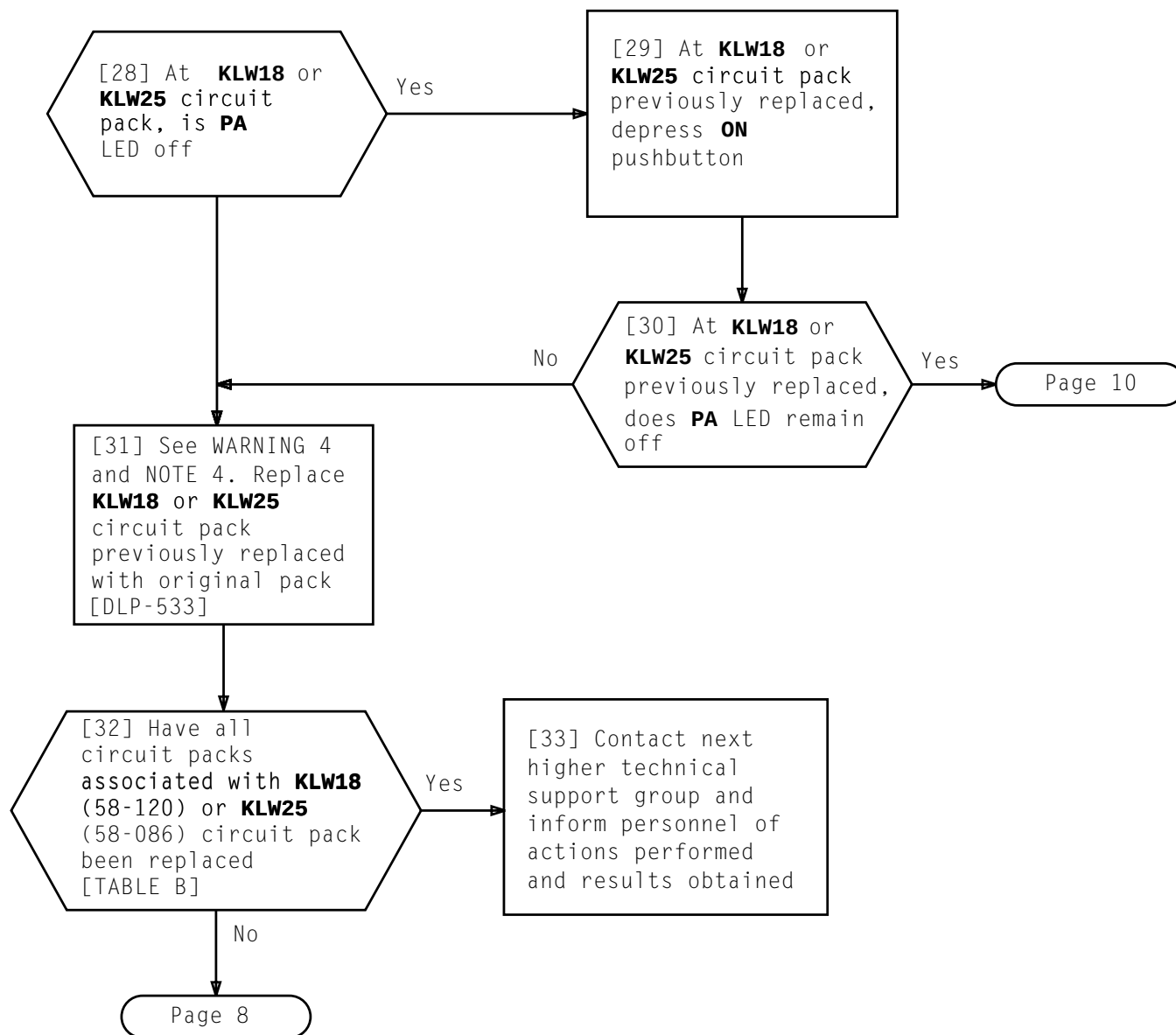


NOTE 3
Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 3
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CLEAR CS, PS, SSD, AUI, MUP, OR XPWR POWER GROUP POWER ALARM - POWER SWITCH PA LED LIGHTED ON K LW1, K LW26, K LW27, K LW2, K LW15, K LW18, K LW25 OR K LW23 CIRCUIT PACK

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NOTE 4
Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 4
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CLEAR CS, PS, SSD, AUI, MUP, OR XPWR POWER GROUP POWER ALARM - POWER SWITCH PA LED LIGHTED ON K LW1, K LW26, K LW27, K LW2, K LW15, K LW18, K LW25 OR K LW23 CIRCUIT PACK

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TABLE B CIRCUIT PACKS ASSOCIATED WITH KLW18 AND KLW25 CIRCUIT PACKS			
CIRCUIT PACK CONTAINING POWER SWITCH		CIRCUIT PACKS ASSOCIATED WITH CIRCUIT PACK CONTAINING POWER SWITCH	
IDENTIFIER	LOCATION	IDENTIFIER	LOCATION
KLW18	58-120	UN338	70-096
			70-112
			70-128
			70-144
			70-160
			70-176
KLW25	58-086	KLW16/KLW116/ KLW216	58-078

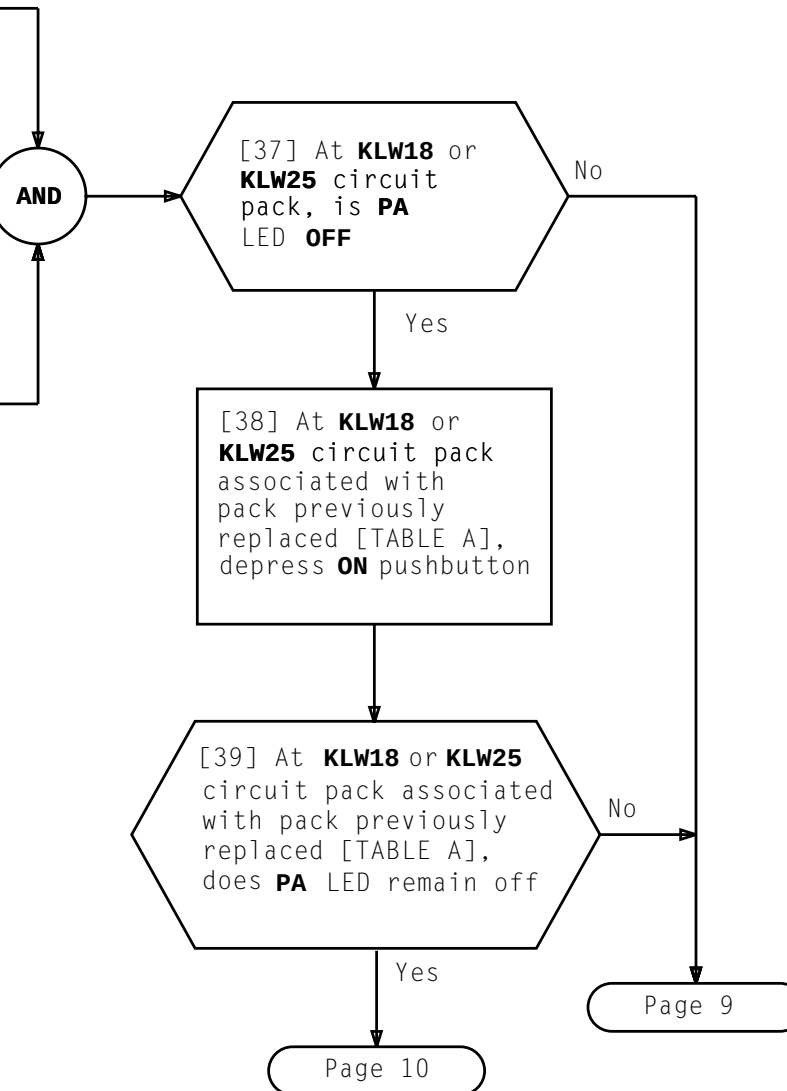
**CLEAR CS, PS, SSD, AUI, MUP, OR XPWR POWER GROUP POWER ALARM -
POWER SWITCH PA LED LIGHTED ON KLW1, KLW26, KLW27, KLW2, KLW15,
KLW18, KLW25 OR KLW23 CIRCUIT PACK**

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[34] Identify first circuit pack associated with **KLW18** or **KLW25** circuit pack previously replaced [TABLE B]

[35] See WARNING 5 and NOTE 5. Replace identified circuit pack [DLP-533]

[36] At **KLW18** or **KLW25** circuit pack associated with pack previously replaced [TABLE A], depress **OFF** pushbutton to clear alarms

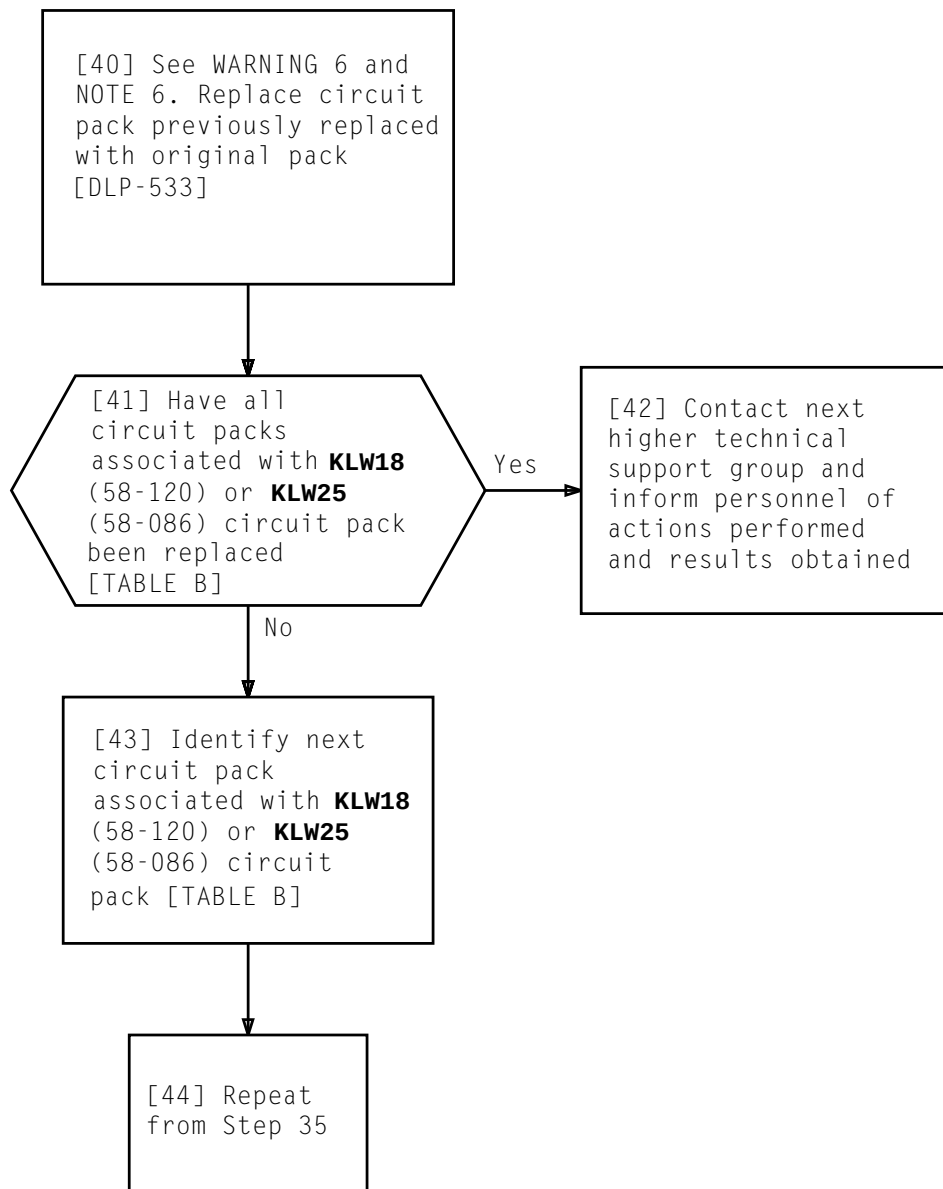


NOTE 5
Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 5
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CLEAR CS, PS, SSD, AUI, MUP, OR XPWR POWER GROUP POWER ALARM - POWER SWITCH PA LED LIGHTED ON KLW1, KLW26, KLW27, KLW2, KLW15, KLW18, KLW25 OR KLW23 CIRCUIT PACK

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NOTE 6
Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

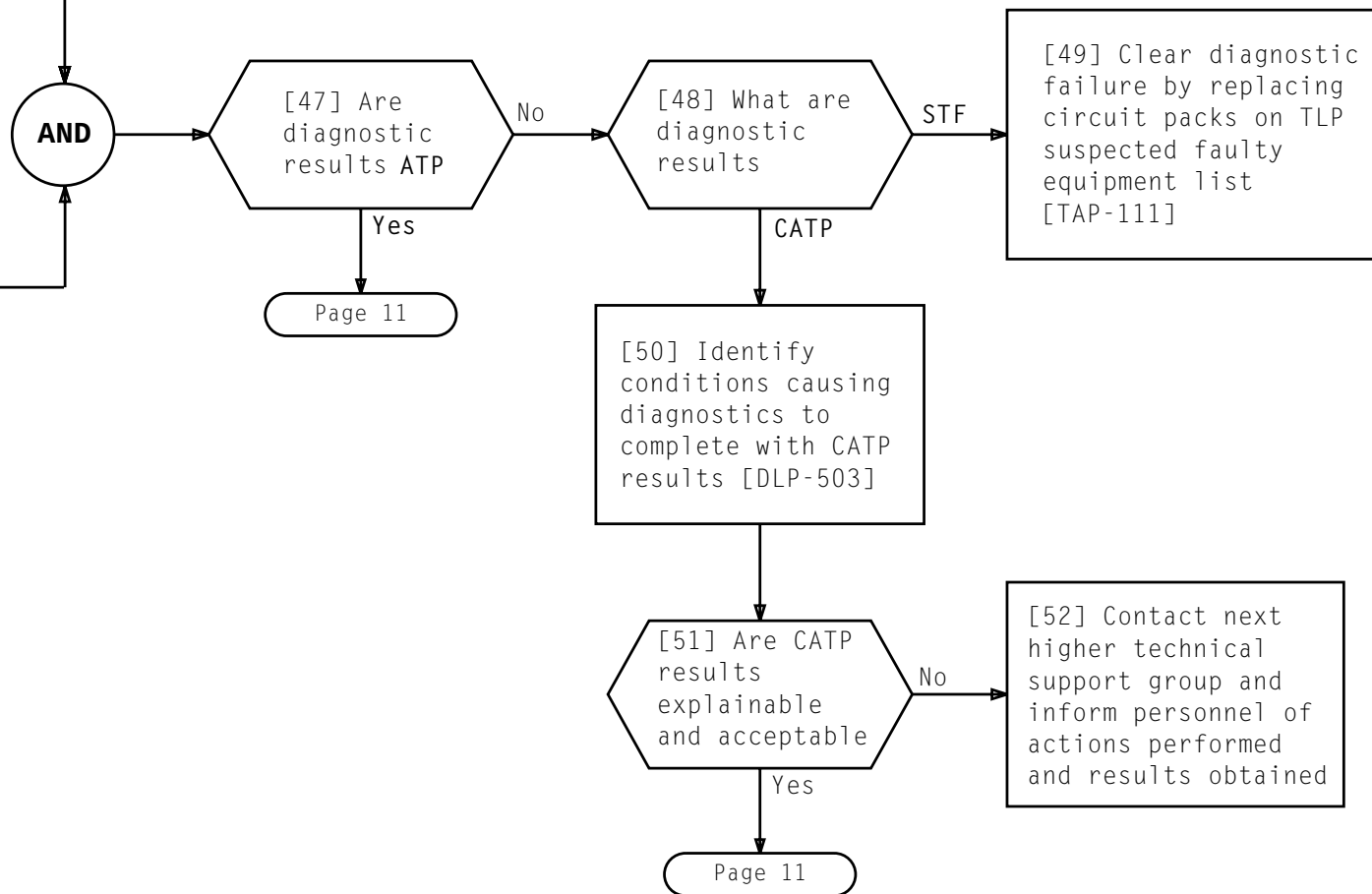
WARNING 6
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CLEAR CS, PS, SSD, AUI, MUP, OR XPWR POWER GROUP POWER ALARM - POWER SWITCH PA LED LIGHTED ON K LW1, K LW26, K LW27, K LW2, K LW15, K LW18, K LW25 OR K LW23 CIRCUIT PACK

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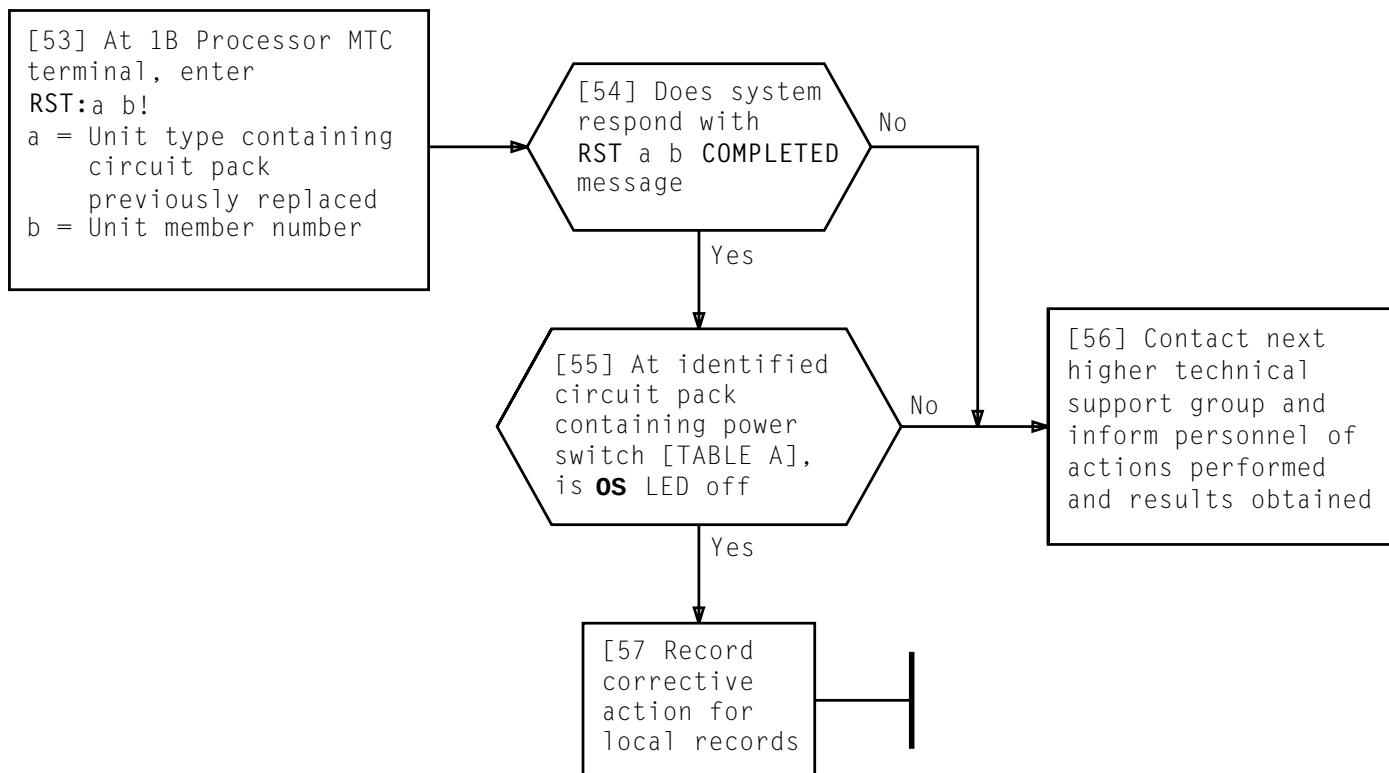
[45] At identified circuit pack containing power switch with previously lighted **PA** LED, move **ROS/NORM** switch left to **NORM** position

[46] Allow ample time for diagnostics to complete



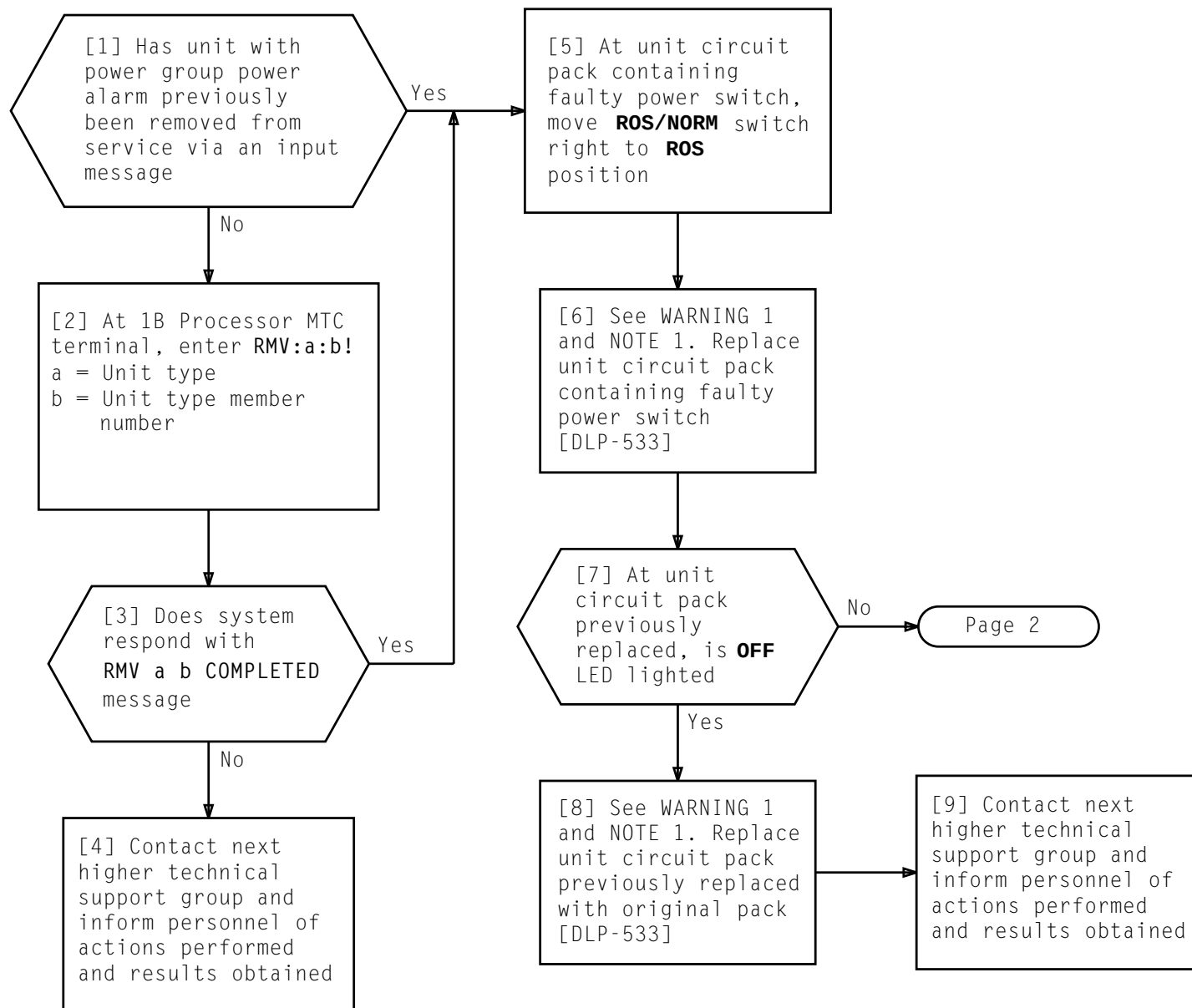
CLEAR CS, PS, SSD, AUI, MUP, OR XPWR POWER GROUP POWER ALARM - POWER SWITCH PA LED LIGHTED ON K LW1, K LW26, K LW27, K LW2, K LW15, K LW18, K LW25 OR K LW23 CIRCUIT PACK

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**CLEAR CS, PS, SSD, AUI, MUP, OR XPWR POWER GROUP POWER ALARM -
POWER SWITCH PA LED LIGHTED ON KLW1, KLW26, KLW27, KLW2, KLW15,
KLW18, KLW25 OR KLW23 CIRCUIT PACK**

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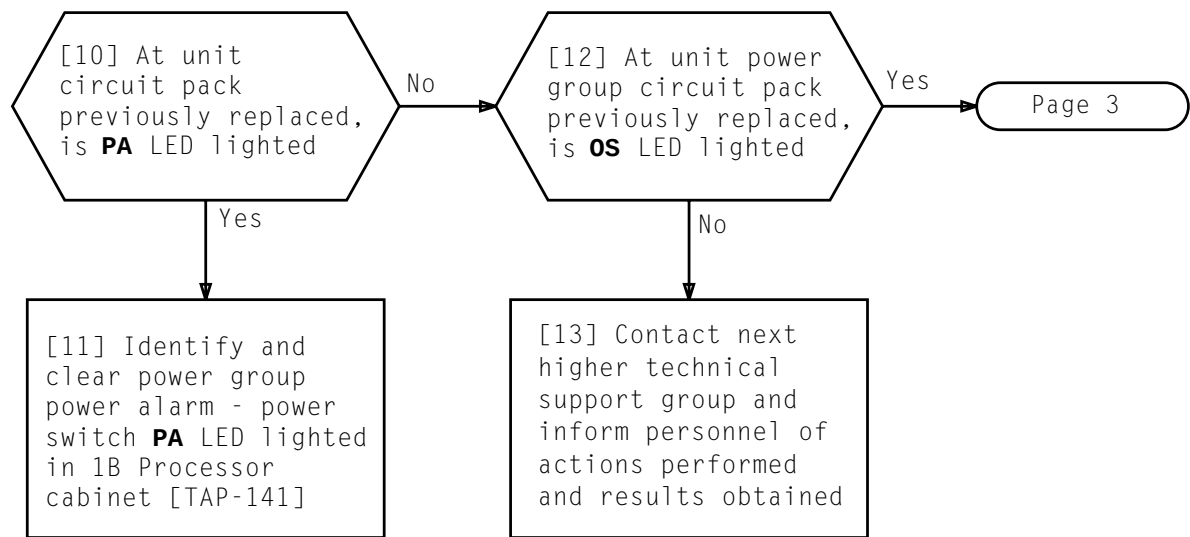


NOTE 1
Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 1
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CLEAR POWER GROUP POWER ALARM - FAULTY POWER GROUP POWER SWITCH INDICATOR

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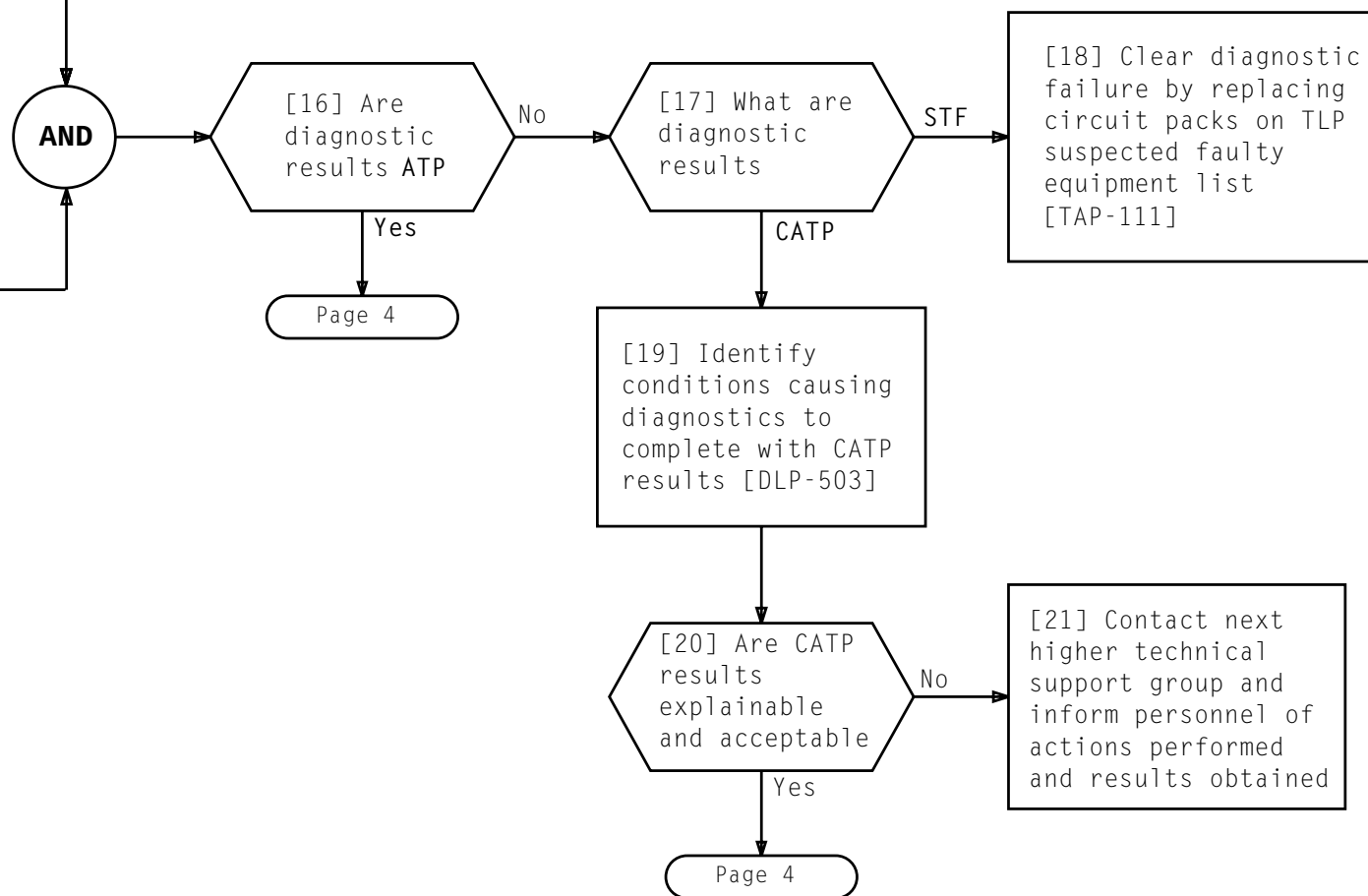


CLEAR POWER GROUP POWER ALARM – FAULTY POWER GROUP POWER SWITCH INDICATOR

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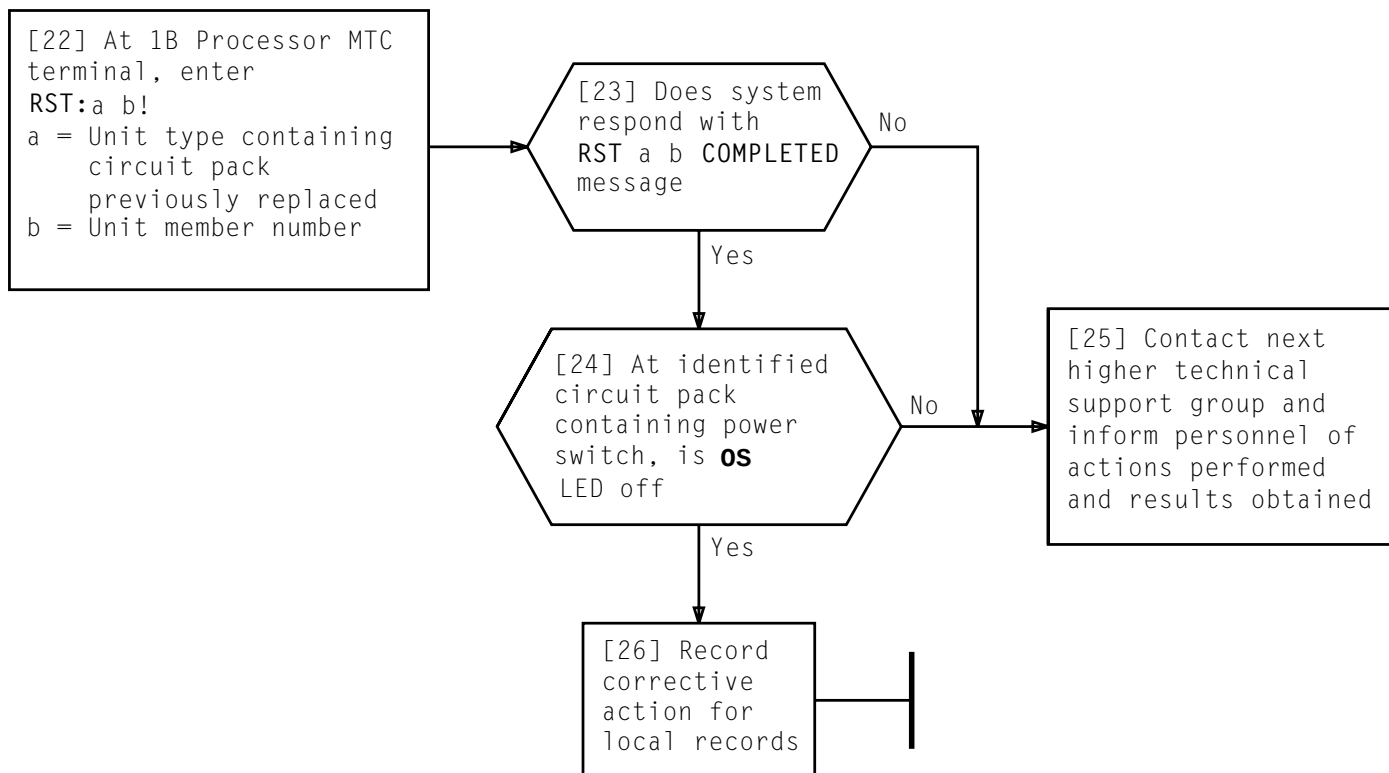
[14] At unit circuit pack containing power switch previously replaced, move **ROS/NORM** switch left to **NORM** position

[15] Allow ample time for diagnostics to complete



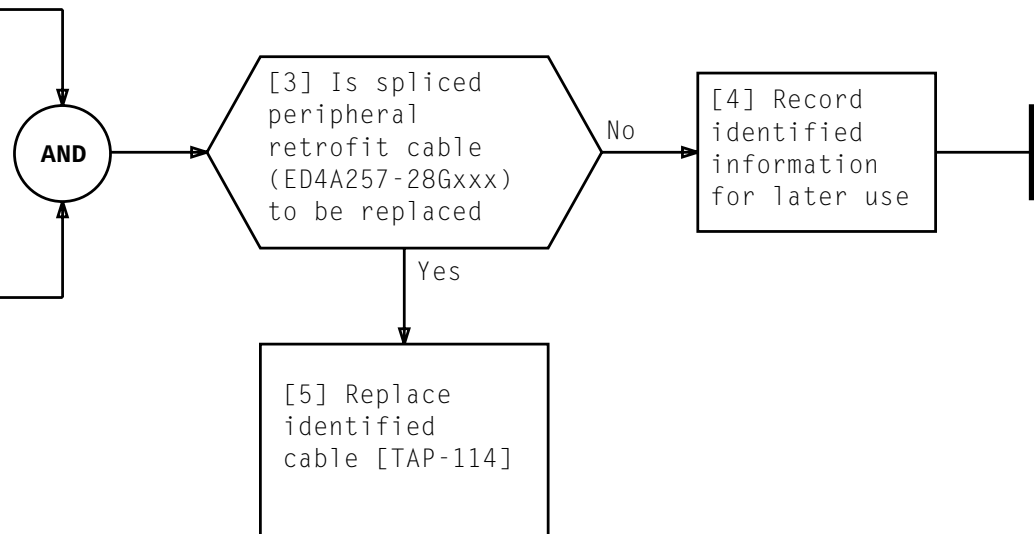
CLEAR POWER GROUP POWER ALARM – FAULTY POWER GROUP POWER SWITCH INDICATOR

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[1] At rear of 1B Processor cabinet,
open doors and identify spliced
peripheral retrofit cable
(ED4A257-28Gxxx) requiring
replacement cable identification

[2] Using Table A, identify 1B to 4ESS
replacement cable (ED4A257-30Gxxx)
associated with previously identified
spliced peripheral retrofit cable



IDENTIFY REPLACEMENT CABLE (ED4A257-30Gxx) FOR 1B PROCESSOR SPLICED PERIPHERAL RETROFIT CABLE (ED4A257-28Gxx)

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TABLE A 1B PROCESSOR SPLICED PERIPHERAL RETROFIT CABLE (ED4A257-28Gxx) TO REPLACEMENT CABLE (ED4A257-30Gxx) CONVERSIONS			
Spliced Cable		1B To 4ESS Replacement Cable	Remarks
From 1B	To 4ESS		
ED4A257-28G1	ED4A257-28G201	ED4A257-30G1	
G2	G202	G1	
G3	G203	G1	
G4	G204	G1	
G5	G205	G1	
G6	G206	G1	
G7	G207	G1	
G8	G208	G1	
G9	G209	G1	
G10	G210	G1	
G11	G211	G1	
G12	G212	G1	
G13	G213	G1	
G14	G214	G1	
G15	G215	G1	
G16	G216	G1	
G17	G217	G1	
G18	G218	G1	
G19	G219	G1	
G20	G220	G1	
G21	G221	G1	

**IDENTIFY REPLACEMENT CABLE (ED4A257-30Gxx) FOR 1B PROCESSOR
SPLICED PERIPHERAL RETROFIT CABLE (ED4A257-28Gxx)**

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TABLE A (Contd) 1B PROCESSOR SPLICED PERIPHERAL RETROFIT CABLE (ED4A257-28Gxx) TO REPLACEMENT CABLE (ED4A257-30Gxx) CONVERSIONS			
Spliced Cable		1B To 4ESS Replacement Cable	Remarks
From 1B	To 4ESS		
ED4A257-28G22 G23 G24	ED4A257-28G222 G223 G224	ED4A257-30G1 G1 G1	
ED4A257-28G25 G26 G27 G28 G29 G30 G31 G32	ED4A257-28G225 G226 G227 G228 G229 G230 G231 G232	ED4A257-30G25 G25 G25 G25 G25 G25 G25 G25	
ED4A257-28G33 G34	ED4A257-28G233 G234	ED4A257-30G33 G33	
ED4A257-28G35 G36 G37 G38 G39 G40 G41 G42	ED4A257-28G235 G236 G237 G238 G239 G240 G241 G242	ED4A257-30G25 G25 G25 G25 G25 G25 G25 G25	

**IDENTIFY REPLACEMENT CABLE (ED4A257-30Gxx) FOR 1B PROCESSOR
SPLICED PERIPHERAL RETROFIT CABLE (ED4A257-28Gxx)**

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TABLE A (Contd) 1B PROCESSOR SPLICED PERIPHERAL RETROFIT CABLE (ED4A257-28Gxx) TO REPLACEMENT CABLE (ED4A257-30Gxx) CONVERSIONS			
Spliced Cable		1B To 4ESS Replacement Cable	Remarks
From 1B	To 4ESS		
ED4A257-28G43 G44 G45 G46 G47 G48 G49 G50 G51 G52 G53 G54 G55 G56	ED4A257-28G243 G244 G245 G246 G247 G248 G249 G250 G251 G252 G253 G254 G255 G256	ED4A257-30G25 G25 G25 G25 G25 G25 G25 G25 G25 G25 G25 G25 G25 G25	
ED4A257-28G57 G58	ED4A257-28G257A,C G258B,D	ED4A257-30G33 G33	
ED4A257-28G59 G60 G61 G62 G63	ED4A257-28G59 G260 G261 G262 G263	ED4A257-30G25 G25 G25 G25 G25	

**IDENTIFY REPLACEMENT CABLE (ED4A257-30Gxx) FOR 1B PROCESSOR
SPLICED PERIPHERAL RETROFIT CABLE (ED4A257-28Gxx)**

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TABLE A (Contd) 1B PROCESSOR SPLICED PERIPHERAL RETROFIT CABLE (ED4A257-28Gxx) TO REPLACEMENT CABLE (ED4A257-30Gxx) CONVERSIONS			
Spliced Cable		1B To 4ESS Replacement Cable	Remarks
From 1B	To 4ESS		
ED4A257-28G64 G65 G66	ED4A257-28G264 G265 G266	ED4A257-30G25 G25 G25	
ED4A257-28G67 G68 G69 G70 G71 G72 G73 G74 G75 G76 G77 G78 G79 G80 G81 G82	Existing 4ESS To 1A Cable Existing 4ESS To 1A Cable Existing 4ESS To 1A Cable Existing 4ESS To 1A Cable Existing 4ESS To 1A Cable Existing 4ESS To 1A Cable Existing 4ESS To 1A Cable Existing 4ESS To 1A Cable Existing 4ESS To 1A Cable Existing 4ESS To 1A Cable Existing 4ESS To 1A Cable Existing 4ESS To 1A Cable Existing 4ESS To 1A Cable Existing 4ESS To 1A Cable Existing 4ESS To 1A Cable Existing 4ESS To 1A Cable	ED4A257-30G67 G67 G67 G67 G67 G67 G67 G67 G67 G67 G67 G67 G67 G67 G67 G67	See Note
ED4A257-28G83 G84	ED4A257-28G283 G284	ED4A257-30G1 G1	
NOTE: The 4ESS end of this cable may need to be modified. If the existing cable is hardwired to the 4ESS, then the connector must be removed before the termination can be completed.			

**IDENTIFY REPLACEMENT CABLE (ED4A257-30Gxx) FOR 1B PROCESSOR
SPLICED PERIPHERAL RETROFIT CABLE (ED4A257-28Gxx)**

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TABLE A (Contd) 1B PROCESSOR SPLICED PERIPHERAL RETROFIT CABLE (ED4A257-28Gxx) TO REPLACEMENT CABLE (ED4A257-30Gxx) CONVERSIONS			
Spliced Cable		1B To 4ESS Replacement Cable	Remarks
From 1B	To 4ESS		
ED4A257-28G85	ED4A257-28G285	ED4A257-30G1	
G86	G286	G1	
G87	G287	G1	
G88	G288	G1	
G89	G289	G1	
G90	G290	G1	
G91	G291	G1	
G92	G292	G1	
G93	G293	G1	
G94	G294	G1	
G95	G295	G1	
G96	G296	G1	
G97	G297	G1	
G98	G298	G1	
G99	G299	G1	
G100	G300	G1	
G101	G301	G1	
G102	G302	G1	
ED4A257-28G105	Existing 4ESS To 1A Cable	ED4A257-30G67	See Note
G106	Existing 4ESS To 1A Cable	G67	
G107	Existing 4ESS To 1A Cable	G67	
NOTE: The 4ESS end of this cable may need to be modified. If the existing cable is hardwired to the 4ESS, then the connector must be removed before the termination can be completed.			

**IDENTIFY REPLACEMENT CABLE (ED4A257-30Gxx) FOR 1B PROCESSOR
SPLICED PERIPHERAL RETROFIT CABLE (ED4A257-28Gxx)**

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TABLE A (Contd) 1B PROCESSOR SPLICED PERIPHERAL RETROFIT CABLE (ED4A257-28Gxx) TO REPLACEMENT CABLE (ED4A257-30Gxx) CONVERSIONS			
Spliced Cable		1B To 4ESS Replacement Cable	Remarks
From 1B	To 4ESS		
ED4A257-28G108 G109 G110 G111 G112	Existing 4ESS To 1A Cable Existing 4ESS To 1A Cable Existing 4ESS To 1A Cable Existing 4ESS To 1A Cable Existing 4ESS To 1A Cable	ED4A257-30G67 G67 G67 G67 G67	See Note
ED4A257-28G115 G116 G117 G118	ED4A257-28G315 G316 G317 G318	ED4A257-30G1 G1 G1 G1	
ED4A257-28G119 G120 G121 G122 G123 G124 G125 G126 G127 G128 G129 G130	Existing 4ESS To 1A Cable Existing 4ESS To 1A Cable Existing 4ESS To 1A Cable Existing 4ESS To 1A Cable Existing 4ESS To 1A Cable Existing 4ESS To 1A Cable Existing 4ESS To 1A Cable Existing 4ESS To 1A Cable Existing 4ESS To 1A Cable Existing 4ESS To 1A Cable Existing 4ESS To 1A Cable Existing 4ESS To 1A Cable	ED4A257-30G67 G67 G67 G67 G67 G67 G67 G67 G67 G67 G67 G67	See Note
NOTE: The 4ESS end of this cable may need to be modified. If the existing cable is hardwired to the 4ESS, then the connector must be removed before the termination can be completed.			

**IDENTIFY REPLACEMENT CABLE (ED4A257-30Gxx) FOR 1B PROCESSOR
SPLICED PERIPHERAL RETROFIT CABLE (ED4A257-28Gxx)**

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TABLE A (Contd)			
1B PROCESSOR SPLICED PERIPHERAL RETROFIT CABLE (ED4A257-28Gxx) TO REPLACEMENT CABLE (ED4A257-30Gxx) CONVERSIONS			
Spliced Cable		1B To 4ESS Replacement Cable	Remarks
From 1B	To 4ESS		
ED4A257-28G131	Existing 4ESS To 1A Cable	ED4A257-30G67 G67 G67 G67	See Note
G132	Existing 4ESS To 1A Cable		
G133	Existing 4ESS To 1A Cable		
G134	Existing 4ESS To 1A Cable		
ED4A257-28G135	ED4A257-28G355	ED4A257-30G25 G25	
G136	G336		
ED4A257-28G139A	Existing 4ESS To 1A Cable	ED4A257-30G139A	See Note
ED4A257-28G140A	Existing 4ESS To 1A Cable	ED4A257-30G140A G140A	See Note
G141A	Existing 4ESS To 1A Cable		
NOTE: The 4ESS end of this cable may need to be modified. If the existing cable is hardwired to the 4ESS, then the connector must be removed before the termination can be completed.			

**IDENTIFY REPLACEMENT CABLE (ED4A257-30Gxx) FOR 1B PROCESSOR
SPLICED PERIPHERAL RETROFIT CABLE (ED4A257-28Gxx)**

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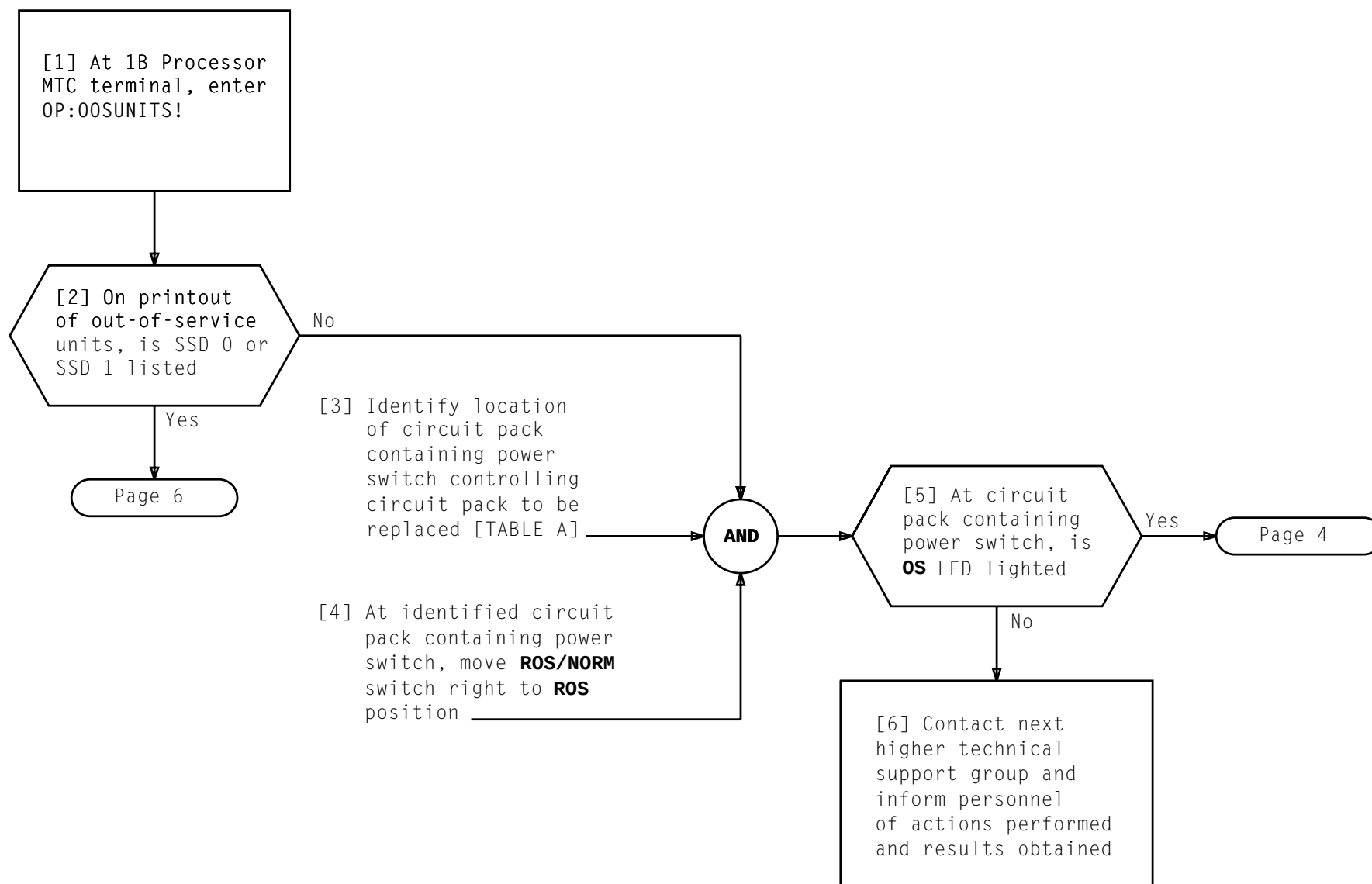


TABLE A
1B PROCESSOR UNIT POWER SWITCH IDENTIFIERS AND LOCATIONS

UNIT	CIRCUIT PACK TO BE REPLACED		CIRCUIT PACK CONTAINING POWER SWITCH		UNIT	CIRCUIT PACK TO BE REPLACED		CIRCUIT PACK CONTAINING POWER SWITCH	
	IDENTIFIER	LOCATION	IDENTIFIER	LOCATION		IDENTIFIER	LOCATION	IDENTIFIER	LOCATION
CC	KLW03	41-104	KLW11	41-014	AUI (Contd)	UN338	70-128	KLW18	58-120
	KLW04	41-112					70-144		
	KLW05/KLW105/ KLW205	41-096					70-160		
							70-176		
	KLW06	41-054			MUP	KLW16/KLW116/ KLW216	58-078	KLW25	58-086
	KLW07	41-078				KLW25	58-086		
	KLW08	41-046			CS	KLW01	24-006	Self- Powered	Same Location
	KLW09	41-038					24-014		
	KLW10/KLW210	41-030					24-022		
	KLW11	41-014					24-030		
	KLW12	58-014					24-038		
	KLW13	58-070					24-046		
	KLW14	58-038					24-054		
	KLW17/KLW117/ KLW217	41-086					24-062		
	KLW19	41-070					24-070		
	KLW20	58-062					24-078		
	KLW21	58-046					24-104		
	KLW22/KLW122/ KLW222	41-120					24-112		
	KLW24	41-062					24-120		
	KLW28	41-022					24-128		
	UN339	70-014					24-136		
		70-030					24-144		
		70-070					24-152		
		70-086					24-160		
	UN340	70-038					24-168		
		70-062					24-176		
AUI	KLW18	58-120	KLW18	58-120	PS	KLW02	41-128	Self- Powered	Same Location
	UN338	70-096					41-136		
		70-112					41-144		
							41-152		

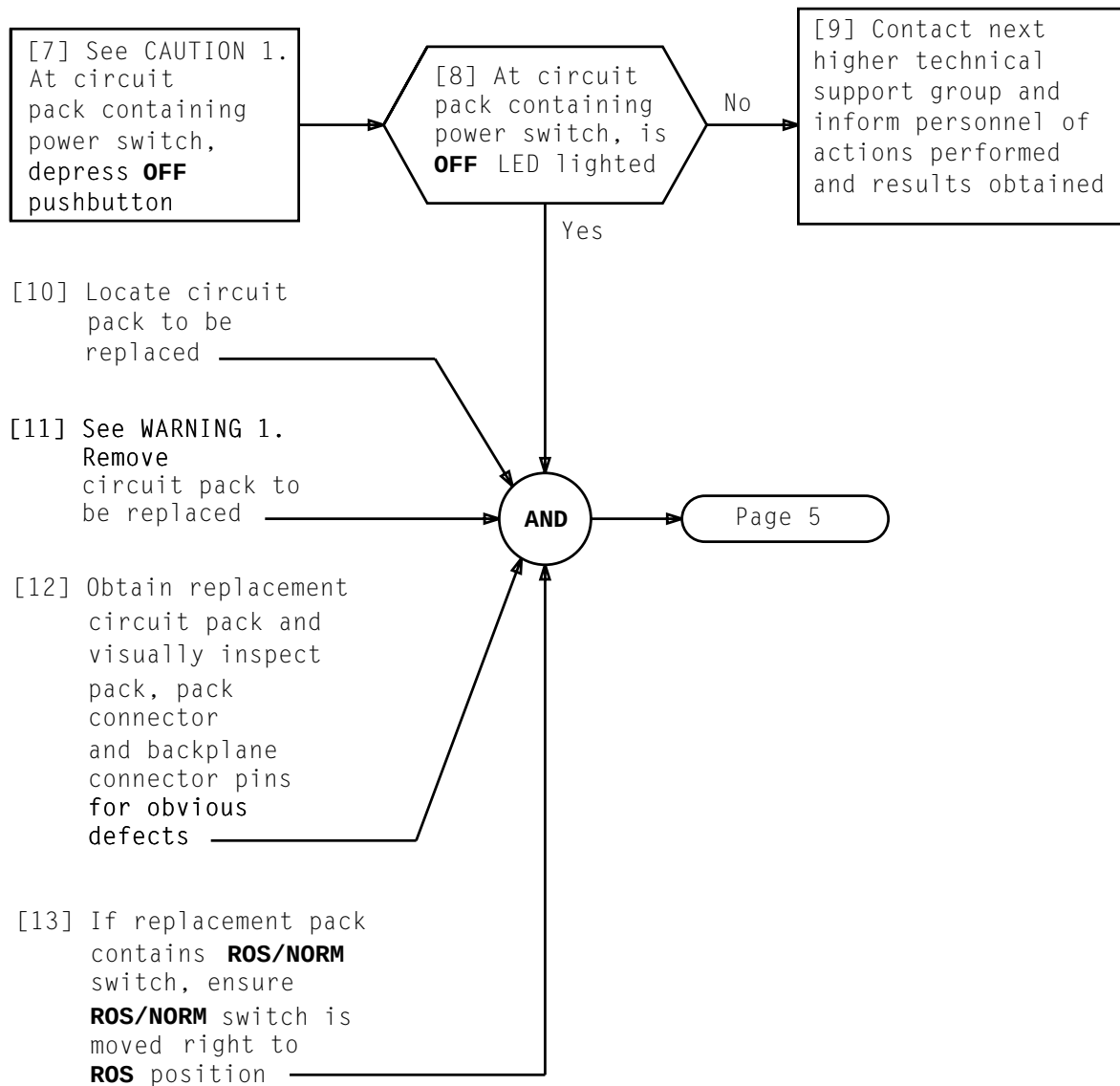
REPLACE CIRCUIT PACK – 1B PROCESSOR CABINET

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TABLE A (Contd)									
1B PROCESSOR UNIT POWER SWITCH IDENTIFIERS AND LOCATIONS									
UNIT	CIRCUIT PACK TO BE REPLACED		CIRCUIT PACK CONTAINING POWER SWITCH		UNIT	CIRCUIT PACK TO BE REPLACED		CIRCUIT PACK CONTAINING POWER SWITCH	
	IDENTIFIER	LOCATION	IDENTIFIER	LOCATION		IDENTIFIER	LOCATION	IDENTIFIER	LOCATION
PS	KLW02	41-160	Self- Powered	Same Location					
		41-168							
		41-176							
SSD	KLW15	58-168	Self- Powered	Same Location					
XPWR	KLW23	24-030	Self- Powered	Same Location					
CALL STORE BUS 0 BUFFER	KLW26	24-086	Self- Powered	Same Location					
CALL STORE BUS 1 BUFFER	KLW27	24-096	Self- Powered	Same Location					
FAN SYSTEM	FC	77-000	NA	NA					

REPLACE CIRCUIT PACK – 1B PROCESSOR CABINET

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WARNING 1 <i>A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins</i>
CAUTION 1 <i>Powering down an out-of-service unit should not cause system recovery actions (interrupts, phases, etc.) to be initiated. If system recovery actions are initiated when powering down an OOS unit, another unit may be at fault. Immediately confirm that the switch is processing calls. If there are indications of a continuing outage, power up the unit previously powered down. If there are no indications of a continuing outage, determine the unit that caused the system recovery actions to be initiated and correct the fault in that unit before continuing to work on the OOS unit originally powered down</i>

[14] See WARNING 2 and NOTE 1.
Insert and properly seat
replacement pack

[15] At circuit pack
containing power switch,
depress **OFF** pushbutton
to clear alarms

[16] See CAUTION 2.
At circuit pack
containing power
switch, depress
ON pushbutton

AND

[17] At circuit
pack containing
power switch, did
OFF LED go off

No

Yes

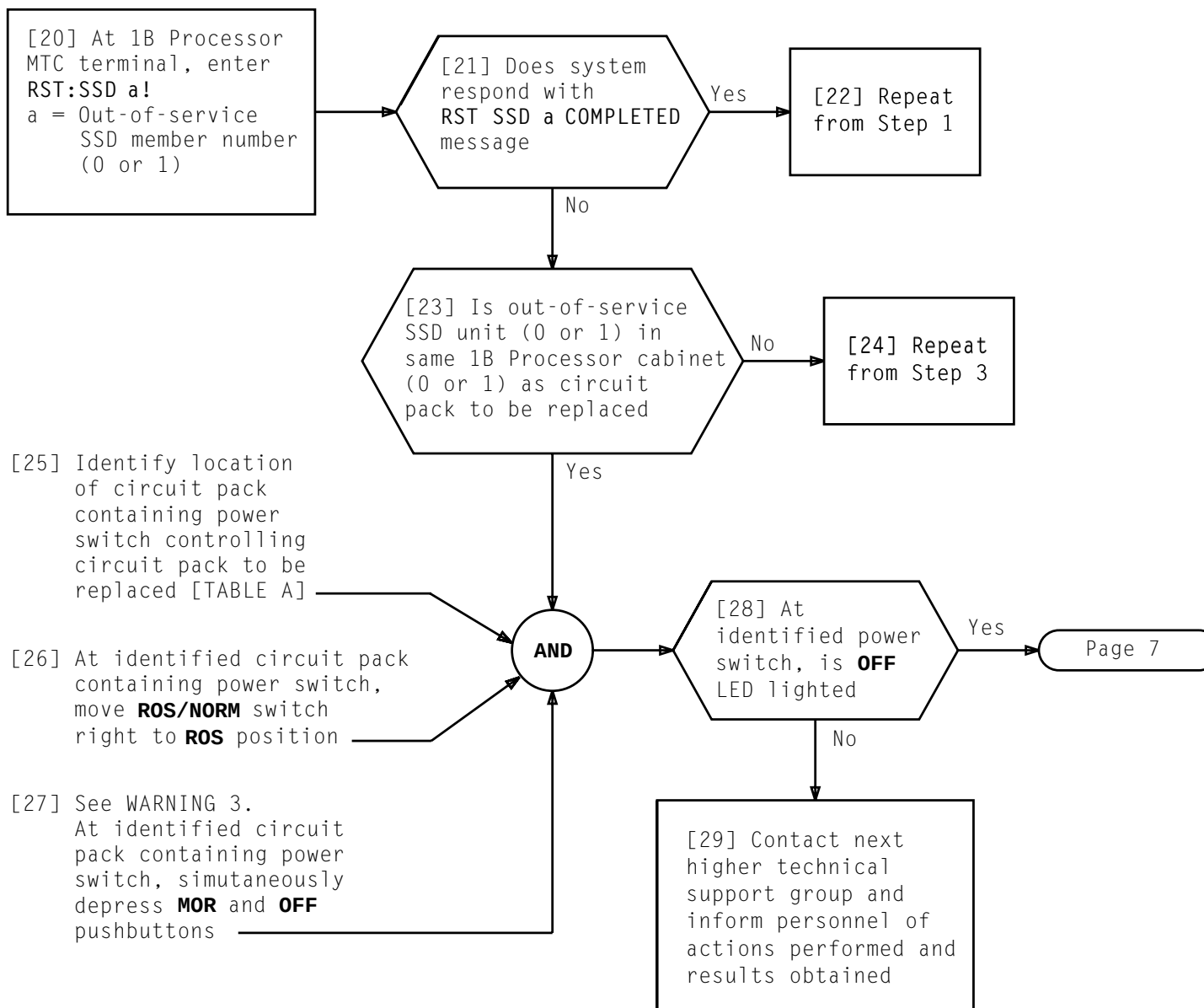
[19] At circuit
pack containing
power switch,
move **ROS/NORM**
switch left to
NORM position

NOTE 1
Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

[18] Contact next
higher technical
support group and
inform personnel of
actions performed
and results obtained

WARNING 2
A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads, or connector pins

CAUTION 2
If system recovery actions (interrupts, phases, etc.) are initiated when powering up any unit (CC, CS, etc.), the suspected cause should be the unit just powered up. Therefore, the first action to take in this situation should be to power down the unit just powered up in an attempt to clear the reason that system recovery actions were initiated



WARNING 3 <i>Extreme caution must be taken to ensure circuit pack replacement is being performed in the correct unit. Consulting next higher technical support group before manually overriding power switch may be required per local practice</i>	
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[30] Locate circuit pack
to be replaced

[31] See WARNING 4. Remove
circuit pack to be
replaced

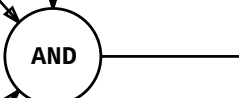
[32] Obtain replacement circuit
pack and visually inspect pack,
pack connector and backplane
connector pins for obvious
defects

[33] If replacement pack contains
a **ROS/NORM** switch, ensure
ROS/NORM switch is moved
right to **ROS** position

[34] See WARNING 4 and NOTE 2.
Insert and properly seat
replacement pack

[35] At circuit pack containing
power switch, depress **OFF**
pushbutton to clear alarms

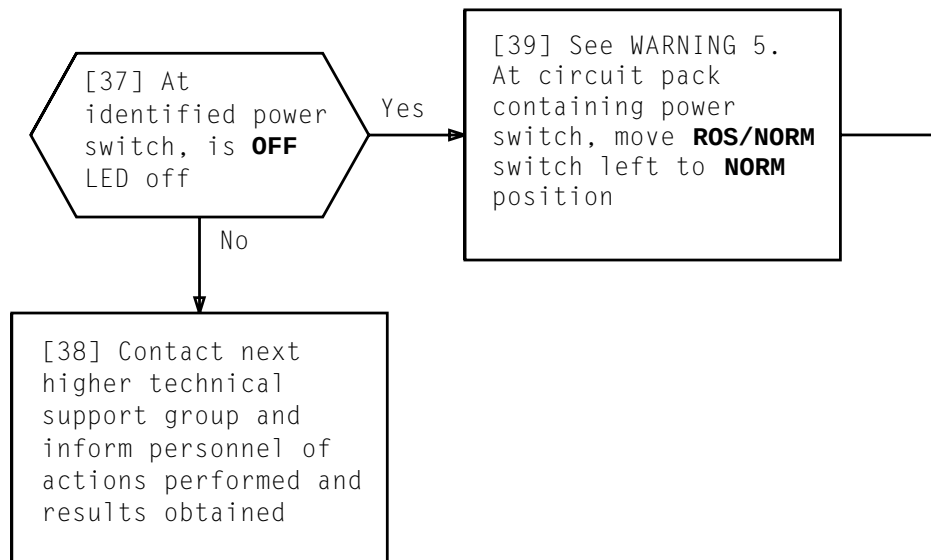
[36] See CAUTION 3. At circuit pack
containing power switch, depress
ON pushbutton



NOTE 2
Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 4
A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads, or connector pins

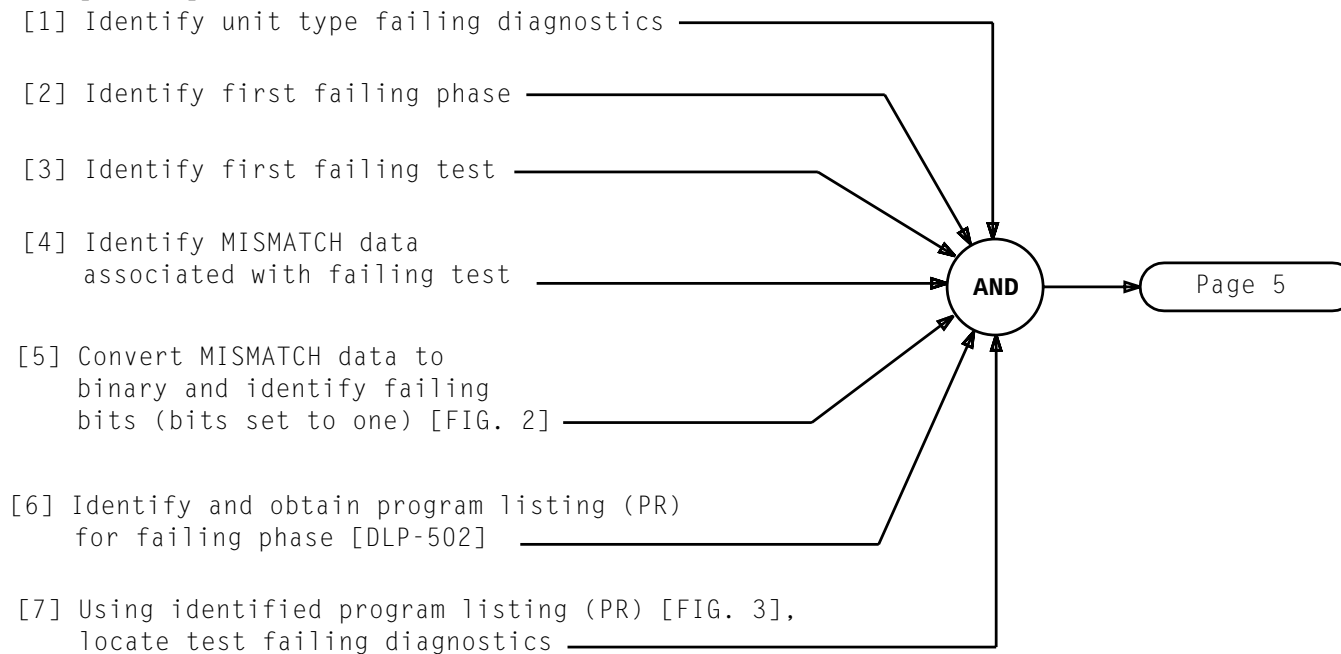
CAUTION 3
If system recovery actions (interrupts, phases, etc.) are initiated when powering up any unit (CC, CS, etc.), the suspected cause should be the unit just powered up. Therefore, the first action to take in this situation should be to power down the unit just powered up in an attempt to clear the reason that system recovery actions were initiated



WARNING 5
*Extreme caution must still be taken from this point forward due to the SSD unit controlling this processor's scan and signal distributor points is out-of-service. Thus, any **OS** and **ACK** LED responses controlled via these scan and signal distributor points must be ignored until the out-of-service SSD unit is diagnosed, repaired and restored to service. Consulting next higher technical support group before proceeding may be required per local practice*

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Using failing diagnostic
raw data [FIG. 1]:



IDENTIFY ADDITIONAL SUSPECT CIRCUIT PACKS USING FAILING DIAGNOSTIC RAW DATA

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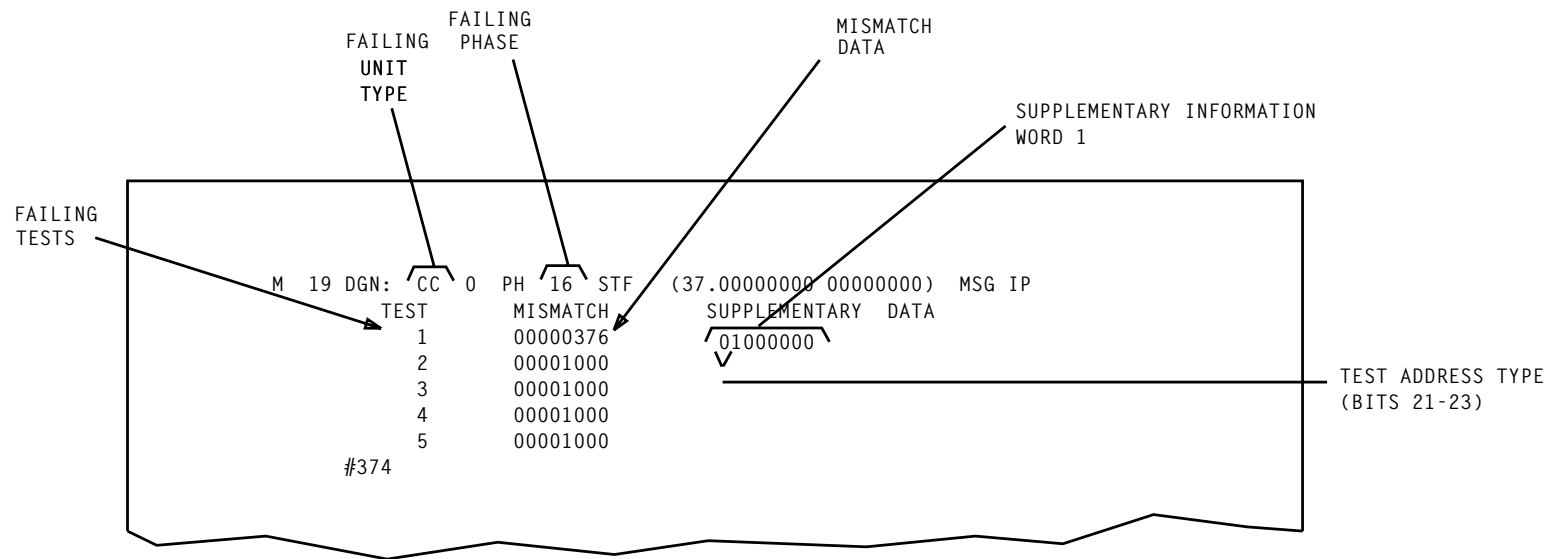


FIG. 1 – Sample Printout of Failing Diagnostic Raw Data

**IDENTIFY ADDITIONAL SUSPECT CIRCUIT PACKS
USING FAILING DIAGNOSTIC RAW DATA**

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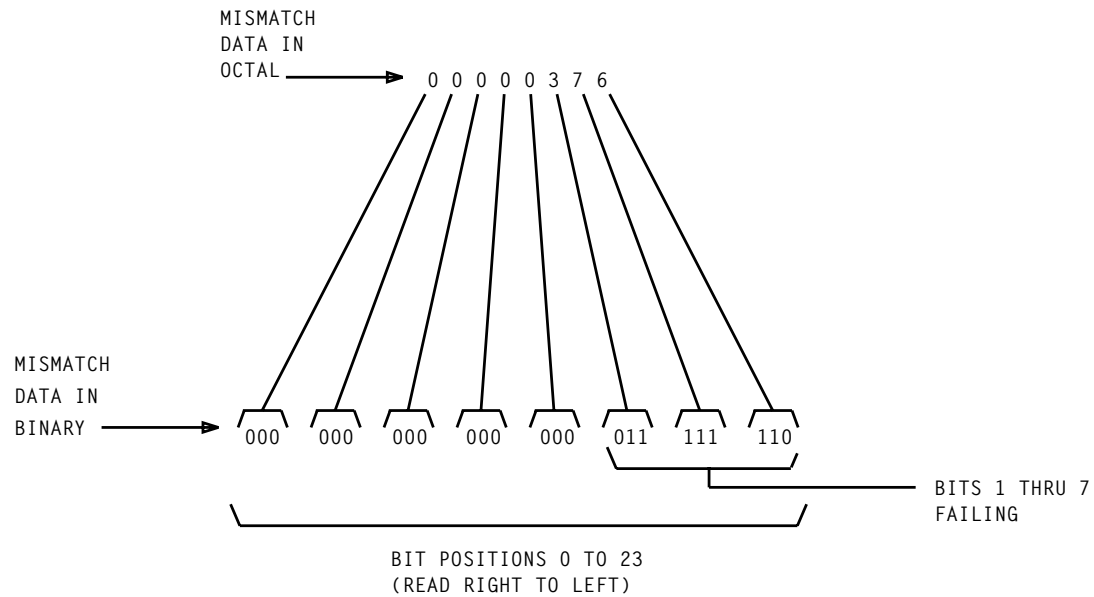


FIG. 2 - Example of Mismatch Data Octal To Binary Conversion

**IDENTIFY ADDITIONAL SUSPECT CIRCUIT PACKS
USING FAILING DIAGNOSTIC RAW DATA**

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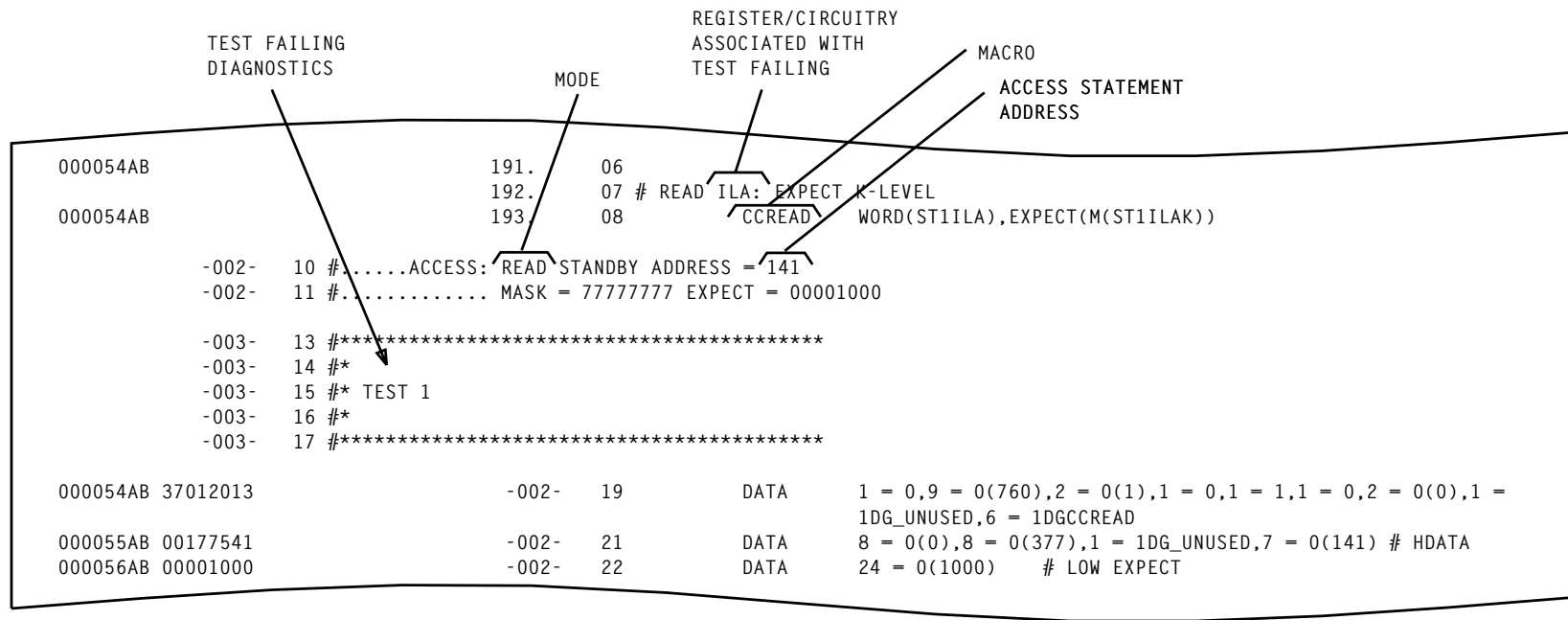
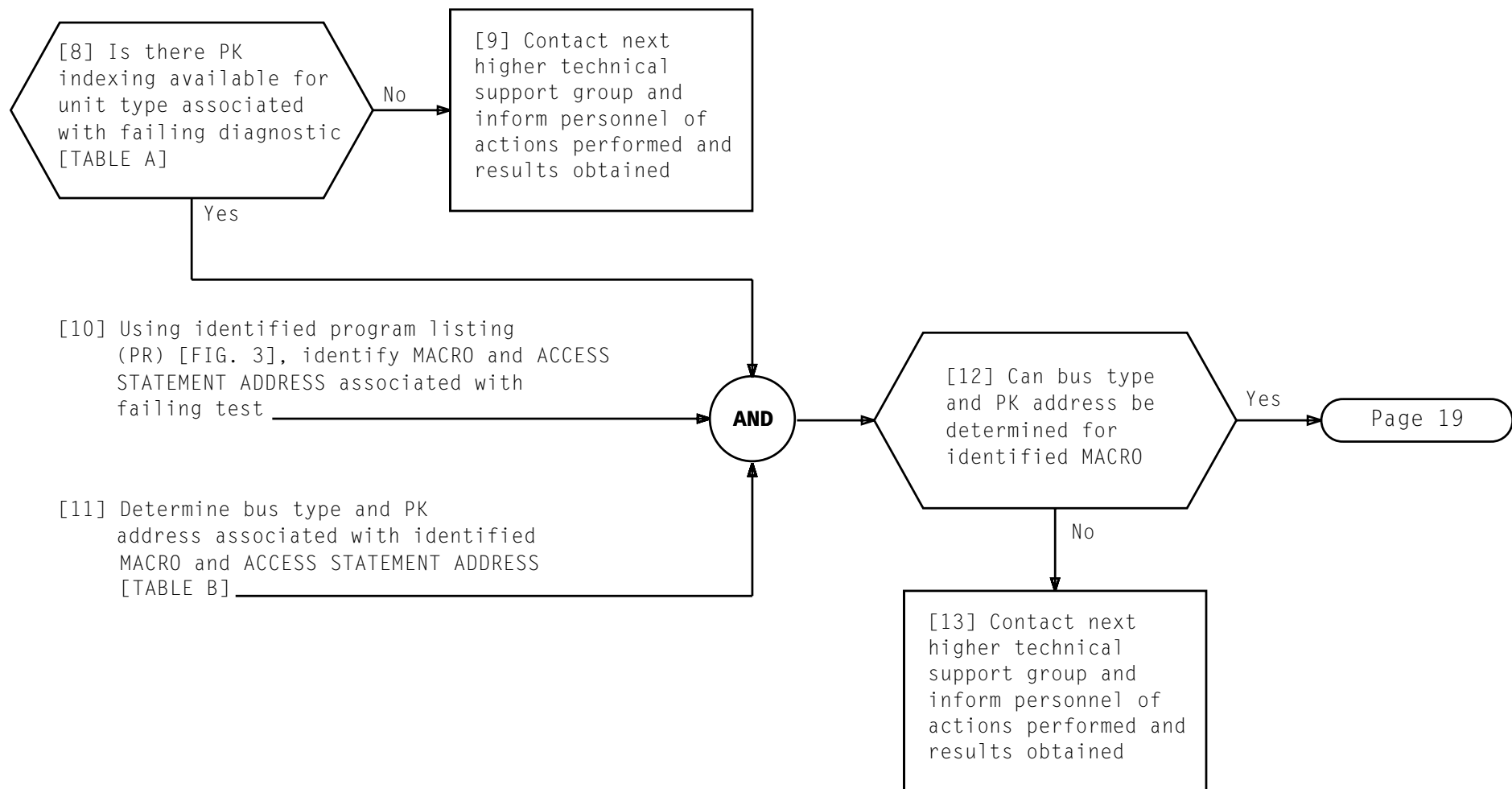


FIG. 3 – Example of Program Listing (PR)

IDENTIFY ADDITIONAL SUSPECT CIRCUIT PACKS
USING FAILING DIAGNOSTIC RAW DATA



IDENTIFY ADDITIONAL SUSPECT CIRCUIT PACKS USING FAILING DIAGNOSTIC RAW DATA

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TABLE A FAILING DIAGNOSTIC DATA TO PK INDEX AVAILABILITY					
UNIT TYPE	FAILING PHASE	PK INDEX AVAILABLE	UNIT TYPE	FAILING PHASE	PK INDEX AVAILABLE
AUI	01	YES	CC	01	YES
AUI	11	YES	CC	02	YES
AUI	21	YES	CC	03	YES
AUI	22	YES	CC	05	YES
AUI	23	YES	CC	06	YES
AUI	24	YES	CC	07	YES
AUI	25	YES	CC	08	YES
AUI	26	YES	CC	09	YES
AUI	27	YES	CC	10	YES
AUI	28	YES	CC	12	YES
AUI	29	YES	CC	13	YES
AUI	30	YES	CC	15	YES
AUI	31	YES	CC	16	YES
AUI	32	YES	CC	17	YES
AUI	33	YES	CC	18	YES
AUI	34	YES	CC	19	YES
AUI	35	YES	CC	20	YES
AUI	36	YES	CC	21	YES
AUI	37	YES	CC	22	YES
AUI	41	YES	CC	23	YES
AUI	43	YES			

**IDENTIFY ADDITIONAL SUSPECT CIRCUIT PACKS
USING FAILING DIAGNOSTIC RAW DATA**

TABLE A (Contd)					
FAILING DIAGNOSTIC DATA TO PK INDEX AVAILABILITY					
UNIT TYPE	FAILING PHASE	PK INDEX AVAILABLE	UNIT TYPE	FAILING PHASE	PK INDEX AVAILABLE
CC	24	YES	CC	42	YES
CC	25	YES	CC	43	YES
CC	26	YES	CC	44	YES
CC	27	YES	CC	45	YES
CC	28	YES	CC	46	YES
CC	29	YES	CC	47	YES
CC	30	YES	CC	48	YES
CC	31	YES	CC	49	YES
CC	32	YES	CC	50	YES
CC	33	YES	CC	51	YES
CC	34	YES	CC	52	YES
CC	35	YES	CC	53	YES
CC	36	YES	CC	54	YES
CC	37	YES	CC	55	YES
CC	38	YES	CC	56	YES
CC	39	YES	CC	57	YES
CC	40	YES	CC	58	YES
CC	41	YES			

**IDENTIFY ADDITIONAL SUSPECT CIRCUIT PACKS
USING FAILING DIAGNOSTIC RAW DATA**

TABLE A (Contd)					
FAILING DIAGNOSTIC DATA TO PK INDEX AVAILABILITY					
UNIT TYPE	FAILING PHASE	PK INDEX AVAILABLE	UNIT TYPE	FAILING PHASE	PK INDEX AVAILABLE
CC	59	YES	CC	87	YES
CC	61	YES	CC	89	YES
CC	62	YES	CC	90	YES
CC	64	YES	CC	91	YES
CC	66	YES	CC	92	YES
CC	67	YES	CC	93	YES
CC	68	YES	CC	94	YES
CC	69	YES	CC	95	YES
CC	70	YES	CC	96	YES
CC	72	YES	CC	97	YES
CC	73	YES	CC	98	YES
CC	74	YES	CS	01	YES
CC	76	YES	CS	02	YES
CC	78	YES	CS	03	YES
CC	79	YES	CS	04	YES
CC	80	YES	CS	05	YES
CC	81	YES	CS	06	YES
CC	83	YES	CS	07	YES
CC	85	YES	CS	08	YES

**IDENTIFY ADDITIONAL SUSPECT CIRCUIT PACKS
USING FAILING DIAGNOSTIC RAW DATA**

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TABLE A (Contd)					
FAILING DIAGNOSTIC DATA TO PK INDEX AVAILABILITY					
UNIT TYPE	FAILING PHASE	PK INDEX AVAILABLE	UNIT TYPE	FAILING PHASE	PK INDEX AVAILABLE
CS	09	YES	CSB	01	YES
CS	11	YES	CSB	02	YES
CS	12	YES	CSB	03	YES
CS	13	YES	CSB	04	YES
CS	14	YES	CSB	05	YES
CS	16	YES	CSB	06	YES
CS	17	YES	CSB	07	YES
CS	18	YES	CSB	08	YES
CS	21	YES	CSB	09	YES
CS	22	YES	CSB	10	YES
CS	23	YES	CSB	11	YES
CS	25	YES	CSB	12	YES
CS	91	YES	CSB	13	YES
CS	92	YES	CSB	14	YES
CS	97	YES	CSB	15	YES

**IDENTIFY ADDITIONAL SUSPECT CIRCUIT PACKS
USING FAILING DIAGNOSTIC RAW DATA**

TABLE A (Contd)					
FAILING DIAGNOSTIC DATA TO PK INDEX AVAILABILITY					
UNIT TYPE	FAILING PHASE	PK INDEX AVAILABLE	UNIT TYPE	FAILING PHASE	PK INDEX AVAILABLE
CSB	16	YES	CSB	36	YES
CSB	17	YES	CSB	37	YES
CSB	18	YES	CSB	38	YES
CSB	19	YES	CSB	39	YES
CSB	20	YES	CSB	40	YES
CSB	21	YES	IFB	01	YES
CSB	22	YES	IFB	10	YES
CSB	23	YES	IFB	12	YES
CSB	24	YES	IFB	14	YES
CSB	25	YES	IFB	16	YES
CSB	26	YES	IFB	30	YES
CSB	27	YES	IFB	32	YES
CSB	28	YES	IFB	34	YES
CSB	29	YES	IFB	36	YES
CSB	30	YES	MUP	01	YES
CSB	31	YES	MUP	02	YES
CSB	32	YES	MUP	03	YES
CSB	33	YES	MUP	04	YES
CSB	34	YES	MUP	05	YES
CSB	35	YES	MUP	06	YES

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TABLE A (Contd)					
FAILING DIAGNOSTIC DATA TO PK INDEX AVAILABILITY					
UNIT TYPE	FAILING PHASE	PK INDEX AVAILABLE	UNIT TYPE	FAILING PHASE	PK INDEX AVAILABLE
MUP	11	NO	PS	03	YES
MUP	12	NO	PS	04	YES
MUP	13	NO	PS	05	YES
MUP	14	NO	PS	06	YES
MUP	15	NO	PS	07	YES
MUP	21	NO	PS	08	YES
MUP	22	NO	PS	09	YES
MUP	23	NO	PS	11	YES
MUP	24	NO	PS	12	YES
MUP	25	NO	PS	13	YES
MUP	91	YES	PS	14	YES
MUP	95	NO	PS	16	YES
PS	01	YES	PS	17	YES
PS	02	YES	PS	18	YES

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TABLE A (Contd)					
FAILING DIAGNOSTIC DATA TO PK INDEX AVAILABILITY					
UNIT TYPE	FAILING PHASE	PK INDEX AVAILABLE	UNIT TYPE	FAILING PHASE	PK INDEX AVAILABLE
PS	21	YES	PSB	12	YES
PS	22	YES	PSB	13	YES
PS	23	YES	PSB	14	YES
PS	25	YES	SSD	01	YES
PS	91	YES	SSD	11	YES
PS	92	YES	SSD	12	YES
PS	97	YES	SSD	13	YES
PSB	01	YES	SSD	14	YES
PSB	02	YES	SSD	15	YES
PSB	03	YES	SSD	21	YES
PSB	04	YES	XPWR	01	YES
PSB	05	YES	XPWR	03	YES
PSB	06	YES	XPWR	05	YES
PSB	07	YES	XPWR	06	YES
PSB	08	YES	XPWR	07	YES
PSB	09	YES	XPWR	08	YES
PSB	10	YES	XPWR	09	YES
PSB	11	YES			

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TABLE A (Contd)					
FAILING DIAGNOSTIC DATA TO PK INDEX AVAILABILITY					
UNIT TYPE	FAILING PHASE	PK INDEX AVAILABLE	UNIT TYPE	FAILING PHASE	PK INDEX AVAILABLE
XPWR	10	YES	XPWR	93	YES
XPWR	90	YES	XPWR	94	YES
XPWR	91	YES	XPWR	95	YES
XPWR	92	YES			

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TABLE B MACRO TO BUS TYPE AND PK ADDRESS IDENTIFICATION	
MACRO	BUS TYPE AND PK ADDRESS IDENTIFICATION
AUMREAD	1. If ACCESS STATEMENT ADDRESS is 111 - DMA Reply Register 112 - Gate Data Reply Bus 2. If ACCESS STATEMENT ADDRESS is 0, 1, 2, 4, 10, 20, 40, 100, 200, 400, 1000, 2000, 1777, 2777, 3377, 3577, 3677, 3737, 3757, 3767, 3773, 3775, 3776, or 3777, the test is Address Loop-Around.
AUPULSE	ACCESS STATEMENT ADDRESS is a GCP address. Look up GCP address for unit under test in 'GCP Address Table'.
BNREAD	Use ACCESS STATEMENT ADDRESS directly as PK index
CCISOL	Use ACCESS STATEMENT ADDRESS directly as PK index. See program listing (PR) for Supplementary Information.
CCPULSE	Use ACCESS STATEMENT ADDRESS directly as PK index.
CCRCTST	Use ACCESS STATEMENT ADDRESS directly as PK index.
CCREAD	Use ACCESS STATEMENT ADDRESS directly as PK index
CCREC	Use ACCESS STATEMENT ADDRESS directly as PK index. See program listing (PR) for Supplementary Information.
CCRISTEP	Use ACCESS statement ADDRESS directly as PK index. See program listing (PR) for Supplementary Information.

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TABLE B (Contd) MACRO TO BUS TYPE AND PK ADDRESS IDENTIFICATION	
MACRO	BUS TYPE AND PK ADDRESS IDENTIFICATION
CCRUNDMA	Use ACCESS STATEMENT ADDRESS directly as PK index. See program listing (PR) for Supplementary Information.
CCTRAN	Use ACCESS STATEMENT ADDRESS directly as PK index. See program listing (PR) for Supplementary Information.
CCWRITE	Use ACCESS STATEMENT ADDRESS directly as PK index.
IFBREAD	Use SUPPLEMENTARY INFORMATION WORD 1 [FIG. 4] and TABLE C to obtain PK index.
MEMCHECK	ACCESS STATEMENT ADDRESS not usable as PK index.
MUPRES	Use SUPPLEMENTARY INFORMATION WORD 1 [FIG. 4] and TABLE C to obtain PK index.
SBYPULSE	ACCESS STATEMENT ADDRESS is a GCP address. Look up GCP address for unit under test in 'GCP Address Table'.
STULKBUS	Use ACCESS statement ADDRESS directly as PK index.
STUMUPDN	Use SUPPLEMENTARY INFORMATION WORD 1 [FIG. 4] and TABLE C to obtain Address in Memory Fabric.
STUPULSE	ACCESS statement ADDRESS is a GCP address. Look up GCP address for unit under test in 'GCP Address Table'.

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TABLE B (Contd) MACRO TO BUS TYPE AND PK ADDRESS IDENTIFICATION	
MACRO	BUS TYPE AND PK ADDRESS IDENTIFICATION
STUREAD	1. If Data Table Macro specifies 'OPTION C', use ACCESS STATEMENT ADDRESS as an index into the Control Registers in the Memory Unit 00 - CR00 Register (Data Register) 01 - CR01 Register (Status Register) 10 - CR10 Register (Write Protect Register) 11 - CR11 Register (Data Register - Odd PS). 2. If Data Table Macro specifies 'OPTIONS C,W,R', the test is an Address Loop-Around test. 3. If Data Table Macro does not specify 'OPTION C', then the ACCESS STATEMENT ADDRESS is in the Memory Fabric.
STUWRITE	Address read for test is CES Register (IN1CES).
XREAD	Use ACCESS STATEMENT ADDRESS directly as PK index for buffer bus only. ACCESS STATEMENT ADDRESS can be scratch location or other location not directly usable. See program listing (PR) for Supplementary Information.

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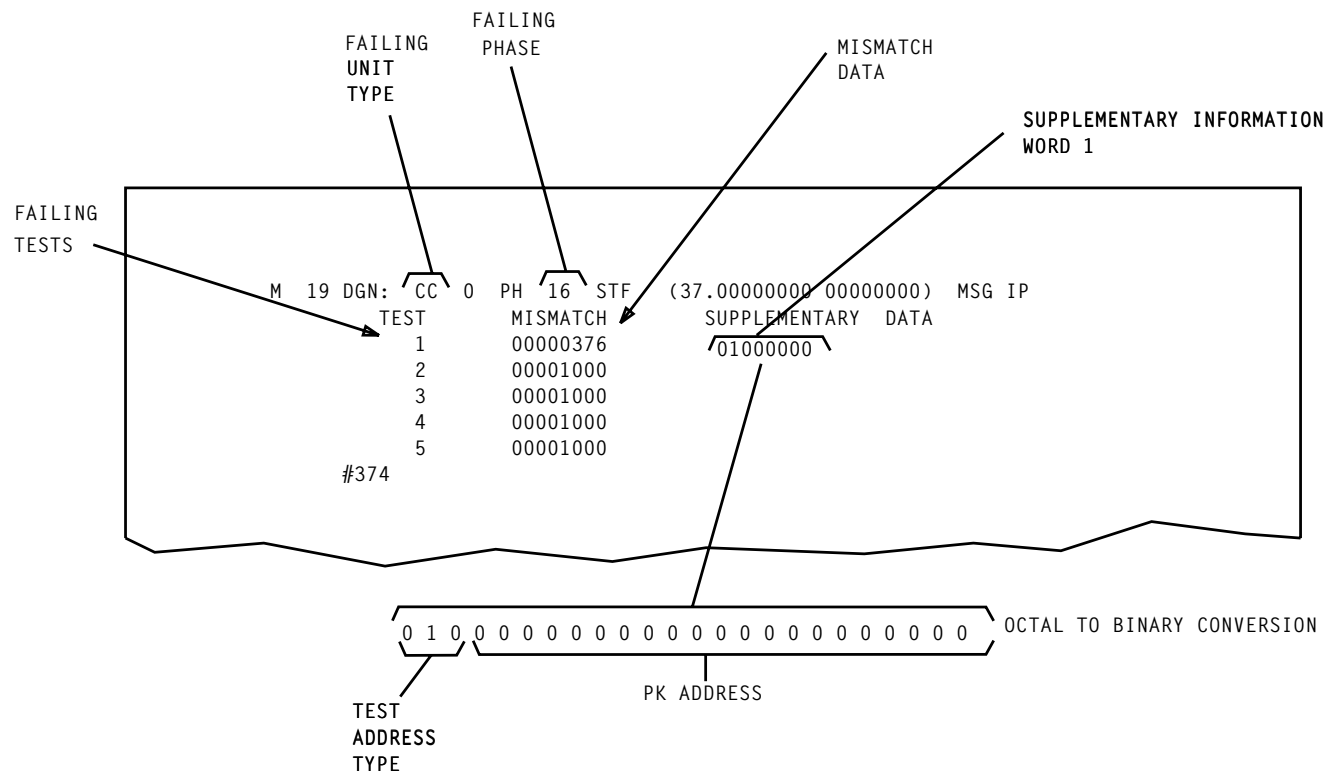


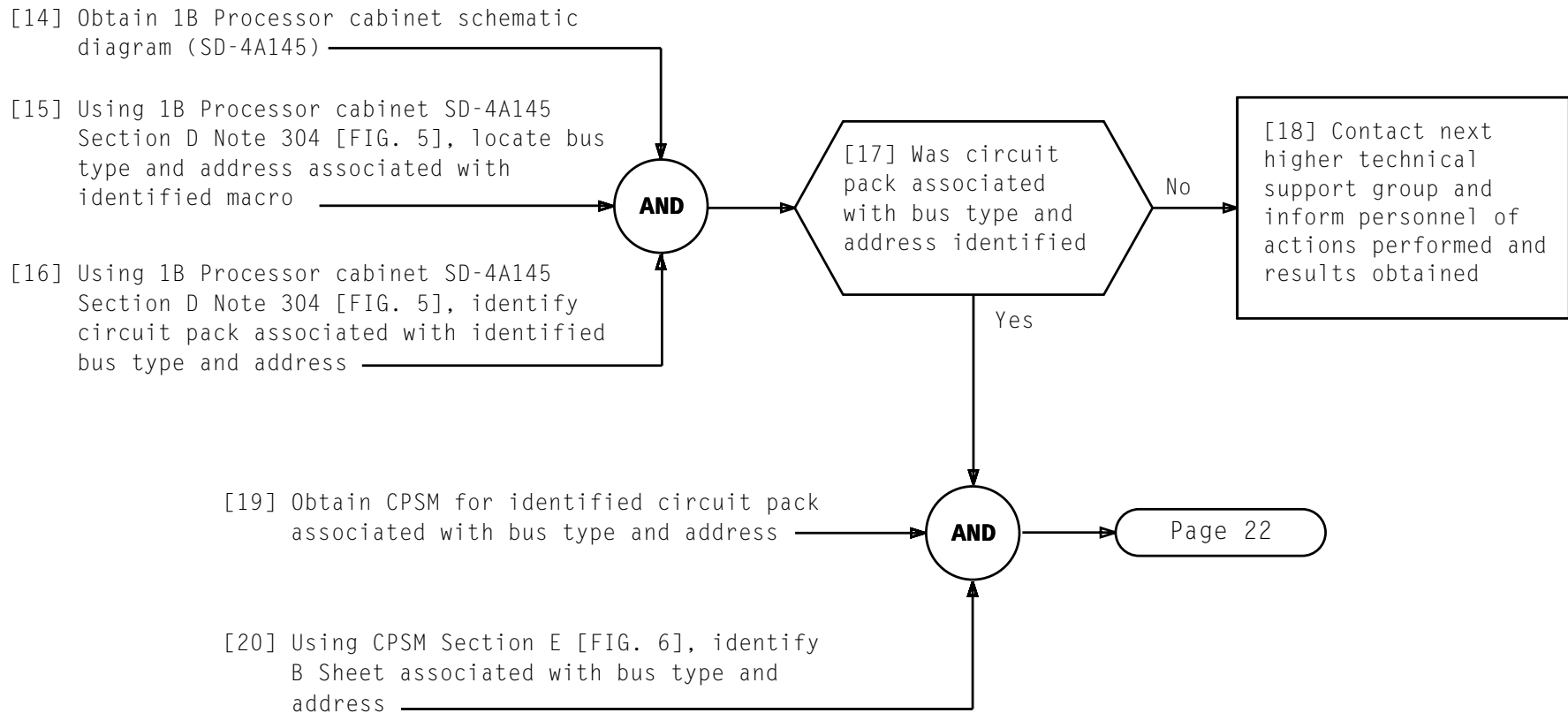
FIG. 4 - Example of Supplementary Information Word 1 Layout

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TABLE C SUPPLEMENTARY INFORMATION WORD 1 PK INDEX ADDRESSES		
WORD 1 BITS 21-23	BUS TYPE	PK INDEX ADDRESS
000	GCP	PK Address Specified By Supplementary Information Word 1 Bits 00-20
001	GCP	
010	Buffer Bus	PK Address Specified By Supplementary Information Word 1 Bits 00-07
011	Other Information	See Test documentation in PR
100	Utility Bus	PK Address Specified By Supplementary Information Word 1 Bits 00-08
101	None	PK Address Information Not Provided
110	Interface Bus	PK Address Specified By Supplementary Information Word 1 Bits 00-14
111	Store	PK Address Specified By Supplementary Information Word 1 Bits 00-19

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						BUFFER BUS					
BUS ADDRESS (OCTAL)	NODE (R/W)	BUS NAME	MNEMONIC	REGISTER NAME	CIRCUIT PACK	BUS ADDRESS (OCTAL)	NODE (R/W)	BUS NAME	MNEMONIC	REGISTER NAME	CIRCUIT PACK
000	R/W	BUFFER	BNCTL	BUS NODE CONTROL REGISTER	KLW22/KLW122/KLW222	261	R/W	BUFFER	GR	G REGISTER	KLW7
001	R/W	BUFFER	STPTR	STACK STOP POINTER REGISTER	KLW22/KLW122/KLW222	262	R/W	BUFFER	KR	K REGISTER	KLW7
002	W	BUFFER	RDPTA	READ POINTER REGISTER	KLW22/KLW122/KLW222	263	R/W	BUFFER	XR	X REGISTER	KLW7
010	R	BUFFER	DMAD	DATA NODE ADDRESS D	KLW22/KLW122/KLW222	264	R/W	BUFFER	YR	Y REGISTER	KLW7
011	R	BUFFER	DNAC	DATA NODE ADDRESS C	KLW22/KLW122/KLW222	265	R/W	BUFFER	ZR	Z REGISTER	KLW7
012	R	BUFFER	DMAE	DATA NODE ADDRESS B	KLW22/KLW122/KLW222	266	R/W	BUFFER	JR	J REGISTER	KLW7
						267	R/W	BUFFER	TR	STACK (7) REGISTER	KLW7

FIG. 5 – Example of 1B Processor Cabinet Schematic Diagram (SD-4A145) Section D Note 304

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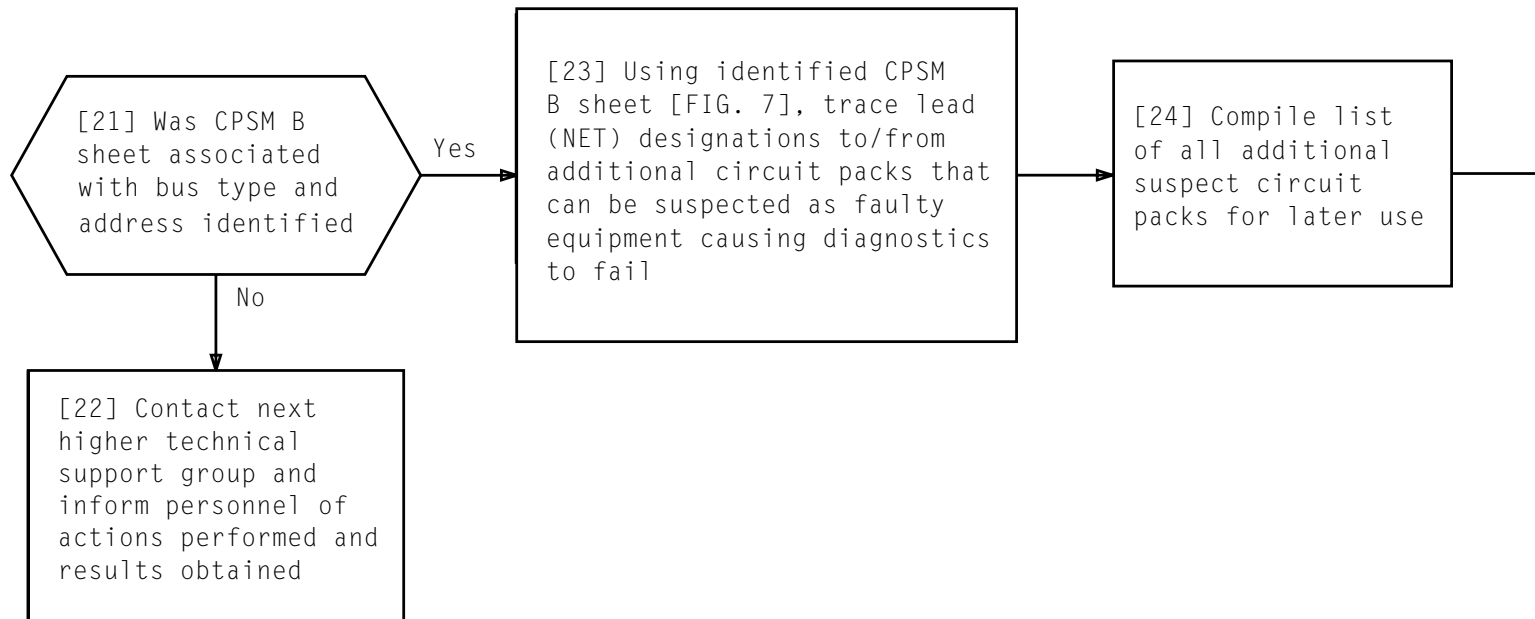
P/O CPSM KIW7
KIW7 - REGISTER TO "B SHEET" LOCATOR

ADDRESSSES	BUFFER BUS ADDRESS (OCTAL)	NODE	MNEMONIC	REGISTER NAME	CPSM B SHEET ASSOCIATED WITH ADDRESSES	SCHEMATIC PAGES (B SHEETS)
	260	R/W	FR	F REGISTER		B8
	261	R/W	GR	G REGISTER		B11
	262	R/W	KR	K REGISTER		B17
	263	R/W	XR	X REGISTER		B20
	264	R/W	YR	Y REGISTER		B23
	265	R/W	ZR	Z REGISTER		B26
	266	R/W	JR	J REGISTER		B14
	267	R/W	TR	STACK (T) REGISTER		B29 - B32
	UTILITY BUS ADDRESS (HEX)	NODE	MNEMONIC	REGISTER NAME		SCHEMATIC PAGES (B SHEETS)
	0A0	R/W*	TRMS0	T REG. MONITOR STORE		B33
	0A1	R/W*	TRMS1	T REG. MONITOR STORE		B33
	0A2	R/W*	TRMS2	T REG. MONITOR STORE		B34
	0A3	R/W*	TRMS3	T REG. MONITOR STORE		B34
	0A4	R/W*	FRMS0	F REG. MONITOR STORE		B9
	0A5	R/W*	FRMS1	F REG. MONITOR STORE		B9

FIG. 6 - Example of Circuit Pack Schematic And Manufacturing (CPSM) Diagram Section E

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P/O CPSM KIW8
ILA - INTERRUPT LEVEL ACTIVE AND
ILR - INTERRUPT LEVEL REQUESTS GENERATORS

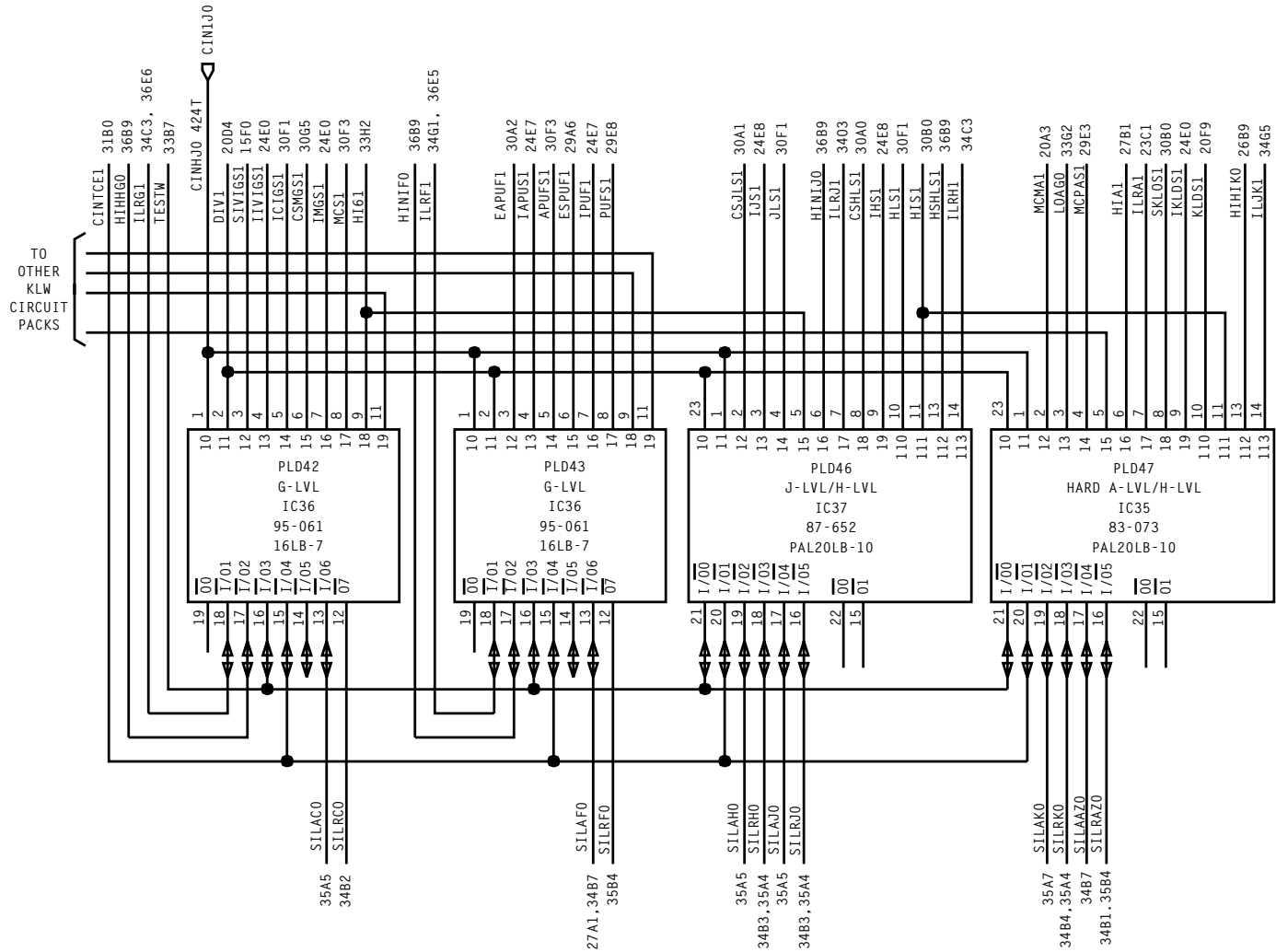
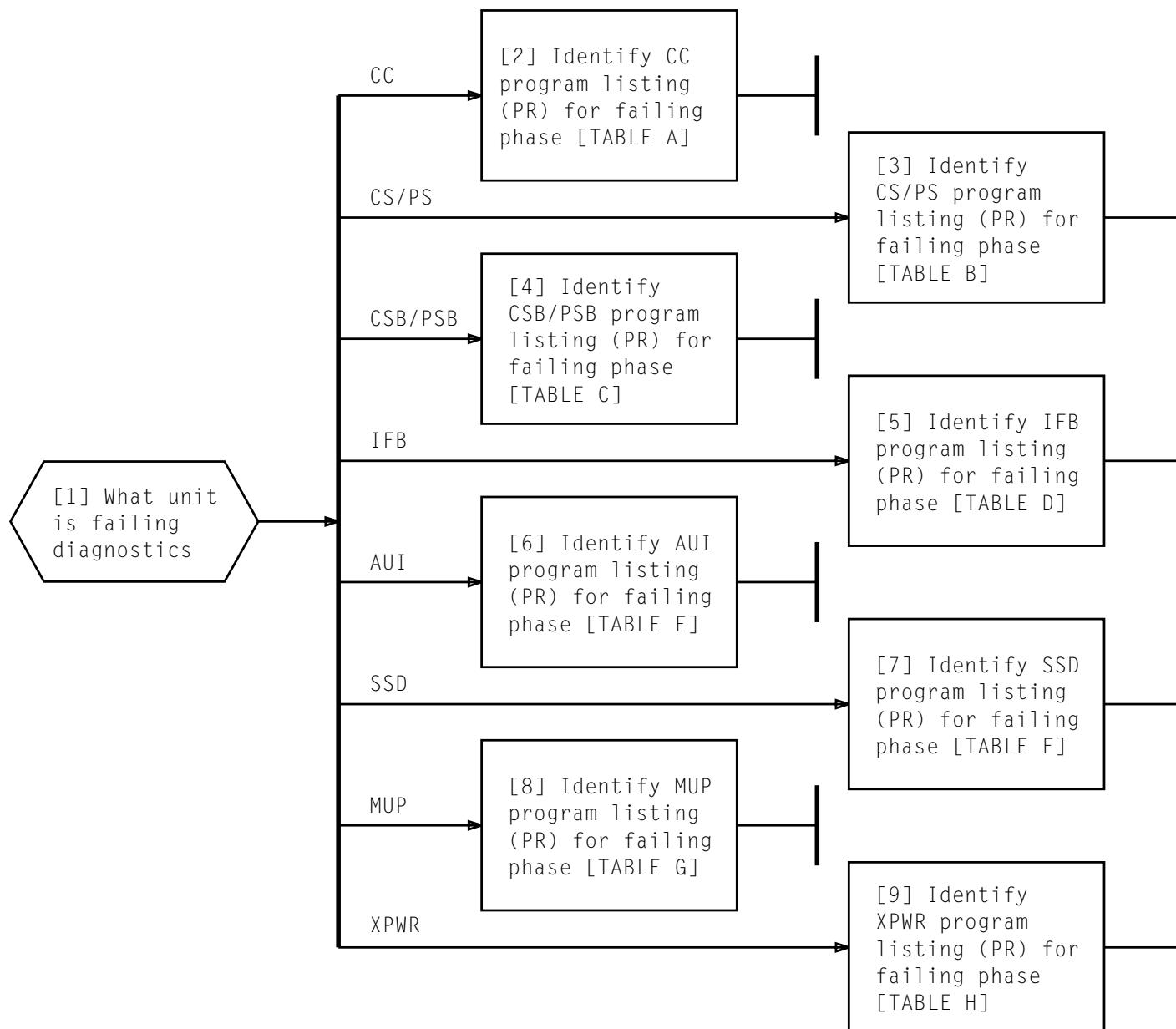


FIG. 7 – Example of 1B Processor CPSM B Sheet Showing Lead (Net) Designations

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TABLE A CENTRAL CONTROL (CC) DIAGNOSTIC PHASES AND ASSOCIATED PROGRAM LISTINGS (PRs)		
DIAGNOSTIC GROUP AND PHASE NUMBER (PIDENT)	PHASE DESCRIPTION	PROGRAM LISTING
CCDG01	CC POC AND POWER MONITOR TESTS (KLW11, KLW12, KLW25)	PR4A3527
CCDG02	CLOCK GENERATION AND DISTRIBUTION TESTS (KLW24)	PR4A3528
CCDG03	CC BUFFER BUS DECODER AND REGISTER TESTS (KLW8, ALL OTHER CC PACKS WITH BUFFER BUS ACCESS)	PR4A3529
CCDG05	B SHADOW REG (BRS), BYTE SWAPPING (BRW), L, P AND E REGISTER TESTS (KLW6)	PR4A3531
CCDG06	GENERAL REGISTERS (F, G, J, K, T, X, Y, Z) TESTS (KLW7)	PR4A3532
CCDG07	FETCH INDEX (FI) REGISTER TESTS (KLW05/KLW105/KLW205)	PR4A3081
CCDG08	FETCH ADDRESS (FA) REGISTER AND TRANSITION ADDRESS REGISTER (TAR) TESTS (KLW17/KLW117/KLW217)	PR4A3082
CCDG09	CONTROL BOARD 2 (CB2) REGISTERS BIT W/R TESTS (KLW14)	PR4A3083
CCDG10	BUFFER BUS W/R ACCESS TO IFBC REGISTERS AND PARITY GENERATORS TESTS (KLW13, KLW20)	PR4A3084
CCDG12	ADDRESS, DATA, PARITY INTERFERENCE TESTS (CS BUS) (KLW3, KLW4, KLW22/KLW122/KLW222)	PR4A3534
CCDG13	ADDRESS, DATA, PARITY INTERFERENCE TESTS (PS BUS) (KLW3, KLW4, KLW22/KLW122/KLW222)	PR4A3535
CCDG15	CONTROL BOARD 1 (CB1) REGISTER TESTS (KLW8)	PR4A3537
CCDG16	CONTROL BOARD 1 (CB1) INTERRUPT LOGIC TESTS (PART 1) (KLW8)	PR4A3538
CCDG17	CONTROL BOARD 1 (CB1) INTERRUPT LOGIC TESTS (PART 2) (KLW8)	PRA43539
CCDG18	MAINTENANCE MATCHER BUFFER BUS ADDRESS DECODER TESTS (KLW9)	PR4A3540
CCDG19	BUS NODE ADDRESS DECODING TESTS (KLW3, KLW4, KLW22/KLW122/KLW222)	PR4A3541
CCDG20	BUS NODE ARBITER TESTS (KLW22/KLW122/KLW222)	PR4A3085
CCDG21	BUS NODE CONTROL PARITY AND PROM TESTS (KLW3, KLW4, KLW22/KLW122/KLW222)	PR4A3542

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TABLE A (Contd) CENTRAL CONTROL (CC) DIAGNOSTIC PHASES AND ASSOCIATED PROGRAM LISTINGS (PRs)		
DIAGNOSTIC GROUP AND PHASE NUMBER (PIDENT)	PHASE DESCRIPTION	PROGRAM LISTING
CCDG22	BUS NODE CS FETCH TESTS (KLW3, KLW4)	PR4A3543
CCDG23	BUS NODE PS FETCH TESTS (KLW3, KLW4)	PR4A3544
CCDG24	BUS NODE CS DATA RECEPTION TESTS (KLW3, KLW4)	PR4A3545
CCDG25	BUS NODE PS DATA RECEPTION TESTS (KLW3, KLW4)	PR4A3546
CCDG26	CALL STORE BUS TRANSMISSION TESTS (KLW3, KLW4, KLW22/KLW122/KLW222)	PR4A3547
CCDG27	PROGRAM STORE BUS TRANSMISSION TESTS (KLW3, KLW4, KLW22/KLW122/KLW222)	PR4A3548
CCDG28	BUS NODE HISTORY STACKS TESTS (PART 1) (KLW22/KLW122/KLW222)	PR4A3549
CCDG29	BUS NODE HISTORY STACKS TESTS (PART 2) (KLW3, KLW4, KLW22/KLW122/KLW222)	PR4A3550
CCDG30	CONTROL INTERFACE AND ALU DESTINATION TESTS (KLW05/KLW105/KLW205, KLW7)	PR4A3146
CCDG31	FI DATA PATH TESTS (KLW05/KLW105/KLW205)	PR4A3155
CCDG32	PIPELINE CONTROL TESTS (KLW17/KLW117/KLW217)	PR4A3552
CCDG33	FETCH ADDRESS (FA) DATA PATHS TESTS (KLW17/KLW117/KLW217)	PR4A3553
CCDG34	IN-LINE FETCH AND TRANSFER FETCH TESTS (KLW05/KLW105/KLW205, KLW17/KLW117/KLW217)	PR4A3554
CCDG35	INDEX ADDER TESTS (KLW05/KLW105/KLW205)	PR4A3555
CCDG36	CONDITION DETECT TESTS (KLW05/KLW105/KLW205)	PR4A3556
CCDG37	FETCH ADDRESS (FA) CURRENT ADDRESS REG (CAR) DATA ADDRESS (DA) TESTS (KLW17/KLW117/KLW217)	PR4A3557
CCDG38	INDEX SOURCE AND DESTINATION TESTS (KLW05/KLW105/KLW205)	PR4A3558
CCDG39	DATA ADDRESS (DA) DECODER TESTS (KLW05/KLW105/KLW205)	PR4A3559
CCDG40	FETCH ADDRESS (FA) MEMORY ACCESS VIA THE STACK COUNTER (SC) TESTS (KLW17/KLW117/KLW217)	PR4A3086

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TABLE A (Contd) CENTRAL CONTROL (CC) DIAGNOSTIC PHASES AND ASSOCIATED PROGRAM LISTINGS (PRs)		
DIAGNOSTIC GROUP AND PHASE NUMBER (PIDENT)	PHASE DESCRIPTION	PROGRAM LISTING
CCDG41	DECODED INSTRUCTION REG (DIR) PIPELINE CONTROL TESTS (KLW05/KLW105/KLW205)	PR4A3560
CCDG42	FI ILLEGAL AND SPECIAL INSTRUCTION TESTS (KLW05/KLW105/KLW205)	PR4A3561
CCDG43	DECODED INSTRUCTION REG AND DIR PIPELINE CONTROL TESTS (KLW19)	PR4A3562
CCDG44	EXECUTION DECODER AND INSTRUCTION DECODER TESTS (KLW05/KLW105/KLW205, KLW19)	PR4A3563
CCDG45	P AND E REGISTER EXECUTION DECODER AND ACCESS TESTS (KLW19)	PR4A3564
CCDG46	DIR REGISTER SELECT, DESTINATION AND BITS USAGE TESTS (KLW19)	PR4A3565
CCDG47	EXECUTION AND INSTRUCTION DECODING OF INSTRUCTIONS THAT INVOLVE MASKING AND PARITY TESTS (KLW19)	PR4A3566
CCDG48	DECODED INSTRUCTION REGISTER (DIR) DATA REGISTER (DIR_D) AND THE DECODED INSTRUCTION REGISTER, MASK REGISTER (DIR_M) TESTS (KLW6)	PR4A3087
CCDG49	ALU ROTATE, SHIFT, MASK AND OTHER ARITHMETIC OPERATIONS TEST (KLW6, KLW19)	PR4A3567
CCDG50	ALU RIGHTMOST ONE CIRCUITRY, ARITHMETIC AND LOGICAL OPERATIONS TESTS (KLW6)	PR4A3088
CCDG51	WINDOW CS ADDRESS TRANSLATION (KLW105/KLW205 ONLY)	PR4A3568
CCDG52	FI DATA PATH TESTS (KLW3, KLW4, KLW22/KLW122/KLW222)	PR4A3569
CCDG53	CONTROL BOARD 1 (CB1) MISCELLANEOUS TESTS (KLW8)	PR4A3570
CCDG54	SHADOW REGISTERS AND CONTROL SIGNALS OF GENERAL REGISTERS (F, G, J, K, L, X, Y, Z) AND ALU TESTS (KLW6, KLW7)	PR4A3571
CCDG55	CONTROL BOARD 1 (CB1) TIMER TESTS (KLW8)	PR4A3572
CCDG56	PERIPHERAL FORMAT CIRCUIT (PFC) ON CLOCK UTILITIES PACK TESTS (KLW24)	PR4A3573
CCDG57	PROCESSOR CONFIGURATION (PC) TRIGGERING CIRCUITS TESTS (KLW8)	PR4A3574
CCDG58	CONTROL BOARD 2 (CB2) PERIPHERAL SEQUENCER TESTS (KLW14)	PR4A3575
CCDG59	CONTROL BOARD 2 (CB2) GCP DECODER TESTS (KLW14)	PR4A3576

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TABLE A (Contd) CENTRAL CONTROL (CC) DIAGNOSTIC PHASES AND ASSOCIATED PROGRAM LISTINGS (PRs)		
DIAGNOSTIC GROUP AND PHASE NUMBER (PIDENT)	PHASE DESCRIPTION	PROGRAM LISTING
CCDG61	BUS NODE TO IFBC ADDRESS BUS ACCESS, IFBC MASTER RESET, ABD IFBC BUS GRANT TIMEOUT TESTS (KLW13, KLW20)	PR4A3577
CCDG62	IFBC TO IFB LOOP TESTS AND ARBITER TESTS (KLW13, KLW20)	PR4A3578
CCDG64	IFBC SLAVE REPLY CODE TESTS (KLW13)	PR4A3580
CCDG66	IFBC MASTER REPLY CODE TESTS (KLW13)C	PR4A3582
CCDG67	FES INTERRUPT GENERATION TESTS (KLW13, KLW20)	PR4A3089
CCDG68	IFB SHADOW REGISTER TESTS (KLW13, KLW20)	PR4A3090
CCDG69	STANDBY CC IFB TO STORE INTERFACE TESTS (KLW3, KLW14, KLW22/KLW122/KLW222)	PR4A3583
CCDG70	IFB CLIENT DMA REQUEST, ENABLE, AND REPLY CODES TESTS (KLW13, KLW20)	PR4A3091
CCDG72	IFB DMA REPLY ACCESS TO BUS NODES AND STORES TESTS (KLW13, KLW20, KLW03, KLW4, KLW22/KLW122/KLW222)	PR4A3585
CCDG73	IFB TO PS/CS BUS TRANSMISSION TEST (KLW3, KLW4, KLW22/KLW122/KLW222)	PR4A1510
CCDG74	IFBC ERROR DETECTORS AND ERRORS SOURCE REGISTER (FES) RECORDING (KLW13, KLW20)	PR4A3586
CCDG76	BUS ISOLATION TESTS, ASW TESTS, BLOCK DMA TESTS (KLW13, KLW20)	PR4A3588
CCDG78	IFB SECTION OF THE BUS NODE STACKS TESTS (KLW22/KLW122/KLW222)	PR4A3590
CCDG79	MAINTENANCE MATCHERS CIRCUITS TESTS (KLW9)	PR4A3092
CCDG80	MUP BUFFER BUS AND MUP/MUI 68010 INTERFACE TESTS (KLW16/KLW116/KLW216, KLW21)	PR4A1519
CCDG81	MUP/MUI INTERFACE AND REGISTERS TESTS (KLW16/KLW116/KLW216, KLW21)	PR4A2591

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TABLE A (Contd) CENTRAL CONTROL (CC) DIAGNOSTIC PHASES AND ASSOCIATED PROGRAM LISTINGS (PRs)		
DIAGNOSTIC GROUP AND PHASE NUMBER (PIDENT)	PHASE DESCRIPTION	PROGRAM LISTING
CCDG83	UTILITY SYSTEM BUFFER BUS ACCESS TO ALL CC PACKS WITH UTILITY BUS ACCESS TESTS (KLW16/KLW116/KLW216, KLW21, ALL CC PACKS WITH US BUS ACCESS)	PR4A3593
CCDG85	UTILITY SYSTEM UTILITY BUS ACCESS TO ALL CC PACKS WITH UTILITY BUS ACCESS TESTS (KLW16/KLW116/KLW216, KLW21, ALL CC PACKS WITH US BUS ACCESS)	PR4A3739
CCDG87	UTILITY SYSTEM MONITOR STORES CONTROL LOGIC ON ALL CIRCUIT PACKS IN THE STANDBY CC TESTS WITH MONITOR STORE LOGIC (KLW16/KLW116/KLW216, KLW21, ALL CC PACKS WITH MONITOR STORE ACCESS)	PR4A3093
CCDG89	UTILITY SYSTEM MATCHERS ON ALL CIRCUIT PACKS IN THE STANDBY CC (KLW28, KLW9, ALSO MATCHER LOGIC ON KLW05/KLW105/KLW205, KLW6, KLW7, KLW8, KLW9, KLW10/KLW210, KLW14, KLW24)	PR4A3095
CCDG90	UTILITY SYSTEM EXHAUSTIVE RANDOM ACCESS MEMORY TESTS (KLW13, KLW20)	PR4A3096
CCDG91	UTILITY SYSTEM EXHAUSTIVE RANDOM ACCESS MEMORY TESTS (KLW8, KLW14)	PR4A3748
CCDG92	UTILITY SYSTEM EXHAUSTIVE RANDOM ACCESS MEMORY TESTS (KLW7, KLW9)	PR4A3740
CCDG93	UTILITY SYSTEM EXHAUSTIVE RANDOM ACCESS MEMORY TESTS (KLW10/KLW210, KLW24)	PR4A3432

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DIAGNOSTIC GROUP AND PHASE NUMBER (PIDENT)	PHASE DESCRIPTION	PROGRAM LISTING
CCDG94	UTILITY SYSTEM EXHAUSTIVE RANDOM ACCESS MEMORY TESTS (KLW7, KLW28)	PR4A3065
CCDG95	PROCESSOR CONFIGURATION (PC) RELATED CIRCUITS (KLW8)	PR4A3097
CCDG96	RETROFIT GCP TEST (UNIQUE BINARY PATTERN TESTS) (KLW8, KLW14)	PR4A3098
CCDG97	RETROFIT GCP SHORT TEST (KLW8, KLW14)	PR4A3099
CCDG98	RETROFIT GCP TEST (SEND CRAFT SELECTED PU GCPs) (KLW8, KLW14)	PR4A3100

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TABLE B CALL STORE/PROGRAM STORE (CS/PS) DIAGNOSTIC PHASES AND ASSOCIATED PROGRAM LISTINGS (PRs)		
DIAGNOSTIC GROUP AND PHASE NUMBER (PIDENT)	PHASE DESCRIPTION	PROGRAM LISTING
MUDG01	POWER MONITOR TESTS AND BUS 0 GCP REPLY TESTS (KLW1, KLW2)	PR4A3013
MUDG02	BUS 1 GCP REPLY TESTS (KLW1, KLW2)	PR4A3014
MUDG03	BUS 0 ORDER/MODE BITS AND TRAP MODE ERROR TESTS (KLW1, KLW2)	PR4A3015
MUDG04	BUS 1 ORDER/MODE BITS AND TRAP MODE ERROR TESTS (KLW1, KLW2)	PR4A1527
MUDG05	BUS 0 ADDRESS MATCH DETECT AND CONTROL WRITE TESTS (KLW1, KLW2)	PR4A3016
MUDG06	BUS 1 ADDRESS MATCH DETECT AND CONTROL WRITE TESTS (KLW1, KLW2)	PR4A3161
MUDG07	DATA LOOP AROUND TESTS BUS 0 ACTIVE (KLW1, KLW2)	PR4A3017
MUDG08	DATA LOOP AROUND TESTS BUS 1 ACTIVE (KLW1, KLW2)	PR4A1528
MUDG09	ADDRESS LOOP-AROUND TESTS BUS 0 ACTIVE (KLW1, KLW2)	PR4A3018
MUDG11	ADDRESS LOOP-AROUND TESTS BUS 1 ACTIVE (KLW1, KLW2)	PR4A3019
MUDG12	MCODE TESTS AND MCODE REJECTION TESTS (KLW1, KLW2)	PR4A3020
MUDG13	ADDRESS PARITY, DATA PARITY AND CONTROL PARITY TESTS (KLW1, KLW2)	PR4A3021
MUDG14	ALL SEEMS WELL AND ALL SEEMS WELL FAILURE TESTS (KLW1, KLW2)	PR4A3022
MUDG16	BUS CONFIGURATION CIRCUITRY TESTS (KLW1, KLW2)	PR4A3024
MUDG17	BUS CONFIGURATION CIRCUITRY TESTS (KLW1, KLW2)	PR4A3711
MUDG18	MEMORY ARRAY, DATA PARITY AND WRITE-PROTECT TESTS (KLW1, KLW2)	PR4A3025
MUDG21	WRITE, ADDR AND REPLY LEAKY BUS TEST (KLW1, KLW2)	PR4A3027
MUDG22	WRITE, ADDR AND REPLY LEAKY BUS TEST (KLW1, KLW2)	PR4A3028

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TABLE B (Contd) CALL STORE/PROGRAM STORE (CS/PS) DIAGNOSTIC PHASES AND ASSOCIATED PROGRAM LISTINGS (PRs)		
DIAGNOSTIC GROUP AND PHASE NUMBER (PIDENT)	PHASE DESCRIPTION	PROGRAM LISTING
MUDG23	AUTOMATIC SLAVE STORE TEST (KLW1, KLW2)	PR4A3029
MUDG25	STRESS TEST (KLW1, KLW2)	PR4A3031
MUDG91	MEMORY ARRAY AND DATA PARITY TEST (KLW1, KLW2)	PR4A3003
MUDG92	MCC BUS TESTS (KLW1, KLW2)	PR4A3004
MUDG97	USER-SPECIFIED ADDRESS RANGE AND DATA TESTS (KLW1, KLW2)	PR4A3007

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TABLE C CALL STORE BUS/PROGRAM STORE BUS (CSB/PSB) DIAGNOSTIC PHASES AND ASSOCIATED PROGRAM LISTINGS		
DIAGNOSTIC GROUP AND PHASE NUMBER (PIDENT)	PHASE DESCRIPTION	PROGRAM LISTING
MBDG01	CSB/PSB MISC POWER (XPWR) TESTS (KLW23) AND CSB/PSB BUS ACCESS TESTS CS0 (KLW1)/PS0 (KLW2)	PR4A3671
NOTE: PHASES IN RANGE 2-40 USE THE SAME PR (PIDENT MBDG01)		
MBDG02	PS/CS BUS ACCESS TESTS CS 1 (KLW1)/PS 1 (KLW2)	PR4A3671
MBDG03	PS/CS BUS ACCESS TESTS CS 2 (KLW1)/PS 2 (KLW2)	PR4A3671
MBDG04	PS/CS BUS ACCESS TESTS CS 3 (KLW1)/PS 3 (KLW2)	PR4A3671
MBDG05	PS/CS BUS ACCESS TESTS CS 4 (KLW1)/PS 4 (KLW2)	PR4A3671
MBDG06	PS/CS BUS ACCESS TESTS CS 5 (KLW1)/PS 5 (KLW2)	PR4A3671
MBDG07	PS/CS BUS ACCESS TESTS CS 6 (KLW1)/PS 6 (KLW2)	PR4A3671
MBDG08	PS/CS BUS ACCESS TESTS CS 7 (KLW1)/PS 7 (KLW2)	PR4A3671
MBDG09	PS/CS BUS ACCESS TESTS CS 8 (KLW1)/PS 8 (KLW2)	PR4A3671
MBDG10	PS/CS BUS ACCESS TESTS CS 9 (KLW1)/PS 9 (KLW2)	PR4A3671
MBDG11	PS/CS BUS ACCESS TESTS CS 10 (KLW1)/PS 10 (KLW2)	PR4A3671
MBDG12	PS/CS BUS ACCESS TESTS CS 11 (KLW1)/PS 11 (KLW2)	PR4A3671
MBDG13	PS/CS BUS ACCESS TESTS CS 12 (KLW1)/PS 12 (KLW2)	PR4A3671
MBDG14	PS/CS BUS ACCESS TESTS CS 13 (KLW1)/PS 13 (KLW2)	PR4A3671
MBDG15	CS BUS ACCESS TESTS CS 14 (KLW1)	PR4A3671
MBDG16	CS BUS ACCESS TESTS CS 15 (KLW1)	PR4A3671

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TABLE C (Contd) CALL STORE BUS/PROGRAM STORE BUS (CSB/PSB) DIAGNOSTIC PHASES AND ASSOCIATED PROGRAM LISTINGS		
DIAGNOSTIC GROUP AND PHASE NUMBER (PIDENT)	PHASE DESCRIPTION	PROGRAM LISTING
MBDG17	CS BUS ACCESS TESTS CS 16 (KLW1)	PR4A3671
MBDG18	CS BUS ACCESS TESTS CS 17 (KLW1)	PR4A3671
MBDG19	CS BUS ACCESS TESTS CS 18 (KLW1)	PR4A3671
MBDG20	CS BUS ACCESS TESTS CS 19 (KLW1)	PR4A3671
MBDG21	CS BUS ACCESS TESTS CS 20 (KLW1)	PR4A3671
MBDG22	CS BUS ACCESS TESTS CS 21 (KLW1)	PR4A3671
MBDG23	CS BUS ACCESS TESTS CS 22 (KLW1)	PR4A3671
MBDG24	CS BUS ACCESS TESTS CS 23 (KLW1)	PR4A3671
MBDG25	CS BUS ACCESS TESTS CS 24 (KLW1)	PR4A3671
MBDG26	CS BUS ACCESS TESTS CS 25 (KLW1)	PR4A3671
MBDG27	CS BUS ACCESS TESTS CS 26 (KLW1)	PR4A3671
MBDG28	CS BUS ACCESS TESTS CS 27 (KLW1)	PR4A3671
MBDG29	CS BUS ACCESS TESTS CS 28 (KLW1)	PR4A3671
MBDG30	CS BUS ACCESS TESTS CS 29 (KLW1)	PR4A3671
MBDG31	CS BUS ACCESS TESTS CS 30 (KLW1)	PR4A3671
MBDG32	CS BUS ACCESS TESTS CS 31 (KLW1)	PR4A3671
MBDG33	CS BUS ACCESS TESTS CS 32 (KLW1)	PR4A3671

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TABLE C (Contd) CALL STORE BUS/PROGRAM STORE BUS (CSB/PSB) DIAGNOSTIC PHASES AND ASSOCIATED PROGRAM LISTINGS		
DIAGNOSTIC GROUP AND PHASE NUMBER (PIDENT)	PHASE DESCRIPTION	PROGRAM LISTING
MBDG34	CS BUS ACCESS TESTS CS 33 (KLW1)	PR4A3671
MBDG35	CS BUS ACCESS TESTS CS 34 (KLW1)	PR4A3671
MBDG36	CS BUS ACCESS TESTS CS 35 (KLW1)	PR4A3671
MBDG37	CS BUS ACCESS TESTS CS 36 (KLW1)	PR4A3671
MBDG38	CS BUS ACCESS TESTS CS 37 (KLW1)	PR4A3671
MBDG39	CS BUS ACCESS TESTS CS 38 (KLW1)	PR4A3671
MBDG40	CS BUS ACCESS TESTS CS 39 (KLW1)	PR4A3671

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TABLE D INTERFACE BUS (IFB) DIAGNOSTIC PHASE AND ASSOCIATED PROGRAM LISTINGS		
DIAGNOSTIC GROUP AND PHASE NUMBER (PIDENT)	PHASE DESCRIPTION	PROGRAM LISTING
IFDG01	TESTS IFB POWER CIRCUITS AND POWER MONITOR CIRCUITS	PR4A3843
IFDG10	TESTS BASIC CC ACCESS TO IFB BUSES (KLW13, KLW20)	PR4A815
IFDG12	TESTS IFB0 ACCESS TO MUP0 FROM BOTH CCs (KLW16/KLW116/KLW216)	PR4A3850
IFDG14	TESTS IFB ACCESS TO AUI0 FROM BOTH CCs (KLW18)	PR4A3852
IFDG16	TESTS IFB0 CONNECTIVITY BETWEEN BOTH CCs AND SSD 0 (KLW15)	PR4A3855
IFDG30	TESTS CC ACCESS TO IFB BUSES BY USING EACH CC (KLW13, KLW20)	PR4A816
IFDG32	TESTS IFB1 ACCESS TO MUP1 FROM BOTH CCs (KLW16/KLW116/KLW216)	PR4A3042
IFDG34	TESTS IFB ACCESS TO AUI1 FROM BOTH CCs (KLW18)	
IFDG36	TESTS IFB1 CONNECTIVITY BETWEEN BOTH CCs AND SSD 1 (KLW15)	PR4A3046
NOTE: EVEN NUMBERED PHASES IN RANGE 60-80 USE THE SAME PR (PIDENT IFDG60)		
IFDG60	VERIFIES IFB0 LEADS BETWEEN EACH CC AND CLIENT SLOT 0 (MUP 0 PWR - KLW16/KLW116/KLW216)	PR4A817
IFDG62	VERIFIES IFB0 LEADS BETWEEN EACH CC AND CLIENT SLOT 2 (MUP 0 - KLW25)	PR4A817
IFDG64	VERIFIES IFB0 LEADS BETWEEN EACH CC AND CLIENT SLOT 4	PR4A817
IFDG66	VERIFIES IFB0 LEADS BETWEEN EACH CC AND CLIENT SLOT 6	PR4A817
IFDG68	VERIFIES IFB0 LEADS BETWEEN EACH CC AND CLIENT SLOT 8	PR4A817
IFDG70	VERIFIES IFB0 LEADS BETWEEN EACH CC AND CLIENT SLOT 10 (AUI 0 - KLW18)	PR4A817
IFDG72	VERIFIES IFB0 LEADS BETWEEN EACH CC AND CLIENT SLOT 12	PR4A817
IFDG74	VERIFIES IFB0 LEADS BETWEEN EACH CC AND CLIENT SLOT 14	PR4A817
IFDG76	VERIFIES IFB0 LEADS BETWEEN EACH CC AND CLIENT SLOT 16	PR4A817
IFDG78	VERIFIES IFB0 LEADS BETWEEN EACH CC AND CLIENT SLOT 18	PR4A817

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TABLE D (Contd) INTERFACE BUS (IFB) DIAGNOSTIC PHASES AND ASSOCIATED PROGRAM LISTINGS		
DIAGNOSTIC GROUP AND PHASE NUMBER (PIDENT)	PHASE DESCRIPTION	PROGRAM LISTING
IFDG80	VERIFIES IFB0 LEADS BETWEEN EACH CC AND CLIENT SLOT 20	PR4A817
NOTE: ODD NUMBERED PHASES IN RANGE 61-81 USE THE SAME PR (PIDENT IFDG61)		
IFDG61	VERIFIES IFB1 LEADS BETWEEN EACH CC AND CLIENT SLOT 1 (MUP 1 - KLW16/KLW116/KLW216)	PR4A3869
IFDG63	VERIFIES IFB1 LEADS BETWEEN EACH CC AND CLIENT SLOT 3 (MUP 1 PWR - KLW25)	PR4A3869
IFDG65	VERIFIES IFB1 LEADS BETWEEN EACH CC AND CLIENT SLOT 5	PR4A3869
IFDG67	VERIFIES IFB1 LEADS BETWEEN EACH CC AND CLIENT SLOT 7	PR4A3869
IFDG69	VERIFIES IFB1 LEADS BETWEEN EACH CC AND CLIENT SLOT 9	PR4A3869
IFDG71	VERIFIES IFB1 LEADS BETWEEN EACH CC AND CLIENT SLOT 11 (AUI 1 - KLW18)	PR4A3869
IFDG73	VERIFIES IFB1 LEADS BETWEEN EACH CC AND CLIENT SLOT 13	PR4A3869
IFDG75	VERIFIES IFB1 LEADS BETWEEN EACH CC AND CLIENT SLOT 15	PR4A3869
IFDG77	VERIFIES IFB1 LEADS BETWEEN EACH CC AND CLIENT SLOT 17	PR4A3869
IFDG79	VERIFIES IFB1 LEADS BETWEEN EACH CC AND CLIENT SLOT 19	PR4A3869
IFDG81	VERIFIES IFB1 LEADS BETWEEN EACH CC AND CLIENT SLOT 21	PR4A3869
IFDG90	TESTS CLIENT REQUEST MULTIPLEXER USING ALL CLIENTS (KLW13, KLW20)	PR4A818

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TABLE E AUXILIARY UNIT INTERFACE (AUI) DIAGNOSTIC PHASES AND ASSOCIATED PROGRAM LISTINGS		
DIAGNOSTIC GROUP AND PHASE NUMBER (PIDENT)	PHASE DESCRIPTION	PROGRAM LISTING
AIDG01	POWER MONITOR TESTS (KLW18, POWER SWITCH, SSDs)	PR4A3067
AIDG11	POWER ON CLEAR (POC), GENERATE CONTROL PULSE (GCP) AND AUI RESET (KLW18)	PR4A3068
AIDG21	BASIC IFB TO AUI ACCESSES (KLW18)	PR4A3069
AIDG22	AUI ADDRESS DECODER AND INTERNAL REGISTER TESTS (KLW18)	PR4A3070
AIDG23	INTERNAL AUI DATA BUS AND REGISTER TESTS (KLW18)	PR4A3071
AIDG24	AUL AND STORE ADR COMPARATOR CIRCUIT (KLW18)	PR4A3072
AIDG25	AUL AND STORE ADR COMPARATOR CIRCUIT (KLW18)	PR4A3073
AIDG26	AUL AND STORE ADR COMPARATOR CIRCUIT (KLW18)	PR4A3074
AIDG27	ERROR DETECTION TESTS (KLW18)	PR4A3060
AIDG28	INTERNAL AUI ADDRESS BUS TESTS (KLW18)	PR4A3061
AIDG29	MISCELLANEOUS AUI DATA PARITY AND INTERJECT TESTS (KLW18)	PR4A3150
AIDG31	AU BUS TROUBLE FLIP-FLOP TESTS (KLW18)	PR4A3075
AIDG32	TESTS AU ADDRESS BUS (KLW18, UN338)	PR4A3076
AIDG33	TESTS AU WRITE BUS (KLW18, UN338)	PR4A3077
AIDG34	TESTS AU REPLY BUS (KLW18, UN338)	PR4A3078
AIDG35	TESTS AU STORE ADDRESS BUS (KLW18, UN338)	PR4A3062
AIDG36	TESTS ABILITY OF AUI DMA CIRCUIT TO DO AU BUS MEMORY TRANSFERS (KLW18, UN338)	PR4A3063
AIDG37	AU INTERJECT TESTS (KLW18, UN338)	PR4A3152

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TABLE F SCAN AND SIGNAL DISTRIBUTOR (SSD) DIAGNOSTIC PHASES AND ASSOCIATED PROGRAM LISTINGS		
DIAGNOSTIC GROUP AND PHASE NUMBER (PIDENT)	PHASE DESCRIPTION	PROGRAM LISTING
PDDG01	TESTS POWER MONITOR CIRCUITS (KLW15)	PR4A3732
PDDG11	TESTS ABILITY OF IFBC TO ACCESS SSD (KLW15)	PR4A1512
PDDG12	TESTS INTERNAL ADDRESS BUS AND SSD REGISTERS (KLW15)	PR4A1513
PDDG13	TESTS PARITY CHECKER, ADDRESS, DECODER CIRCUIT, CONTROL ERROR CIRCUIT AND UNUSED ADDRESS ERROR (KLW15)	PR4A3114
PDDG14	TESTS SSD REGISTER WITH SD MATRIX (KLW15)	PR4A1515
PDDG15	TESTS POWER ON CLEAR (POC) CIRCUIT AND GENERATE CONTROL PULSE (GCP) CIRCUIT (KLW15)	PR4A1516
PDDG21	TESTS ALL WRITEABLE REGISTERS FOR STUCK-AT-ONE AND STUCK AT-ZERO BITS AND ANY SD MATRIX RELATED CIRCUITS (KLW15)	PR4A1517

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TABLE G MCC AND UTILITY PROCESSOR (MUP) DIAGNOSTIC PHASES AND ASSOCIATED PROGRAM LISTINGS		
DIAGNOSTIC GROUP AND PHASE NUMBER (PIDENT)	PHASE DESCRIPTION	PROGRAM LISTING
MCDG01	TESTS MUP POWER SYSTEM (KLW25)	PR4A3673
MCDG02	TESTS BASIC IFB ACCESS (KLW16/KLW116/KLW216, KLW25, KLW13, KLW20)	PR4A1509
MCDG03	CLIENT ENABLE, ERROR RECORDING, INTERJECT AND INTERRUPT TESTS (KLW16/KLW116/KLW216, KLW25, KLW13, KLW20)	PR4A1510
MCDG04	IFB REG INTERFACE AND MUP CORE ERROR TESTS (KLW16/KLW116/KLW216, KLW25, KLW13, KLW2)	PR4A1511
MCDG05	DMA TESTS (KLW16/KLW116/KLW216, KLW25, KLW13, KLW20)	PR4A1520
MCDG06	TESTS MUP BLOCK DMA COUNT AND DATA (KLW16/KLW116/KLW216)	PR4A1521
MCDG11	MUP CORE ROM TEST (KLW16/KLW116/KLW216)	PR4A3674
MCDG12	MUP CORE DRAM TEST (KLW16/KLW116/KLW216)	PR4A3675
MCDG13	MUP CORE CPU TEST (KLW16/KLW116/KLW216)	PR4A1524
MCDG14	MUP CORE DRAM PARITY TEST (KLW16/KLW116/KLW216)	PR4A3125
MCDG15	MUP CORE INTERRUPT REGISTER TEST (KLW16/KLW116/KLW216)	PR4A1526
MCDG21	MUP CORE DMA CONTROLLER TEST (KLW16/KLW116/KLW216)	PR4A3676
MCDG22	MUP CORE DUART TEST (KLW16/KLW116/KLW216)	PR4A3677
MCDG23	MUP CORE ETHERNET TEST (KLW16/KLW116/KLW216)	PR4A3678
MCDG24	MUP CORE MEMORY MANAGEMENT UNIT (MMU) TEST (KLW16/KLW116/KLW216)	PR4A3679
MCDG25	MUP CORE OPERATIONAL INTERRUPT TESTS (KLW16/KLW116/KLW216)	PR4A3680
MCDG91	MUP ACTIVITY CONTROL TESTS (KLW16/KLW116/KLW216, KLW25)	PR4A3696

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TABLE H MISCELLANEOUS POWER (XPWR) DIAGNOSTIC PHASES AND ASSOCIATED PROGRAM LISTINGS		
DIAGNOSTIC GROUP AND PHASE NUMBER (PIDENT)	PHASE DESCRIPTION	PROGRAM LISTING
XPDG01	MISCELLANEOUS POWER (XPWR) BASIC SANITY CHECK (KLW23)	PR4A3130
XPDG03	GENERATE VOLTAGE MONITOR ALARMS TESTS (KLW23)	PR4A3131
XPDG05	MISCELLANEOUS POWER (XPWR) CALL STORE BUS (CSB) 0 POWER TESTS (KLW23)	PR4A3132
XPDG06	MISCELLANEOUS POWER (XPWR) PROGRAM STORE BUS (PSB) 0 POWER TESTS (KLW23)	PR4A3133
XPDG07	MISCELLANEOUS POWER (XPWR) INTERFACE BUS (IFB) 0 POWER TESTS (KLW23)	PR4A3134
XPDG08	MISCELLANEOUS POWER (XPWR) CALL STORE BUS (CSB) 1 POWER TESTS (KLW23)	PR4A3135
XPDG09	MISCELLANEOUS POWER (XPWR) PROGRAM STORE BUS (PSB) 1 POWER TESTS (KLW23)	PR4A3136
XPDG10	MISCELLANEOUS POWER (XPWR) INTERFACE BUS (IFB) 1 POWER TESTS (KLW23)	PR4A3137
XPDG90	MISCELLANEOUS POWER (XPWR) CALL STORE BUS (CSB) 0 POWER TESTS (KLW23)	PR4A3138
XPDG91	MISCELLANEOUS POWER (XPWR) PROGRAM STORE BUS (PSB) 0 POWER TESTS (KLW23)	PR4A3139
XPDG92	MISCELLANEOUS POWER (XPWR) INTERFACE BUS (IFB) 0 POWER TESTS (KLW23)	PR4A3140
XPDG93	MISCELLANEOUS POWER (XPWR) CALL STORE BUS (CSB) 1 POWER TESTS (KLW23)	PR4A3141
XPDG94	MISCELLANEOUS POWER (XPWR) PROGRAM STORE BUS (PSB) 1 POWER TESTS (KLW23)	PR4A3142
XPDG95	MISCELLANEOUS POWER (XPWR) INTERFACE BUS (IFB) 1 POWER TESTS (KLW23)	PR4A3143

IDENTIFY PROGRAM LISTING (PR) FOR FAILING PHASE

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Using printout of diagnostics
with CATP results [FIG. 1]:

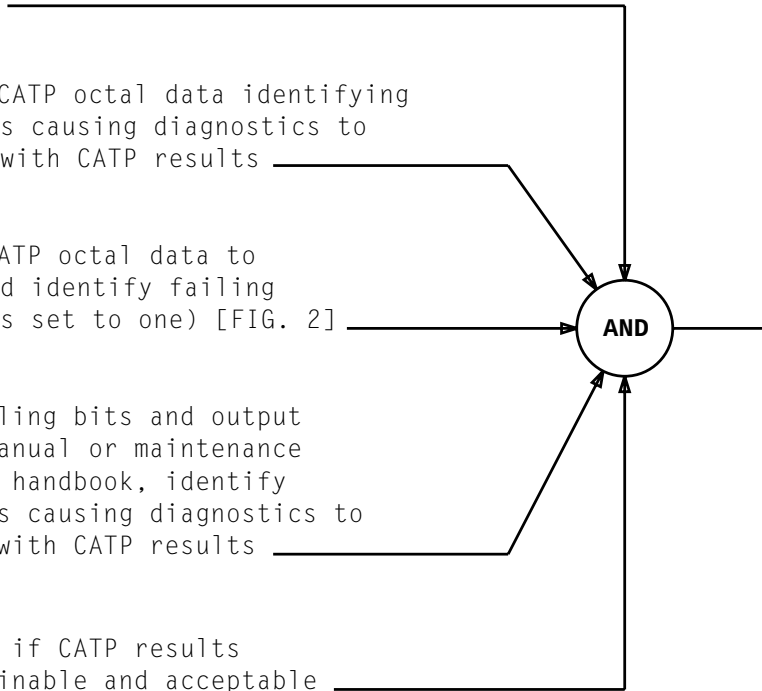
[1] Identify unit being
diagnosed

[2] Identify CATP octal data identifying
conditions causing diagnostics to
complete with CATP results

[3] Convert CATP octal data to
binary and identify failing
bits (bits set to one) [FIG. 2]

[4] Using failing bits and output
message manual or maintenance
reference handbook, identify
conditions causing diagnostics to
complete with CATP results

[5] Determine if CATP results
are explainable and acceptable



IDENTIFY CONDITIONS CAUSING DIAGNOSTICS TO COMPLETE WITH CATP RESULTS

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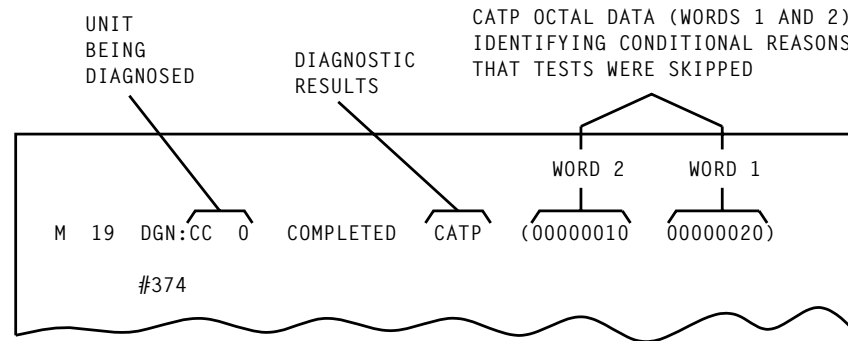


FIG. 1 – Sample Printout of Diagnostics With CATP Results

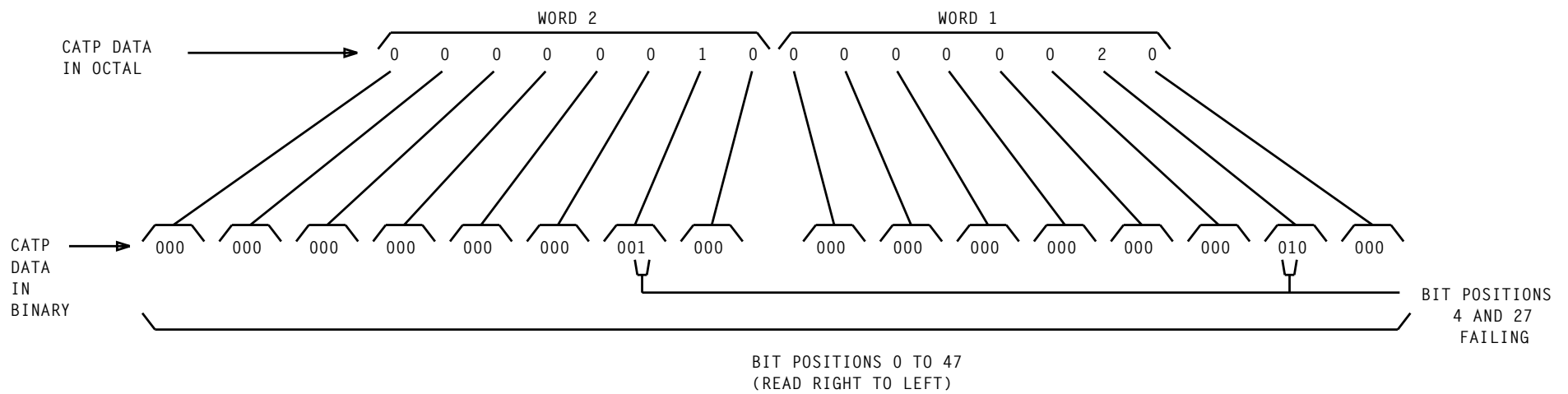
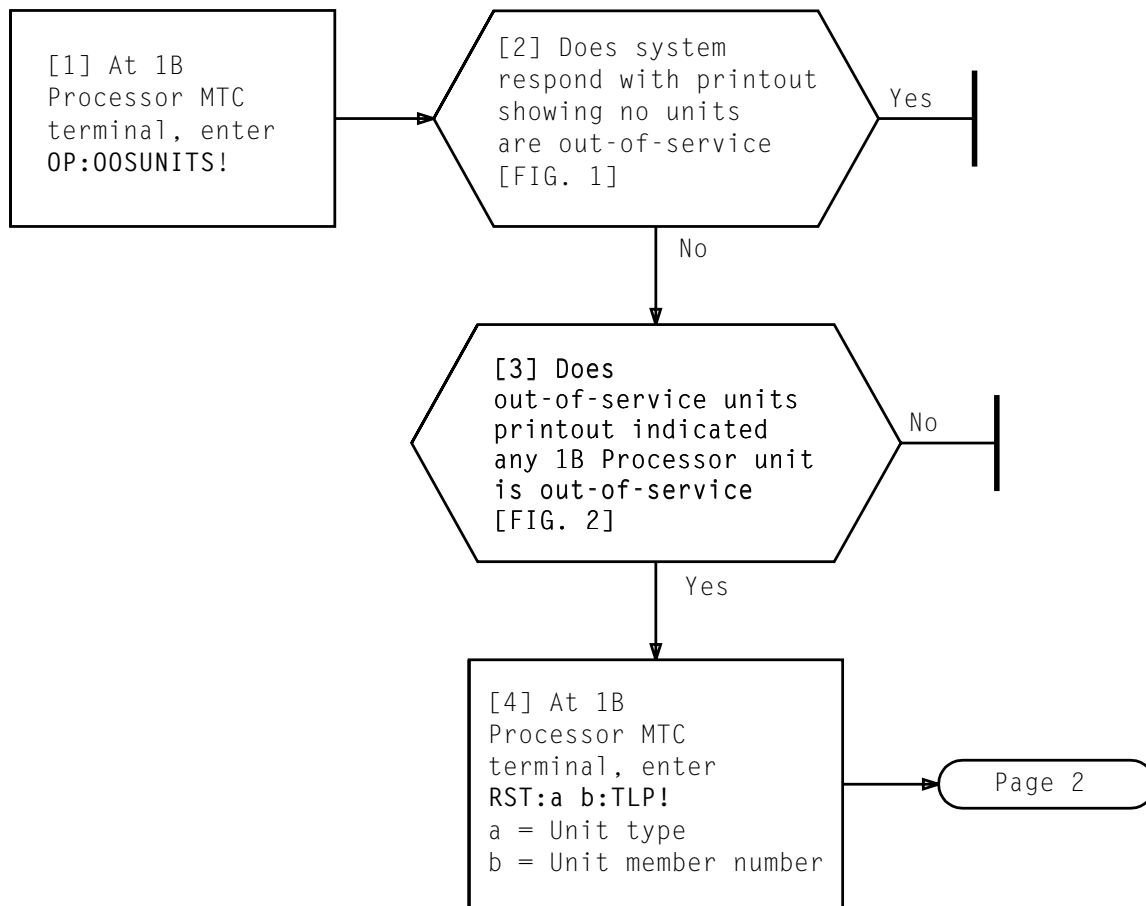


FIG. 2 - Example of CATP Data Octal To Binary Conversion

IDENTIFY CONDITIONS CAUSING DIAGNOSTICS TO COMPLETE WITH CATP RESULTS

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```

M16  OP:OOSUNITS

      NONE
  
```

FIG. 1 – Example of Printout Showing No Units Are Out-of-Service

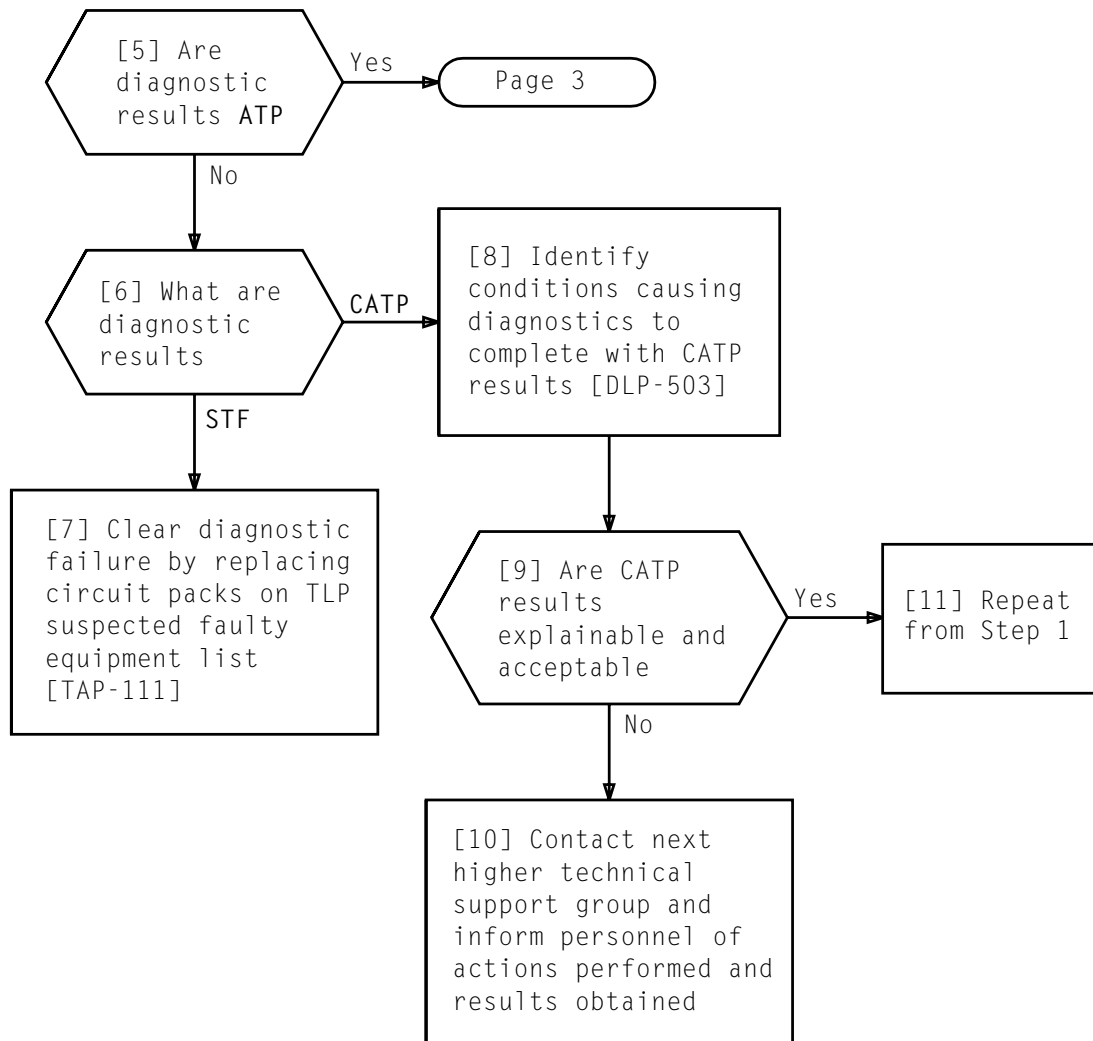
```

M22  OP:OOSUNITS
      CCO
      IFB1
      PS4
      API 1
  
```

FIG. 2 – Example of Printout Showing Out-of-Service Units

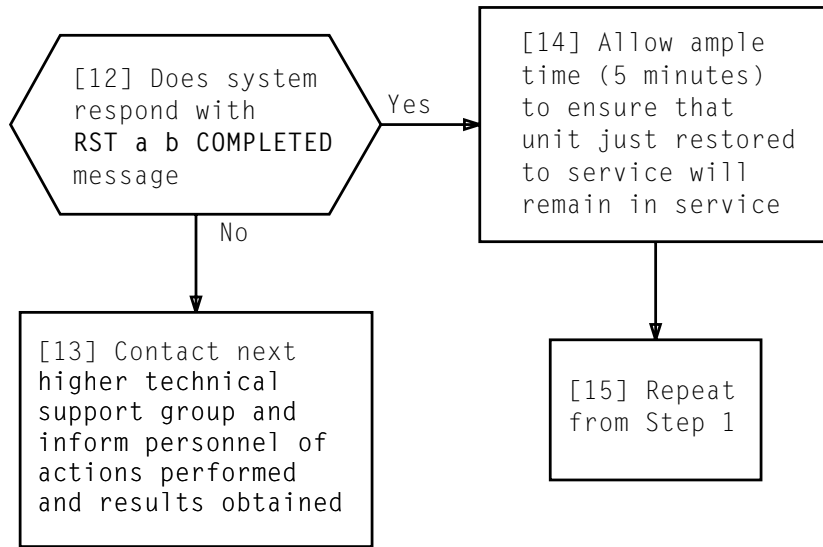
OBTAIN PRINTOUT OF ALL OUT-OF-SERVICE UNITS AND ENSURE ALL 1B PROCESSOR UNITS ARE IN-SERVICE

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OBTAIN PRINTOUT OF ALL OUT-OF-SERVICE UNITS AND ENSURE ALL 1B PROCESSOR UNITS ARE IN-SERVICE

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OBTAIN PRINTOUT OF ALL OUT-OF-SERVICE UNITS AND ENSURE ALL 1B PROCESSOR UNITS ARE IN-SERVICE

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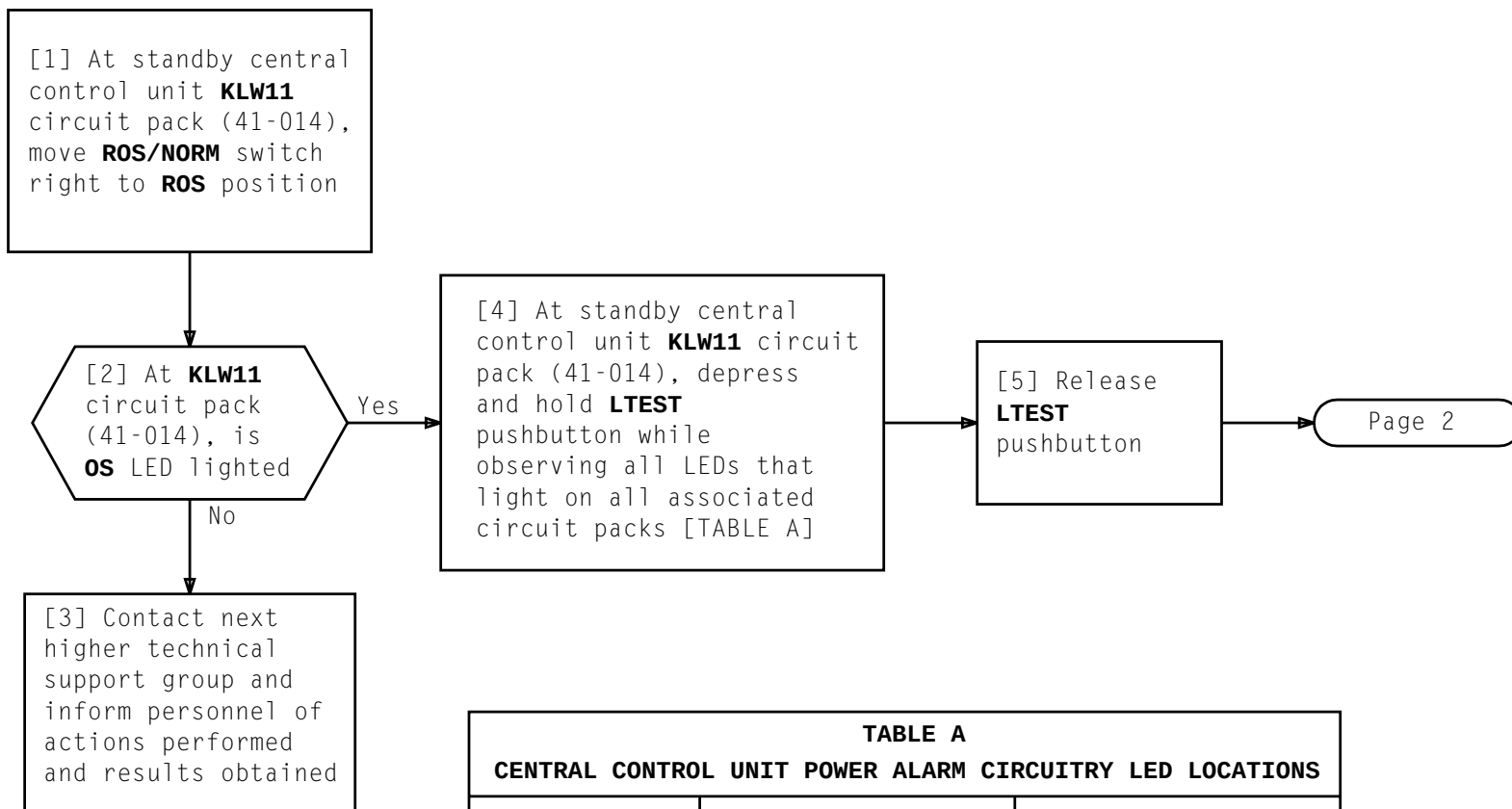
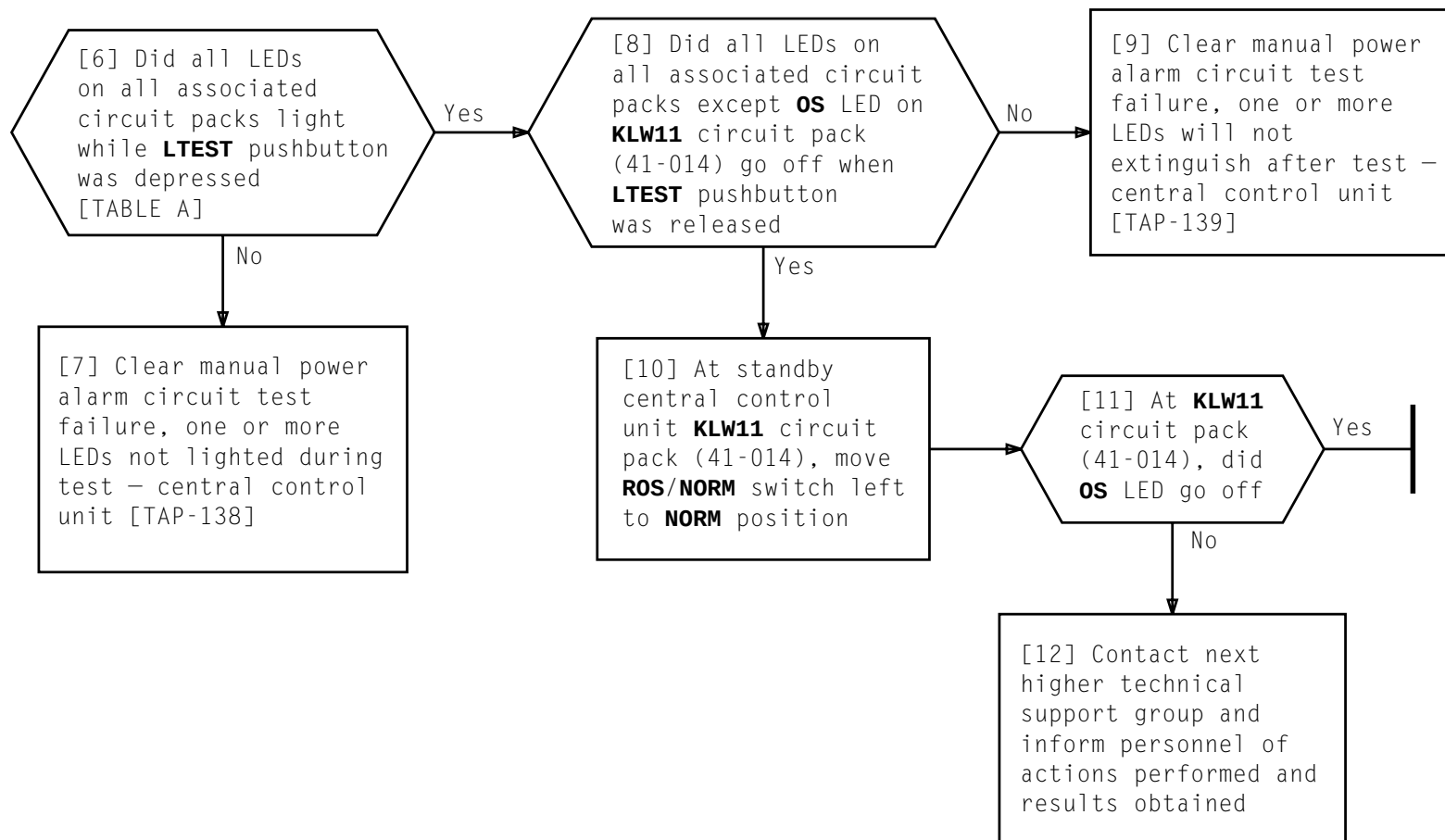
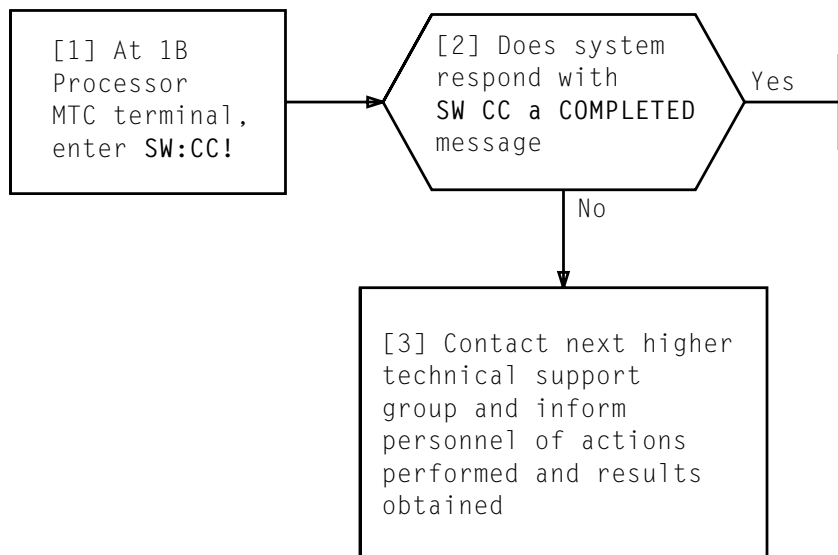


TABLE A CENTRAL CONTROL UNIT POWER ALARM CIRCUITRY LED LOCATIONS		
CIRCUIT PACK CONTAINING LEDS	CIRCUIT PACK LOCATION	NUMBER OF LEDS ON CIRCUIT PACK
KLW11	41-014	19
KLW12	58-014	16
KLW3	41-104	1
KLW4	41-112	1
KLW22/ KLW122/ KLW222	41-120	1





SWITCH CENTRAL CONTROL (CC) UNITS

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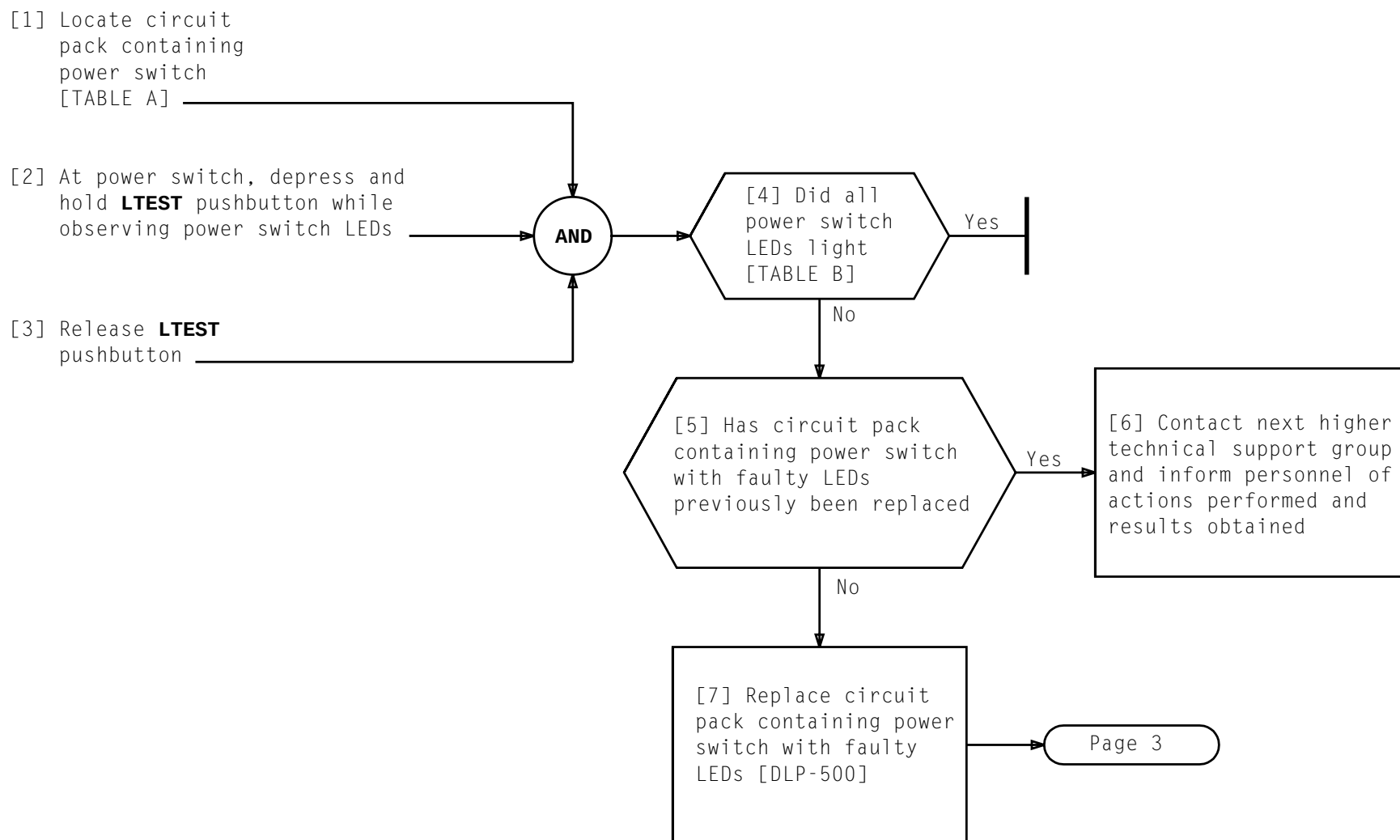
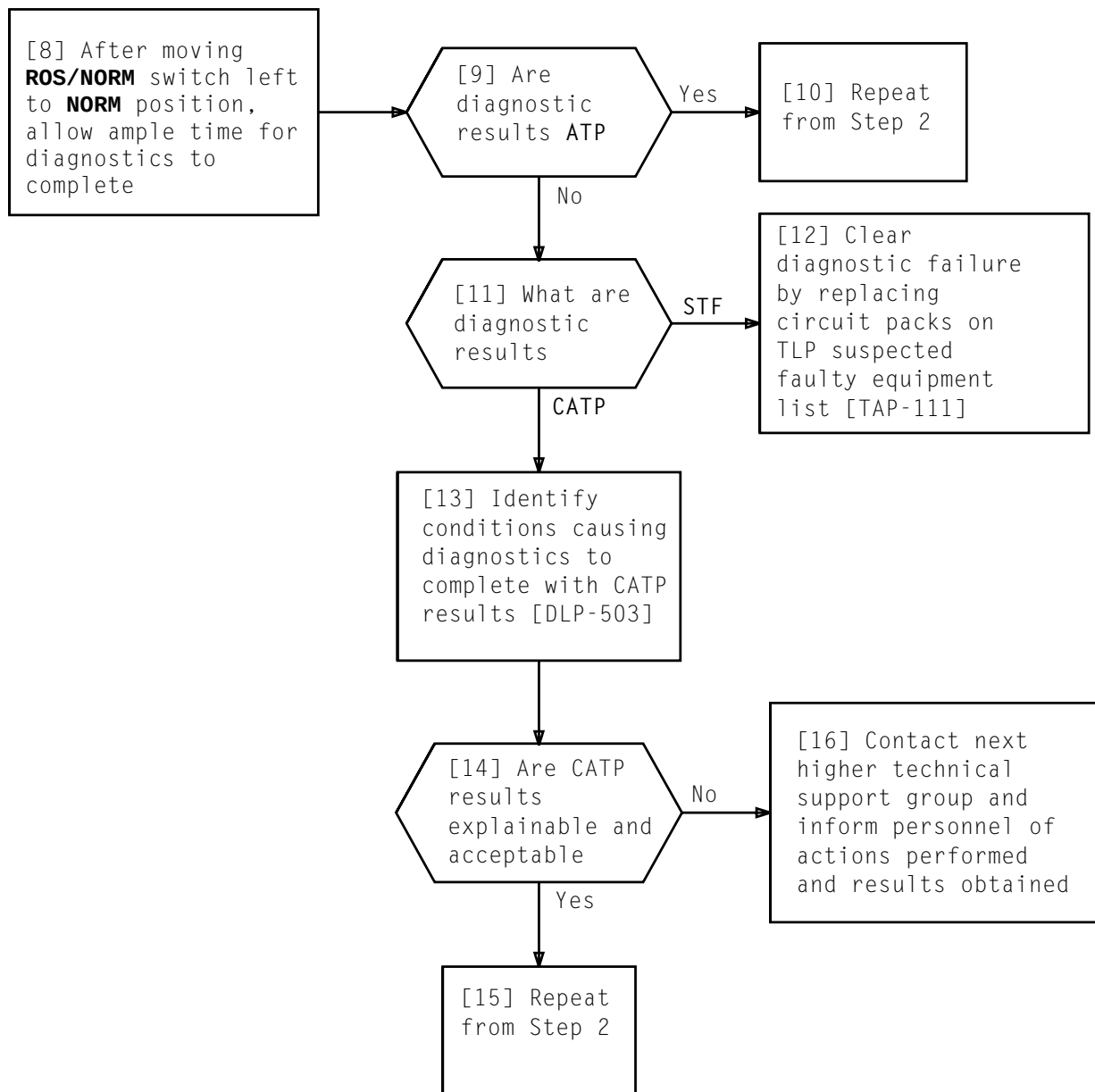


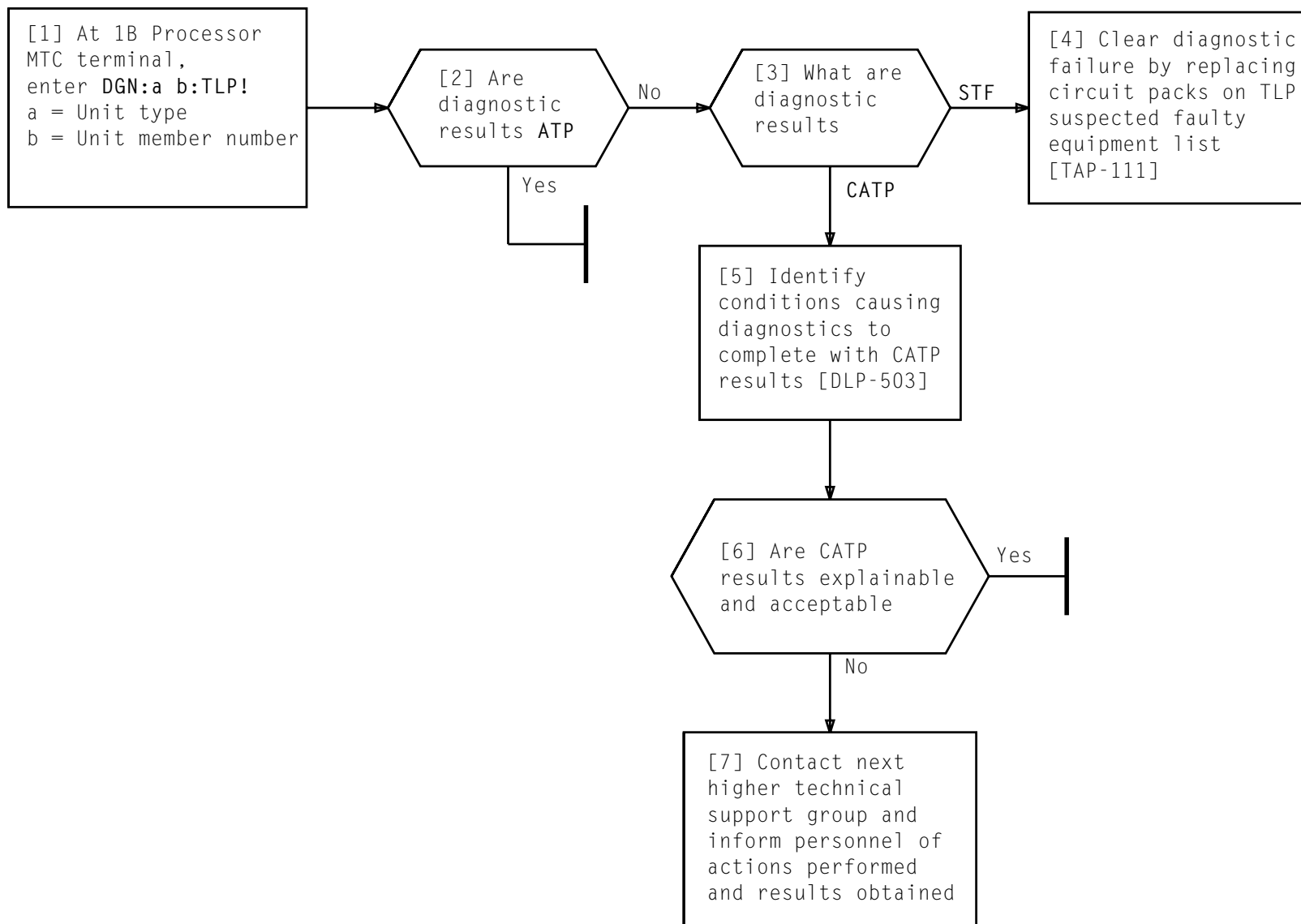
TABLE A CIRCUIT PACKS CONTAINING POWER SWITCH	
CIRCUIT PACK IDENTIFIER	CIRCUIT PACK LOCATION
KLW1	24-006 thru 24-078 24-104 thru 24-176
KLW2	41-126 thru 41-176
KLW11	41-014
KLW15	58-168
KLW18	58-120
KLW23	58-030
KLW25	58-086
KLW26	24-086
KLW27	24-096

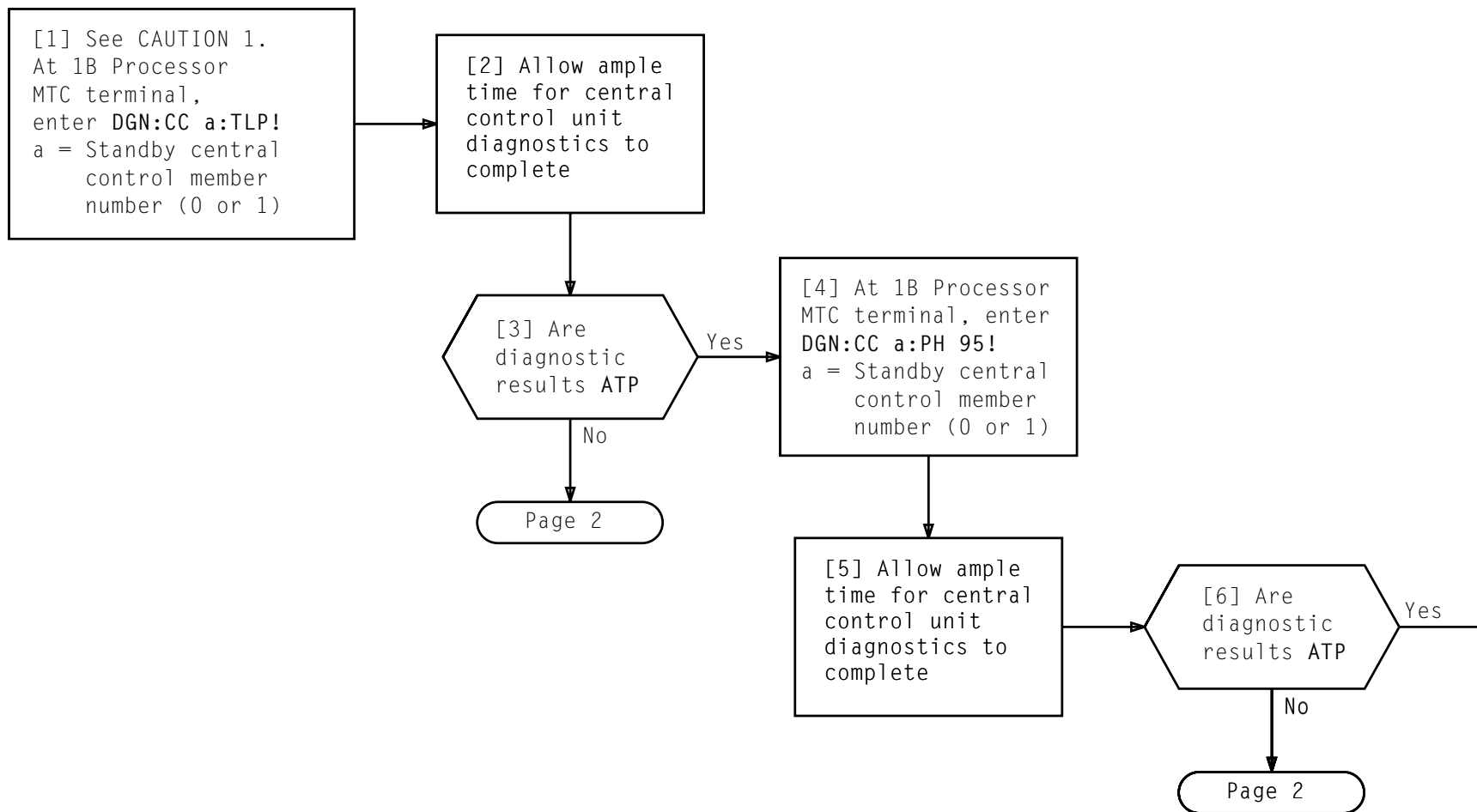
TABLE B POWER SWITCH LEDs		
INDICATOR	NAME	COLOR
OFF	Power Off	Red
PA	Power Alarm	Red
OS	Out of Service	Yellow
ACK	Acknowledge	Green
FA	Fuse Alarm	Red

TEST POWER SWITCH LEDs – 1B PROCESSOR CABINET

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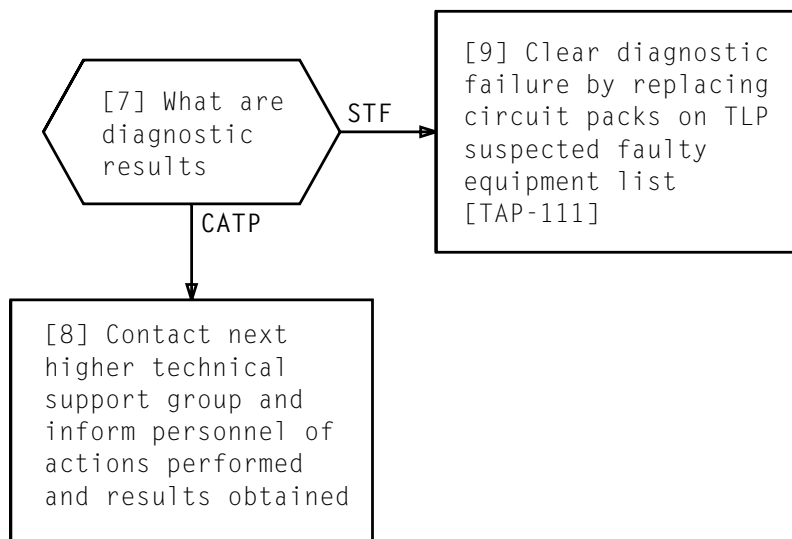






PERFORM PROCESSOR CONFIGURATION TEST (DEMAND PHASE 95) ON STANDBY CENTRAL CONTROL UNIT

CAUTION 1 <i>Diagnostics should be performed during low-traffic period</i>	
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**PERFORM PROCESSOR CONFIGURATION TEST (DEMAND PHASE 95) ON
STANDBY CENTRAL CONTROL UNIT**

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[1] Obtain TEKTRONIX storage oscilloscope (model 2232 or equivalent) and two TEKTRONIX oscilloscope X10 probes (model P6109 or equivalent)

[2] See NOTE 1. Obtain 30-foot coax cable with male BNC connector at each end

[3] Power up storage oscilloscope

[4] At storage oscilloscope, depress **STORE** to IN position

[5] Depress **SETUP - ACQ**

AND

Page 2

SET UP STORAGE OSCILLOSCOPE FOR SCOPING AUXILIARY UNIT BUS (AUB)

NOTE 1

The maximum length coaxial cable that can be used with a high impedance oscilloscope to scope auxiliary unit bus (AUB) is 75 feet.

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[6] On storage oscilloscope under display screen, depress switch labeled **3** to set default values _____

[7] Depress **SETUP – DISPLAY** _____

[8] Observe storage oscilloscope screen and set **DISPLAY** controls by depressing switch associated with control not set correctly [TABLE A] _____

[9] Depress **SETUP – REF** _____

[10] Observe storage oscilloscope screen and set **REF** controls by depressing switch associated with control not set correctly [TABLE B] _____

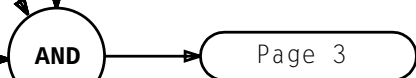
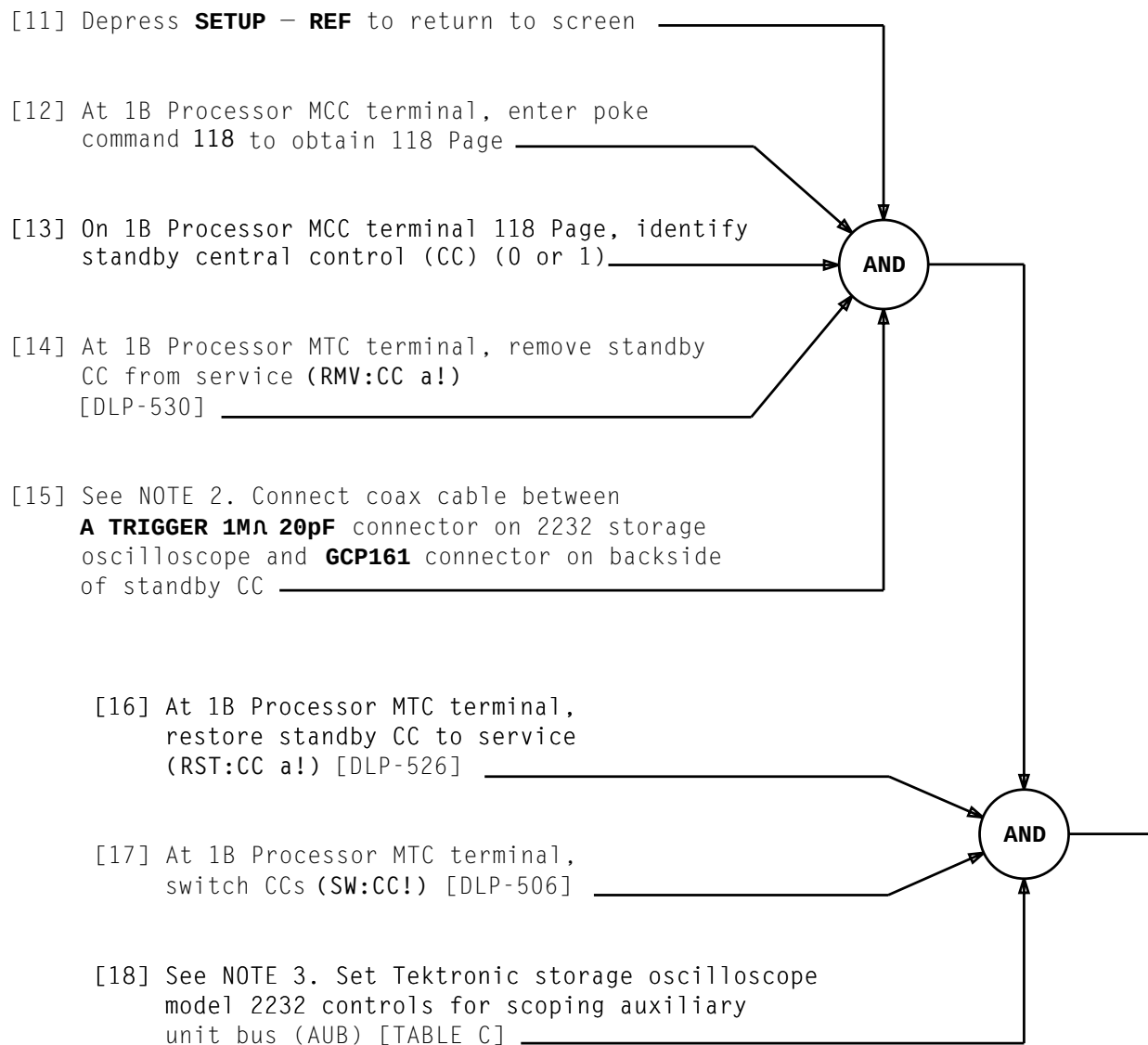


TABLE A TEKTRONIX STORAGE OSCILLOSCOPE MODEL 2232 DISPLAY CONTROLS		
CONTROL IDENTIFIER COLUMN	CONTROLS	SWITCH*
1	ΔT	SAVE REF
2	ON	1
3	ON	2
* Switches under display screen are associated with CONTROL IDENTIFIER column that they are under		

TABLE B TEKTRONIX STORAGE OSCILLOSCOPE MODEL 2232 REF CONTROLS		
CONTROL IDENTIFIER 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 CONTROL IDENTIFIER column that they are under		

SET UP STORAGE OSCILLOSCOPE FOR SCOPING AUXILIARY UNIT BUS (AUB)

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NOTES

2. Coax cable must be connected to oscilloscope before connecting to standby CC.
3. Adjustments for controls specified in TABLE C will provide a general setup for scoping AUB. Final adjustments may be required to completely set up scope for viewing bit patterns

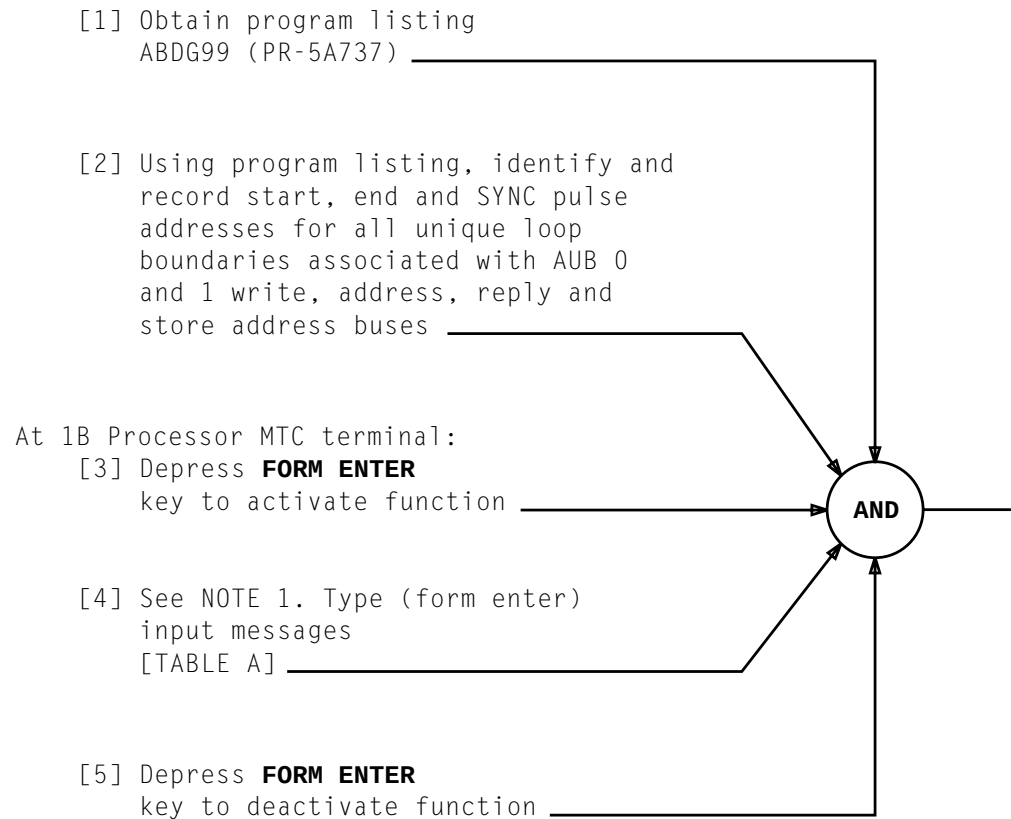
SET UP STORAGE OSCILLOSCOPE FOR SCOPING AUXILIARY UNIT BUS (AUB)

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TABLE C TEKTRONIX STORAGE OSCILLOSCOPE MODEL 2232 CONTROLS FOR SCOPING AUXILIARY UNIT BUS (AUB)	
CONTROLS	POSITION*
CURSORS	Position Not Critical
ACQUISITION – SAVE/CONT	Depress until SAVE is not displayed
STORE	Depress (in)
VAR HOLDOFF	Position Not Critical
VERTICAL – POSITION (left)	Rotate to 11 o'clock position
VERTICAL – A/B SWP SEP	Position Not Critical
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 BOTH B	A
HORIZONTAL – A and B SEC/DIV	.1 μ S
B TRIGGER – SLOPE	Position Not Critical
B TRIGGER – LEVEL	Position Not Critical
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	A EXT CH 1
A TRIGGER – A COUPL	NORM
A TRIGGER – A EXT COUPL	Position Not Critical
* Adjustments for controls specified will provide a general setup for scoping AUB. Final adjustments may be required to completely set up scope for viewing bit patterns.	

SET UP STORAGE OSCILLOSCOPE FOR SCOPING AUXILIARY UNIT BUS (AUB)

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FORM ENTER INPUT MESSAGES USED TO SCOPE AUB USING PHASE 99 DIAGNOSTIC TESTS

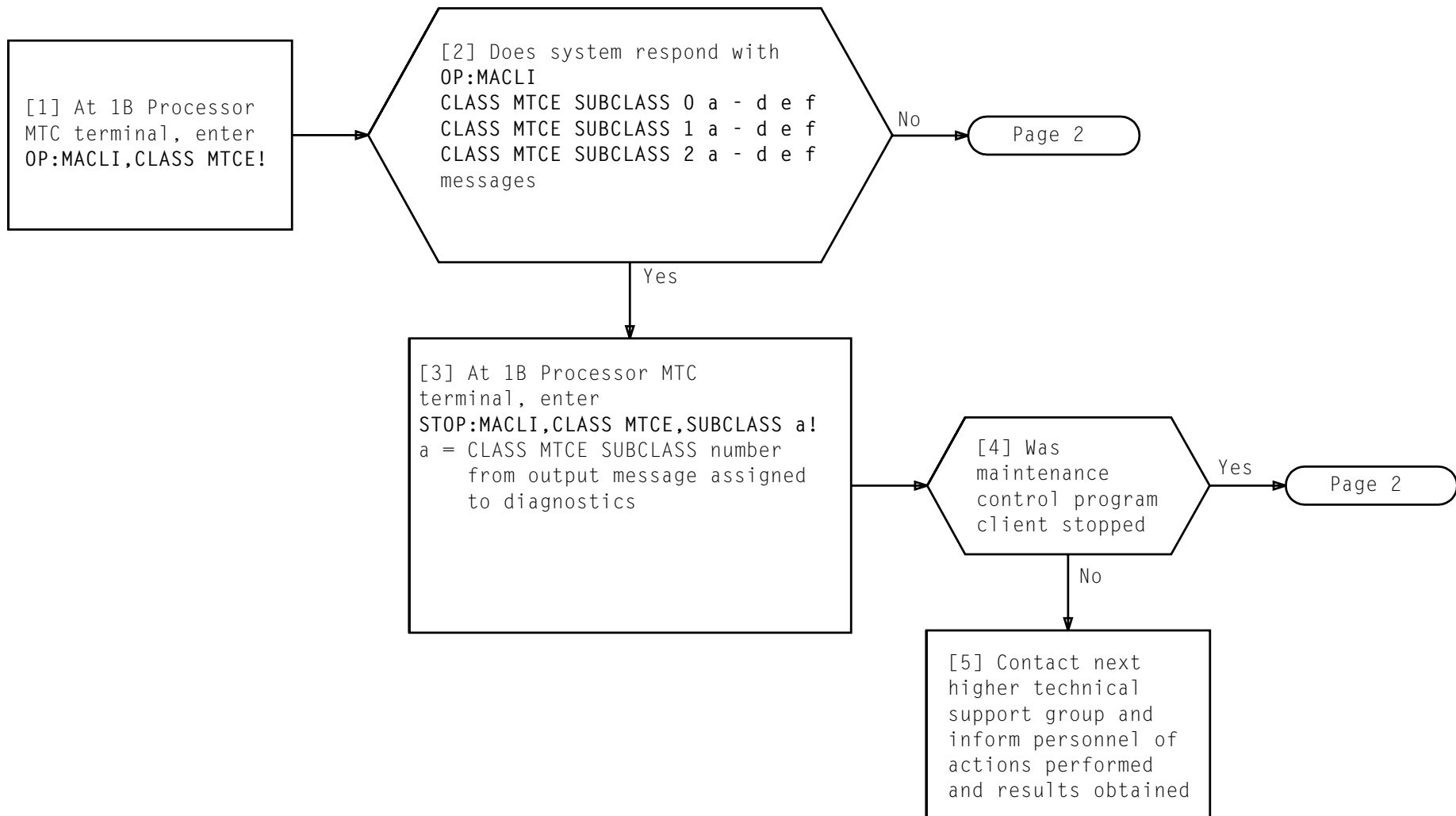
NOTE 1
Messages must
not be entered
into system at
this time

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TABLE A INPUT MESSAGES USED TO SCOPE AUB			
NUMBER	INPUT MESSAGES	NUMBER	INPUT MESSAGES
1	EX:AUB a;START! a = Bus 0 or 1	3	EX:AUB a! a = Bus 0 or 1
2	NOTE: This message must be repeated for all unique loop boundaries identified in program listing. EX:AUB a:PH 99,ADR b-c,SYNC d! a = Bus 0 or 1 b = Start address of loop boundary for bus 0 or 1 c = End address of loop boundary for bus 0 or 1 d = Address that generates sync pulse	4	OP:MACLI,CLASS MTCE!
		5	STOP:MACLI,CLASS MTCE,SUBCLASS a! a = CLASS MTCE SUBCLASS number from OP:MACLI output message assigned to Phase 99 diagnostics
		6	ALW:MACLI,CLASS MTCE!
		7	INH:MACLI,CLASS MTCE;REX!

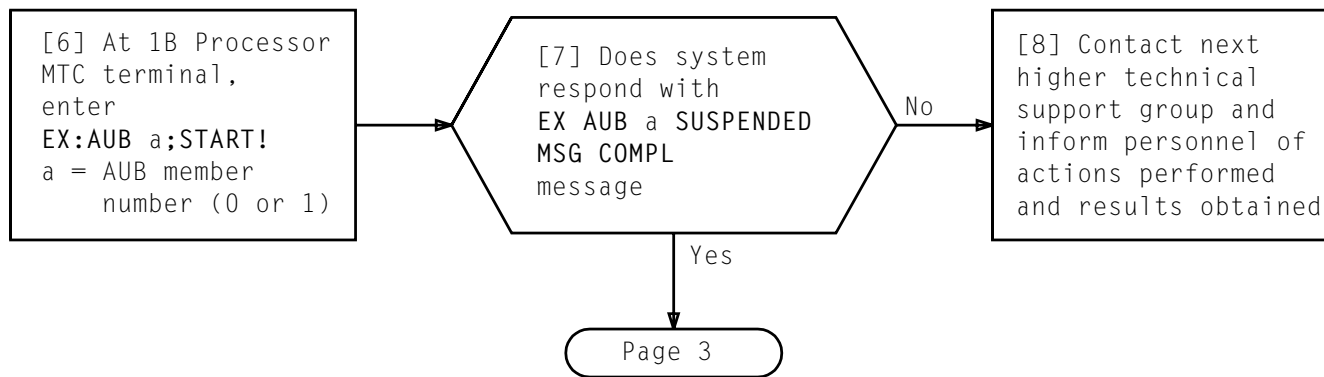
**FORM ENTER INPUT MESSAGES USED TO SCOPE AUB USING
PHASE 99 DIAGNOSTIC TESTS**

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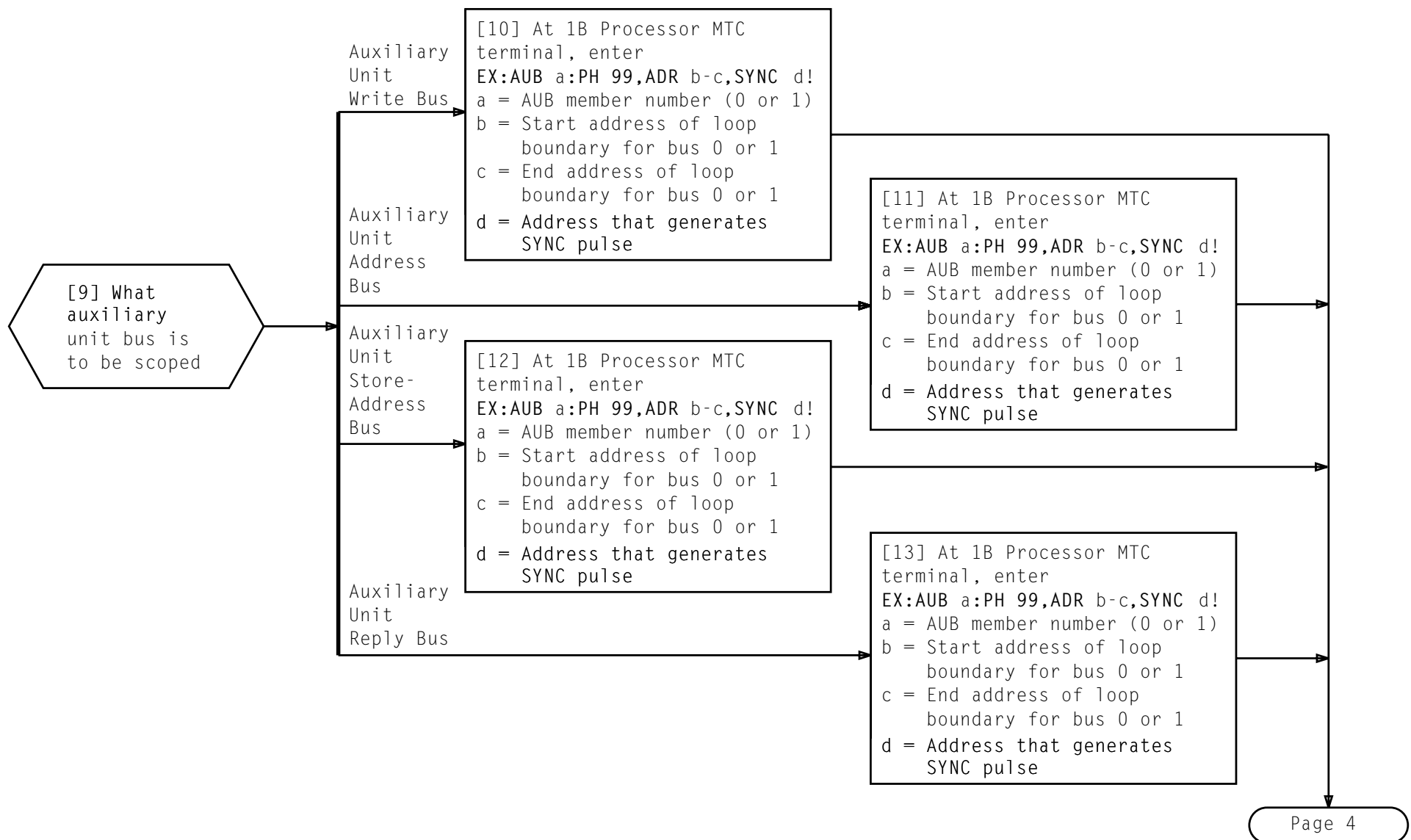
ENTER EXECUTE MESSAGES FOR LOOPING ON SPECIFIED AUXILIARY UNIT BUS (AUB)

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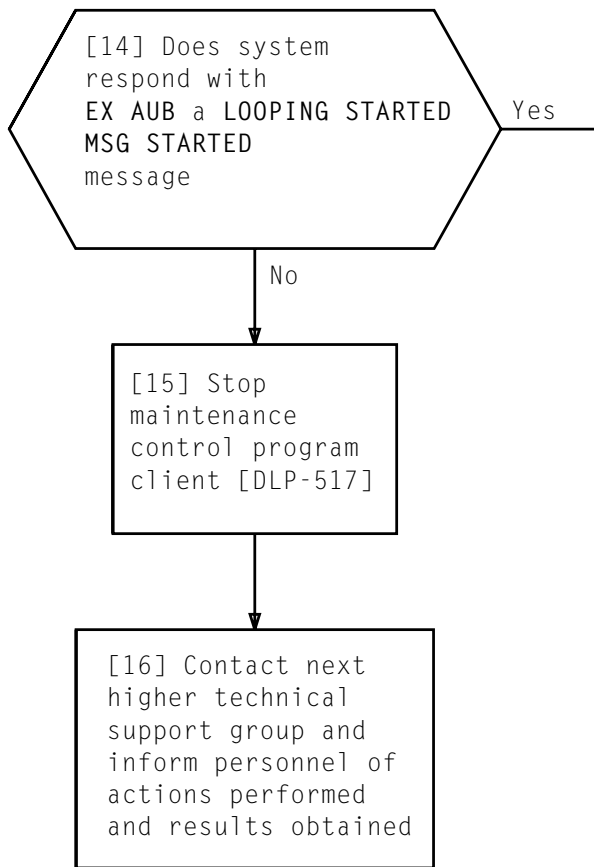
**ENTER EXECUTE MESSAGES FOR LOOPING ON SPECIFIED AUXILIARY
UNIT BUS (AUB)**

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ENTER EXECUTE MESSAGES FOR LOOPING ON SPECIFIED AUXILIARY UNIT BUS (AUB)

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ENTER EXECUTE MESSAGES FOR LOOPING ON SPECIFIED AUXILIARY UNIT BUS (AUB)

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[1] At API frame where AUB write
bus terminates, locate connectors
containing BTRs on applicable API
unit (0 or 1) at position XXX-253
[FIG. 1]

[2] Connect bus scoping tool to BTR on
applicable API unit (0 or 1) [FIG. 2]

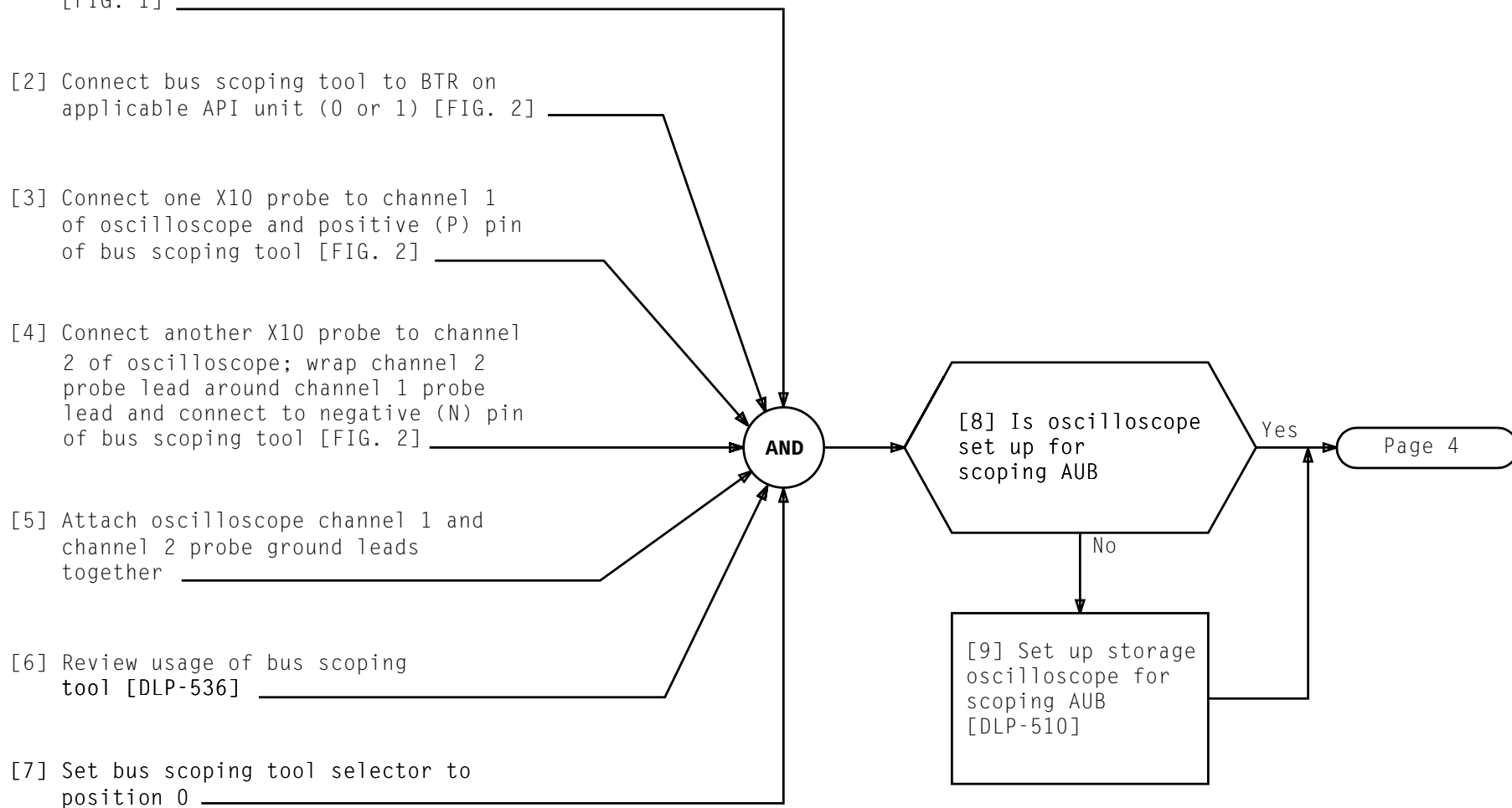
[3] Connect one X10 probe to channel 1
of oscilloscope and positive (P) pin
of bus scoping tool [FIG. 2]

[4] Connect another X10 probe to channel
2 of oscilloscope; wrap channel 2
probe lead around channel 1 probe
lead and connect to negative (N) pin
of bus scoping tool [FIG. 2]

[5] Attach oscilloscope channel 1 and
channel 2 probe ground leads
together

[6] Review usage of bus scoping
tool [DLP-536]

[7] Set bus scoping tool selector to
position 0



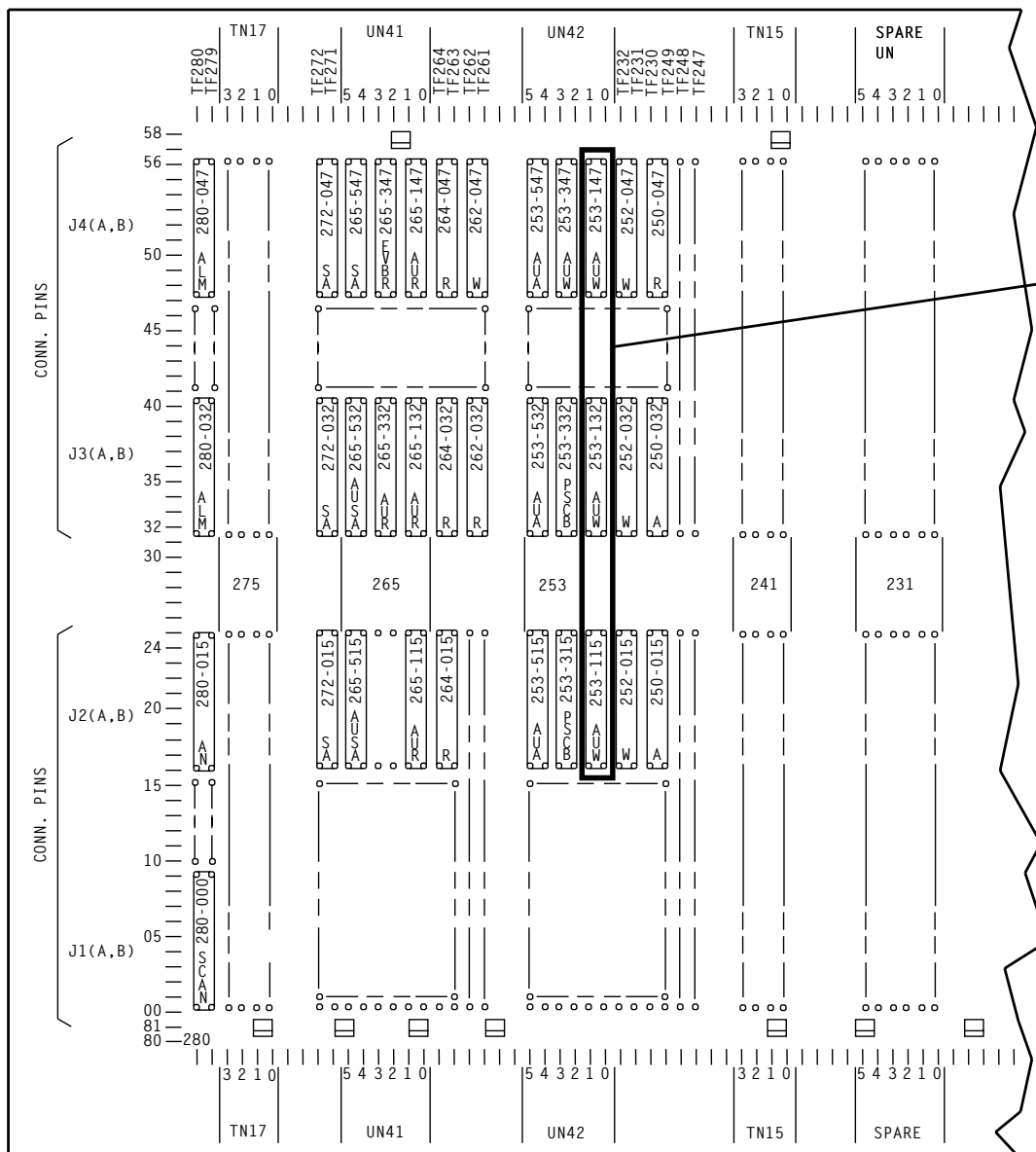
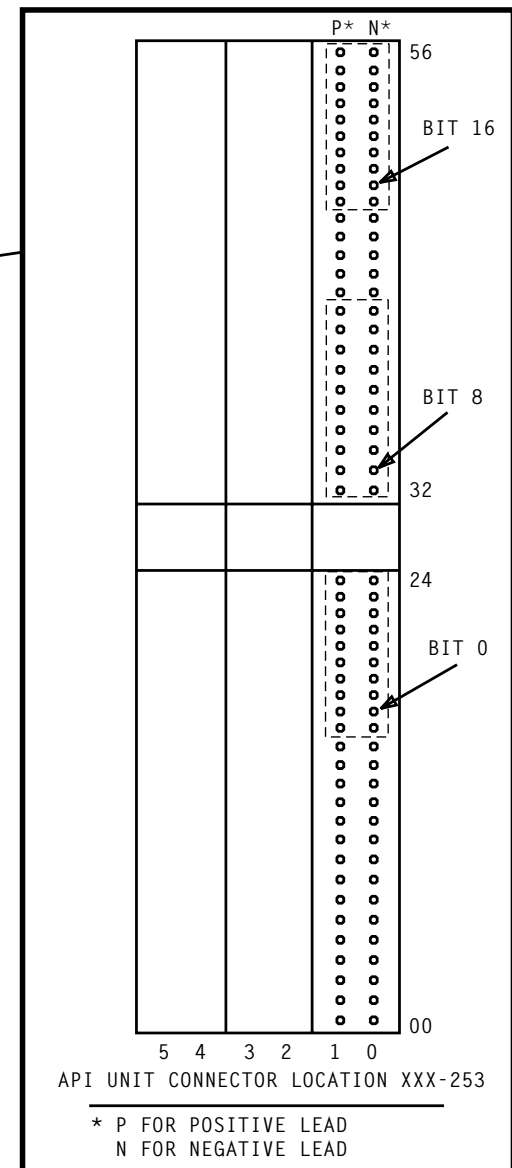


FIG. 1 - Example of API Unit (0 or 1) Connector Layout Showing AUB 0 or 1 Write Bus Bits 0 to 23



SCOPE AUB 0 OR 1 WRITE BUS BITS 0 TO 23

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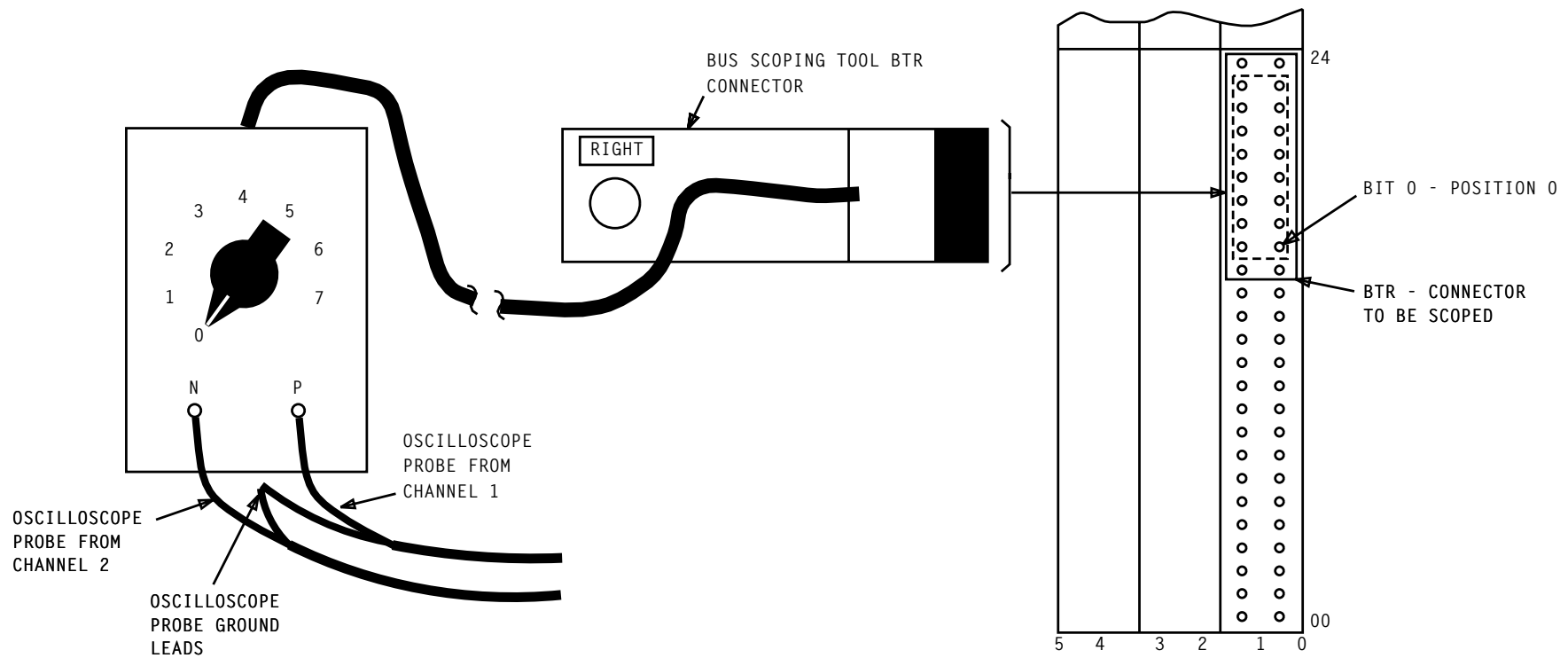


FIG. 2 – Bus Scoping Tool, Oscilloscope Probes and BTR Connections for Scoping Auxiliary Unit Bus (AUB)

SCOPE AUB 0 OR 1 WRITE BUS BITS 0 TO 23

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[10] See NOTE 1. Scope positive and negative pins for bit 0 at connector containing BTR on applicable API unit (0 or 1) (dashed line box) [FIG. 1]

[11] Observe oscilloscope for correct bit pattern [TABLE A] and note any discrepancies [FIG. 3]

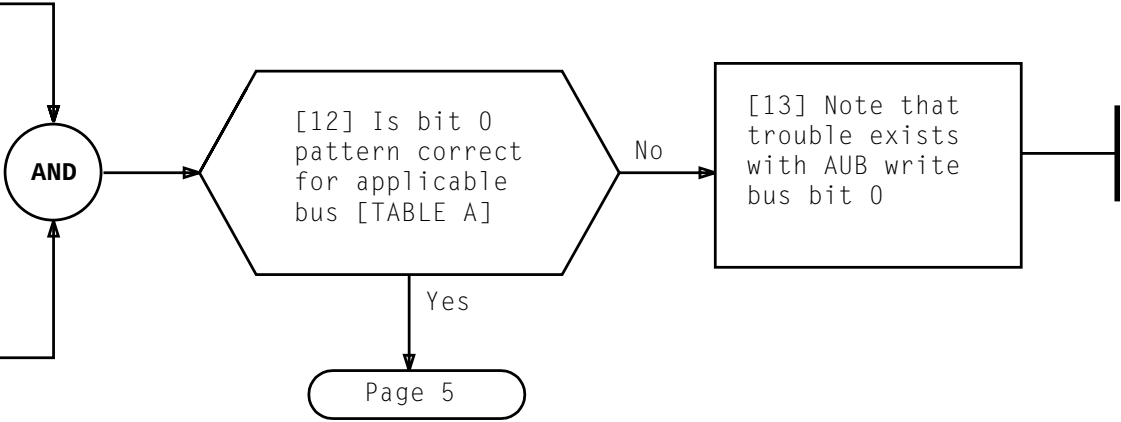


TABLE A AUB 0 OR 1 WRITE BUS BITS 0 TO 23 BIT PATTERNS					
BIT	BIT PATTERN		BIT	BIT PATTERN	
	BUS 0	BUS 1		BUS 0	BUS 1
0	01000000	00000001	12	01001100	00011001
1	01000001	00000011	13	01001101	00011011
2	01000010	00000101	14	01001110	00011101
3	01000011	00000111	15	01001111	00011111
4	01000100	00001001	16	01010000	00100001
5	01000101	00001011	17	01010001	00100011
6	01000110	00001101	18	01010010	00100101
7	01000111	00001111	19	01010011	00100111
8	01001000	00010001	20	01010100	00101001
9	01001001	00010011	21	01010101	00101011
10	01001010	00010101	22	01010110	00101101
11	01001011	00010111	23	01010111	00101111

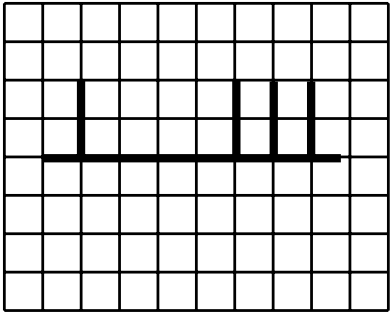
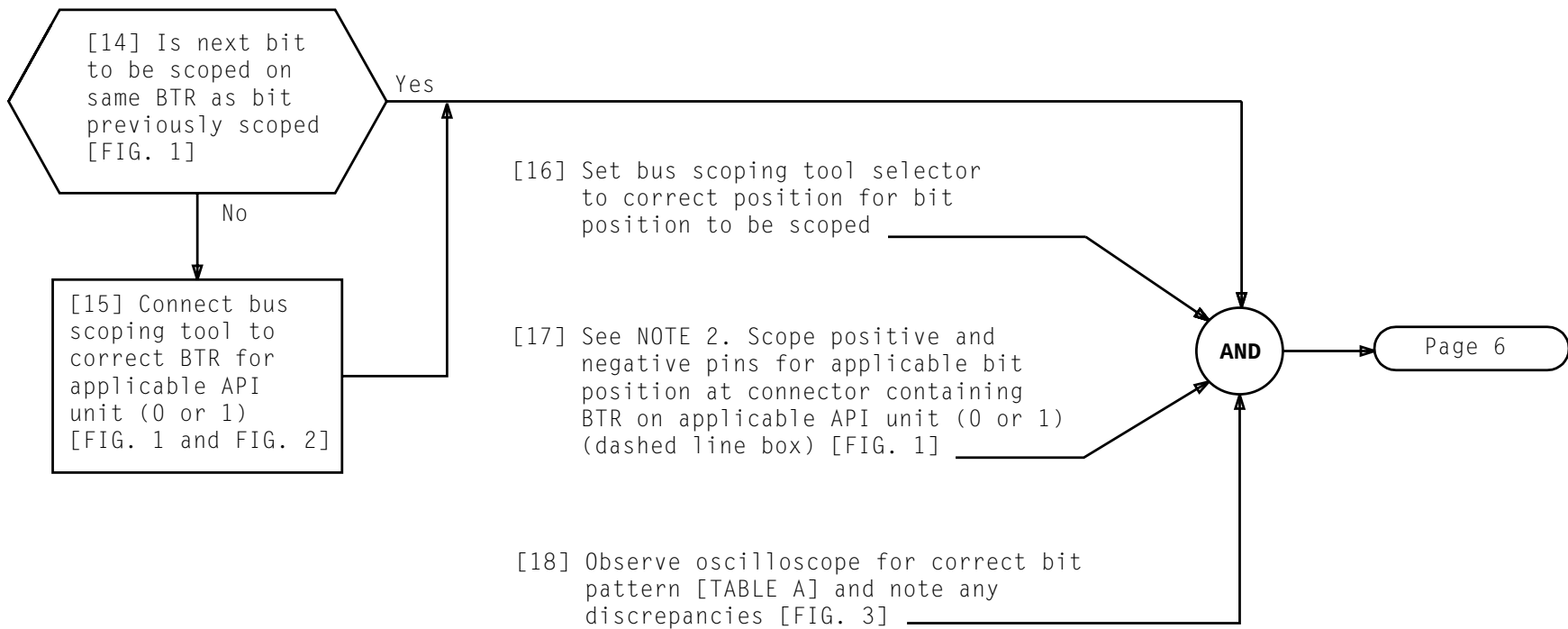
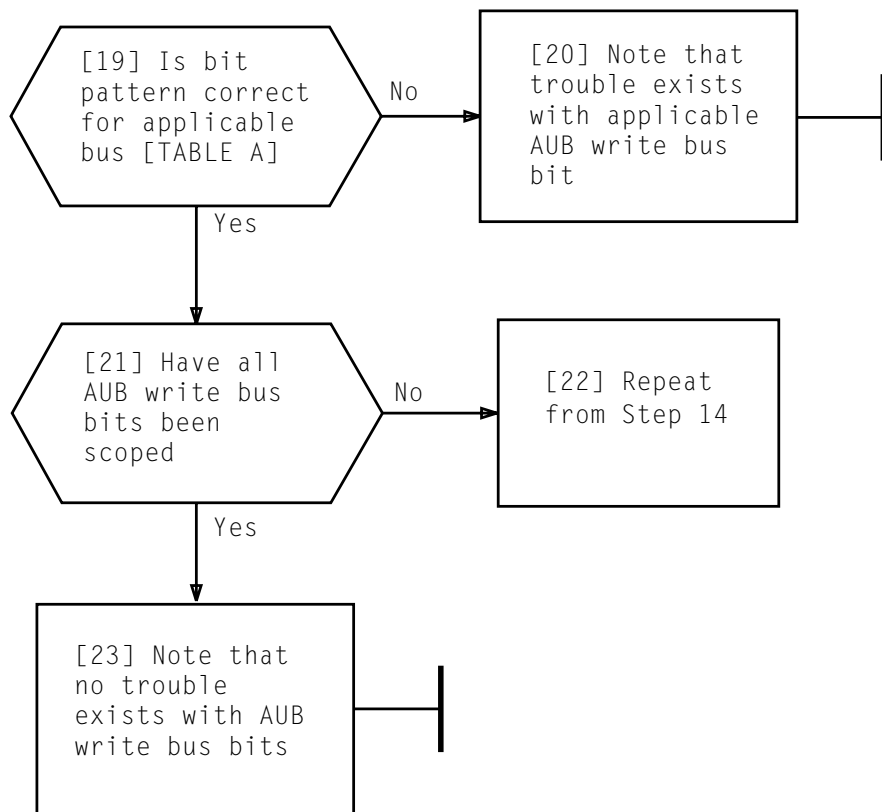


FIG. 3 – Example of Typical AUB Bit Pattern

NOTE 1
Oscilloscope **CURSORS** may need to be adjusted to observe bit pattern

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[1] At API frame where AUB address bus terminates, locate connectors containing BTRs on applicable API unit (0 or 1) at position XXX-253 [FIG. 1]

[2] Connect bus scoping tool to BTR on applicable API unit (0 or 1) [FIG. 2]

[3] Connect one X10 probe to channel 1 of oscilloscope and positive (P) pin of bus scoping tool [FIG. 2]

[4] Connect another X10 probe to channel 2 of oscilloscope; wrap channel 2 probe lead around channel 1 probe lead and connect to negative (N) pin of bus scoping tool [FIG. 2]

[5] Attach oscilloscope channel 1 and channel 2 probe ground leads together

[6] Review usage of bus scoping tool [DLP-536]

[7] Set bus scoping tool selector to position 0

AND

[8] Is oscilloscope set up for scoping AUB

Yes

Page 4

No

[9] Set up storage oscilloscope for scoping AUB [DLP-510]

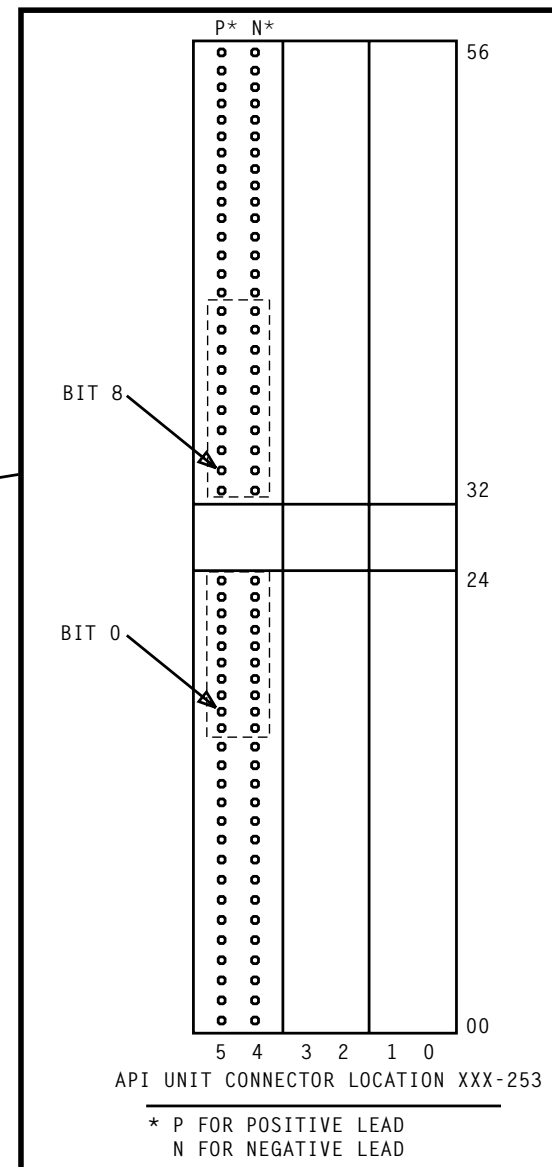
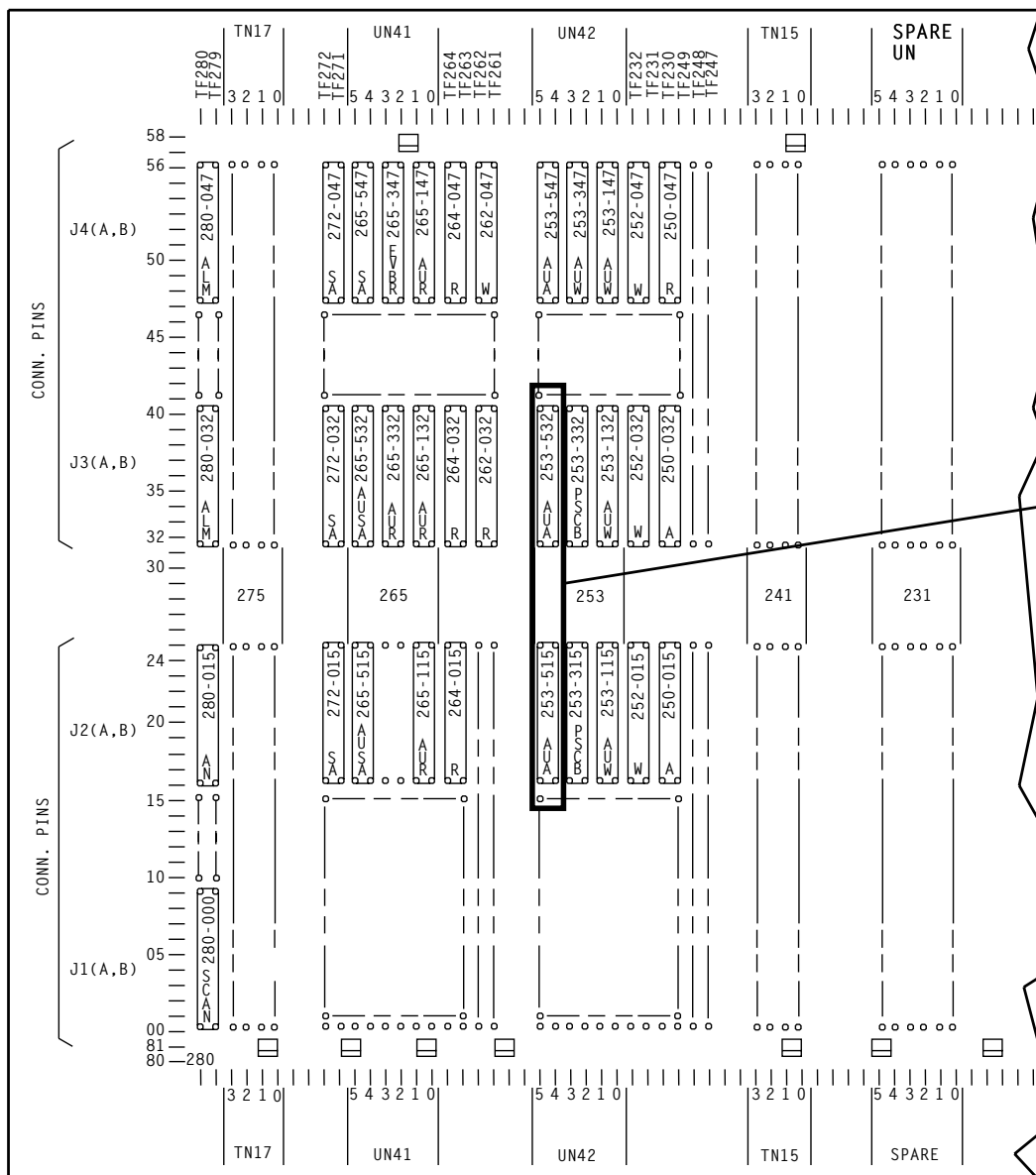


FIG. 1 - Example of API Unit (0 or 1) Connector Layout Showing AUB 0 or 1 Address Bus Bits 0 to 15

SCOPE AUB 0 OR 1 ADDRESS BUS BITS 0 TO 15

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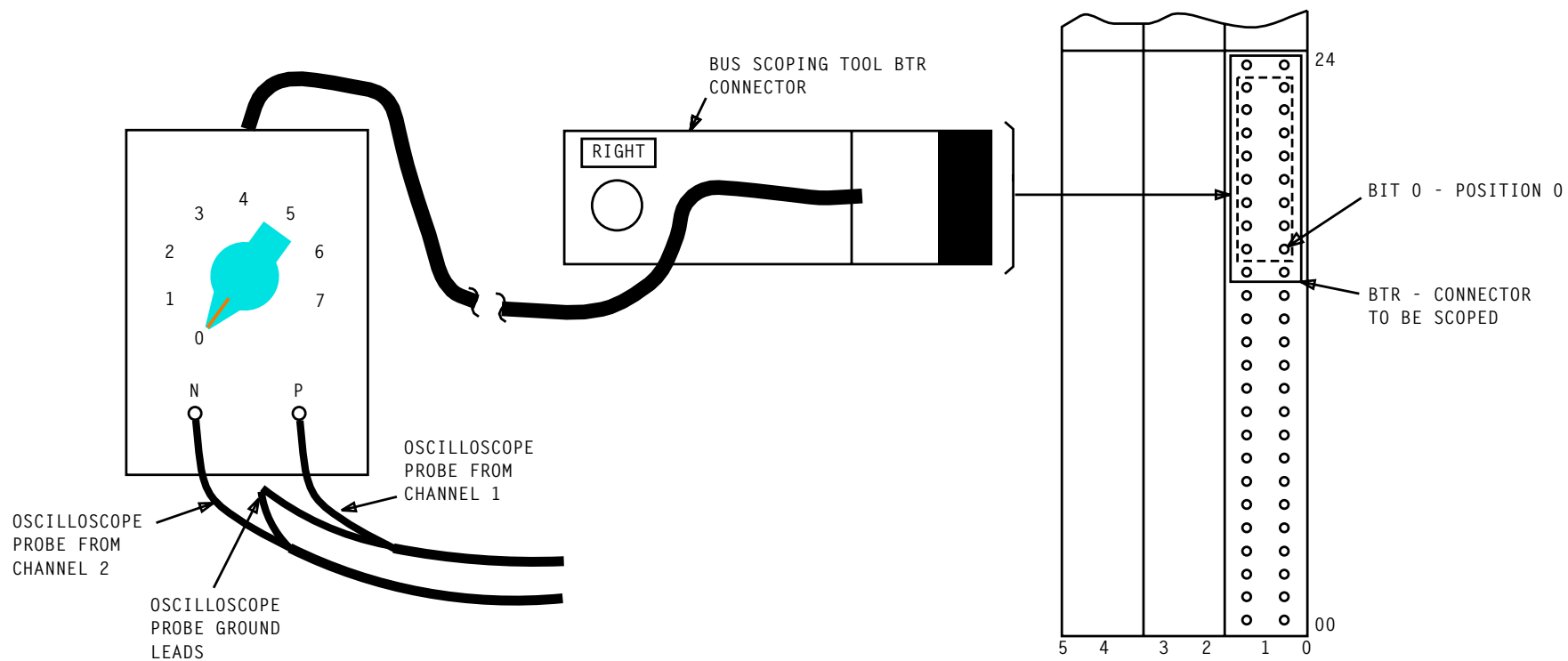


FIG. 2 – Bus Scoping Tool, Oscilloscope Probes and BTR Connections for Scoping Auxiliary Unit Bus (AUB)

SCOPE AUB 0 OR 1 ADDRESS BUS BITS 0 TO 15

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[10] See NOTE 1. Scope positive and negative pins for bit 0 at connector containing BTR on applicable API unit (0 or 1) (dashed line box) [FIG. 1]

[11] Observe oscilloscope for correct bit pattern [TABLE A] and note any discrepancies [FIG. 3]

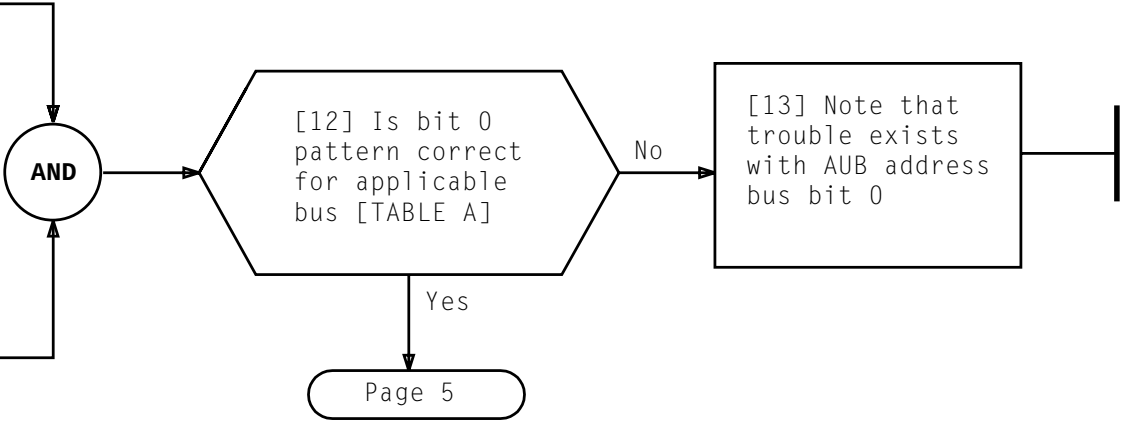


TABLE A AUB 0 OR 1 ADDRESS BUS BITS 0 TO 15 BIT PATTERNS		
BIT	BIT PATTERN	
	BUS 0	BUS 1
0	01000000	00000001
1	01000001	00000011
2	01000010	00000101
3	01000011	00000111
4	01000100	00001001
5	01000101	00001011
6	01000110	00001101
7	01000111	00001111
8	01001000	00010001
9	01001001	00010011
10	01001010	00010101
11	01001011	00010111
12	01001100	00011001
13	01001101	00011011
14	01001110	00011101
15	01001111	00011111

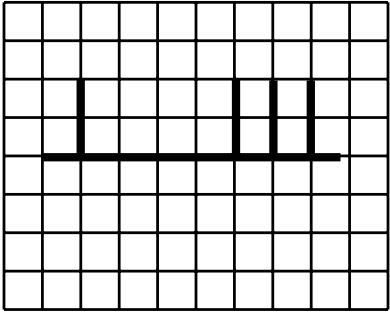
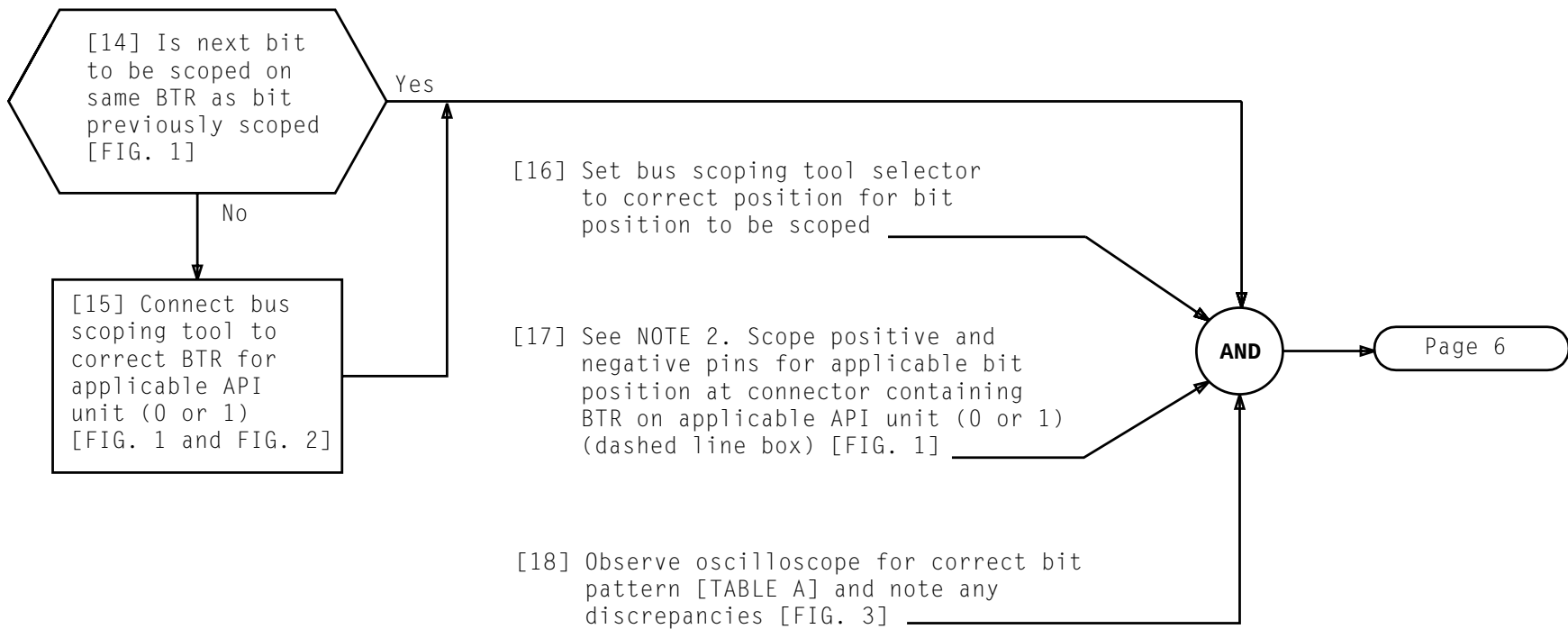
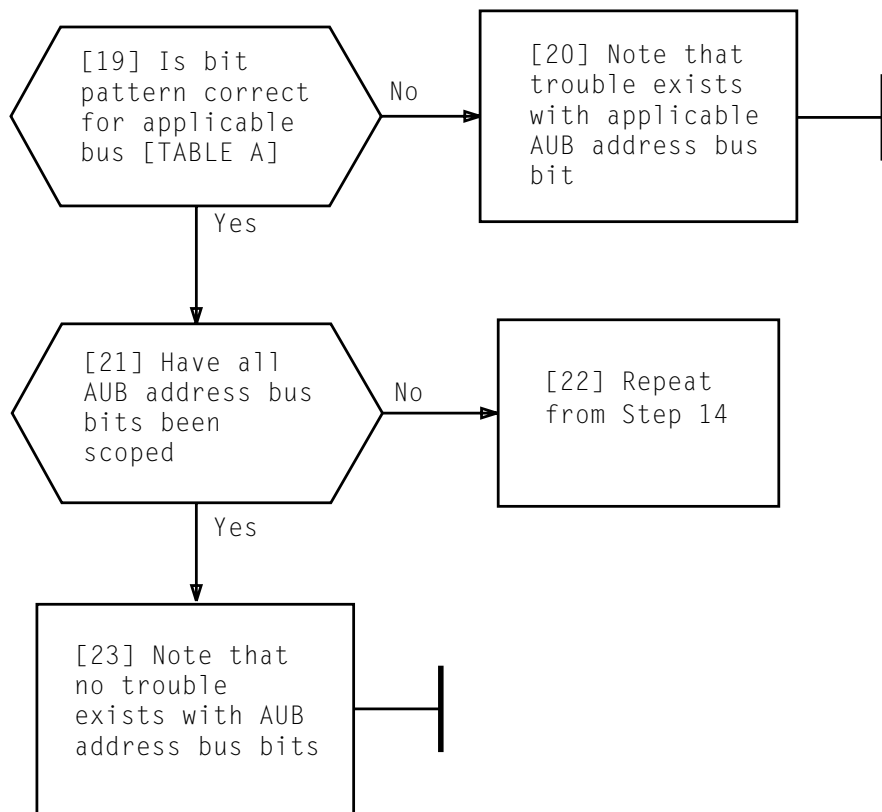


FIG. 3 – Example of Typical AUB Bit Pattern

NOTE 1
Oscilloscope **CURSORS** may need to be adjusted to observe bit pattern





SCOPE AUB 0 OR 1 ADDRESS BUS BITS 0 TO 15

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[1] At API frame where AUB store address bus terminates, locate connectors containing BTRs on applicable API unit (0 or 1) at position XXX-265 [FIG. 1]

[2] Connect bus scoping tool to BTR on applicable API unit (0 or 1) [FIG. 2]

[3] Connect one X10 probe to channel 1 of oscilloscope and positive (P) pin of bus scoping tool [FIG. 2]

[4] Connect another X10 probe to channel 2 of oscilloscope; wrap channel 2 probe lead around channel 1 probe lead and connect to negative (N) pin of bus scoping tool [FIG. 2]

[5] Attach oscilloscope channel 1 and channel 2 probe ground leads together

[6] Review usage of bus scoping tool [DLP-536]

[7] Set bus scoping tool selector to position 0

AND

[8] Is oscilloscope set up for scoping AUB

Yes

Page 4

No

[9] Set up storage oscilloscope for scoping AUB [DLP-510]

SCOPE AUB 0 OR 1 STORE ADDRESS BUS BITS 0 TO 21

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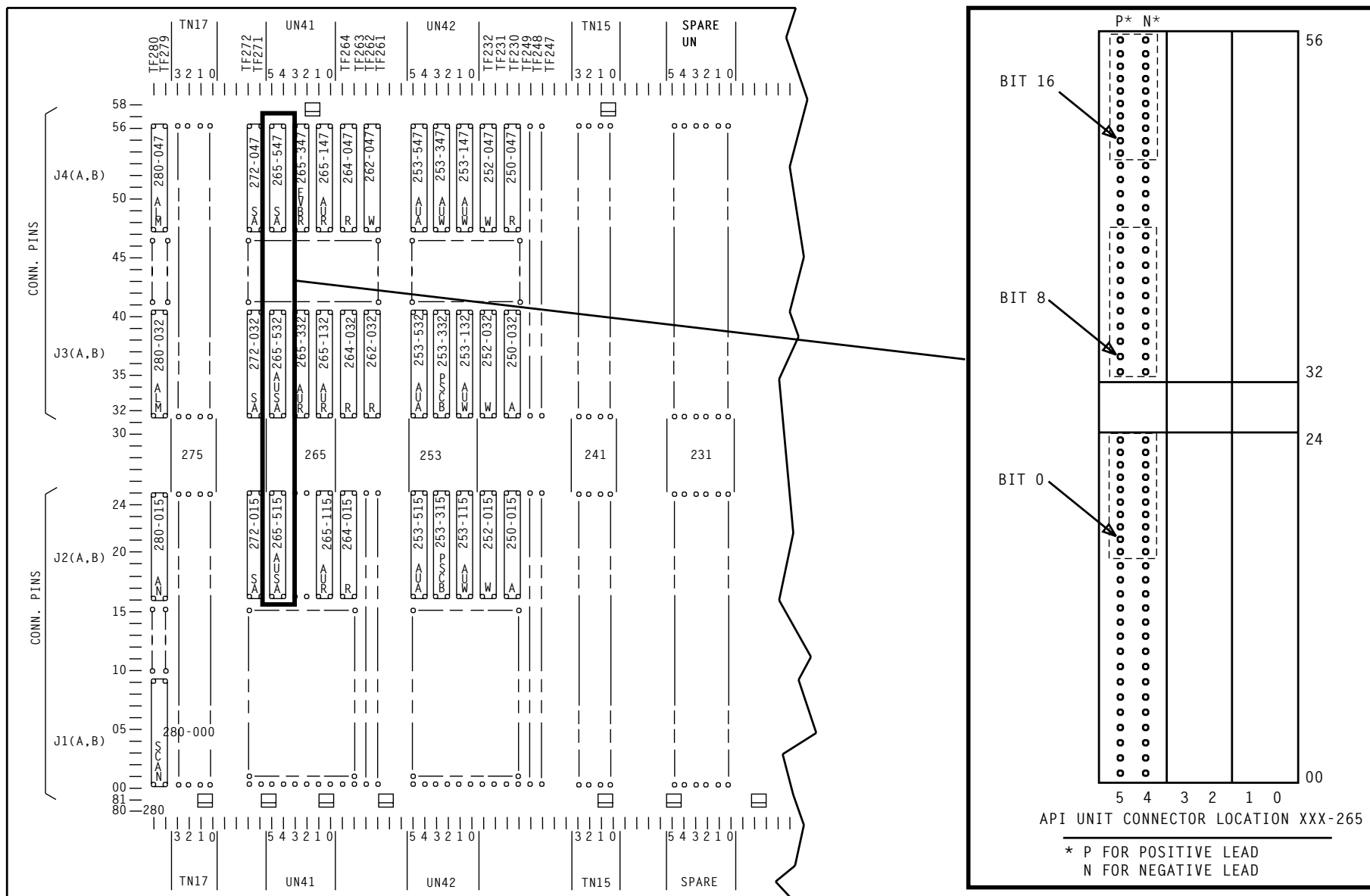


FIG. 1 - Example of API Unit (0 or 1) Connector Layout Showing AUB 0 or 1 Store Address Bus Bits 0 to 21

SCOPE AUB 0 OR 1 STORE ADDRESS BUS BITS 0 TO 21

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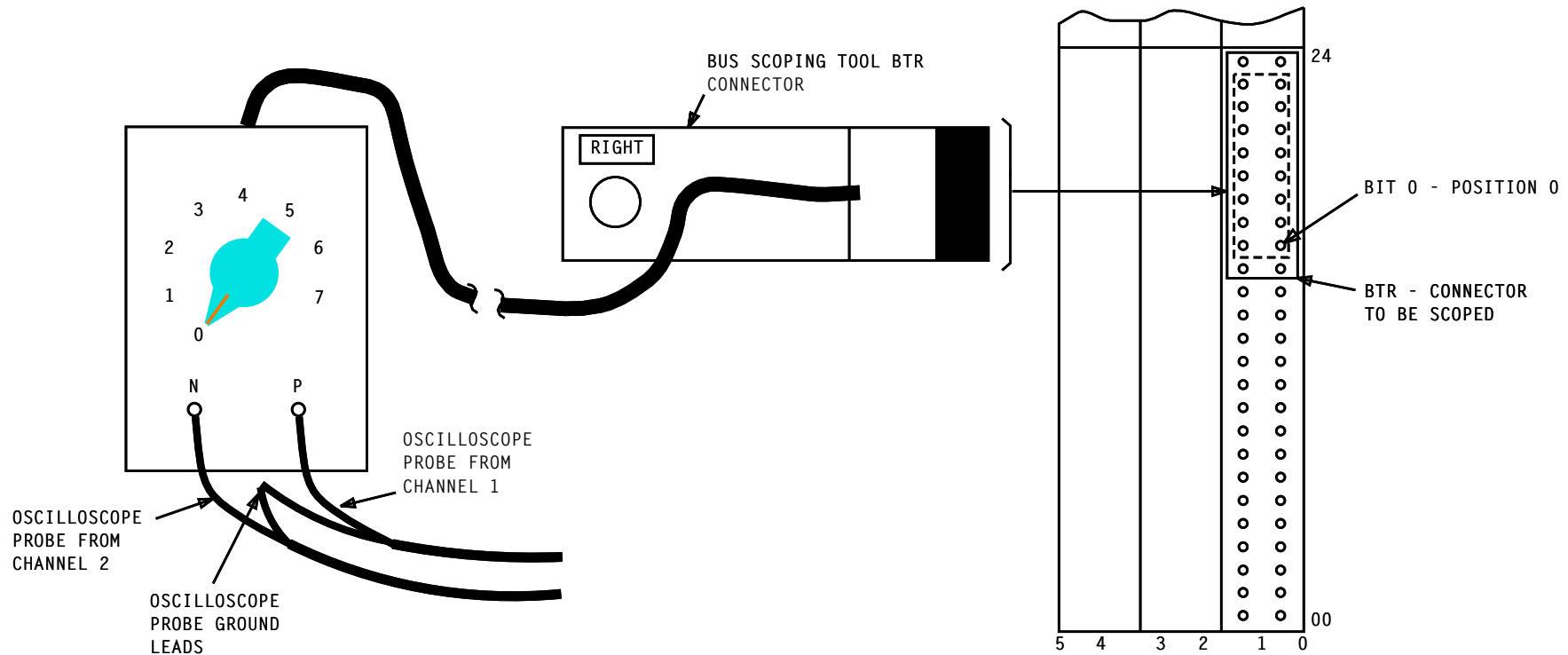


FIG. 2 – Bus Scoping Tool, Oscilloscope Probes and BTR Connections for Scoping Auxiliary Unit Bus (AUB)

SCOPE AUB 0 OR 1 STORE ADDRESS BUS BITS 0 TO 21

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[10] At oscilloscope, set **HORIZONTAL - A AND B**
SEC/DIV to 50µs

[11] See NOTE 1. Scope positive and negative pins for bit 0 at connector containing BTR on applicable API unit (0 or 1) (dashed line box) [FIG. 1]

[12] Observe oscilloscope for correct bit pattern [TABLE A] and note any discrepancies [FIG. 3]

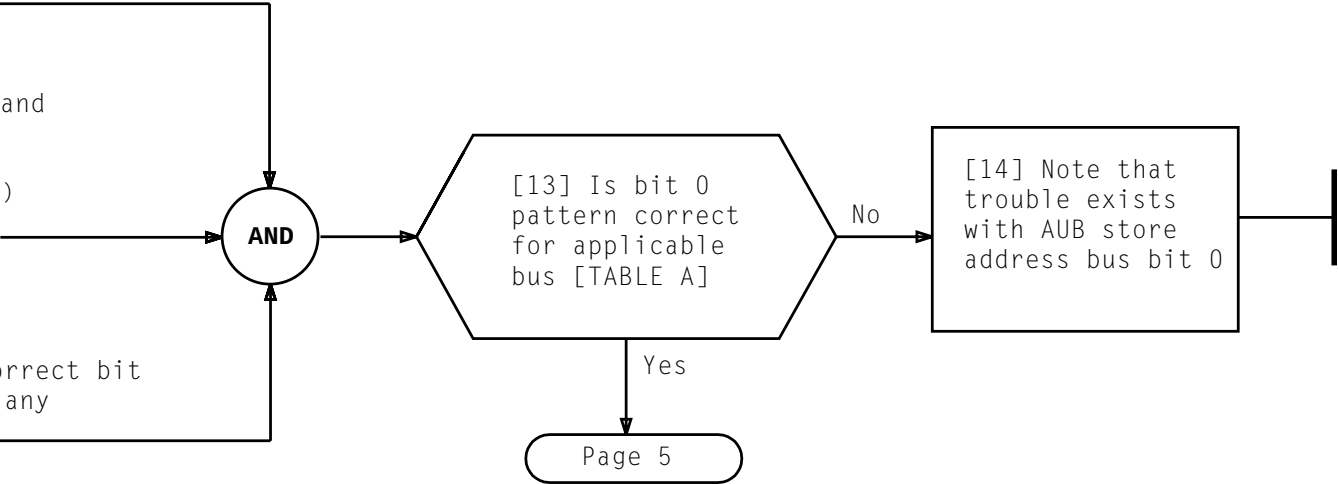


TABLE A AUB 0 OR 1 STORE ADDRESS BUS BITS 0 TO 21 BIT PATTERNS					
BIT	BIT PATTERN		BIT	BIT PATTERN	
	BUS 0	BUS 1		BUS 0	BUS 1
0	01000000	00000001	12	01001100	00011001
1	01000001	00000011	13	01001101	00011011
2	01000010	00000101	14	01001110	00011101
3	01000011	00000111	15	01001111	00011111
4	01000100	00001001	16	01010000	00100001
5	01000101	00001011	17	01010001	00100011
6	01000110	00001101	18	01010010	00100101
7	01000111	00001111	19	01010011	00100111
8	01001000	00010001	20	01010100	00101001
9	01001001	00010011	21	01010101	00101011
10	01001010	00010101			
11	01001011	00010111			

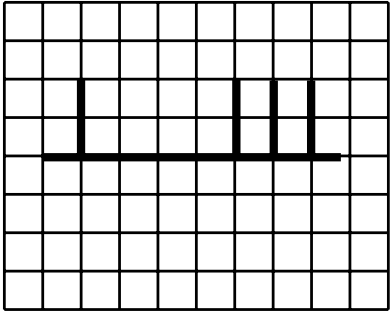
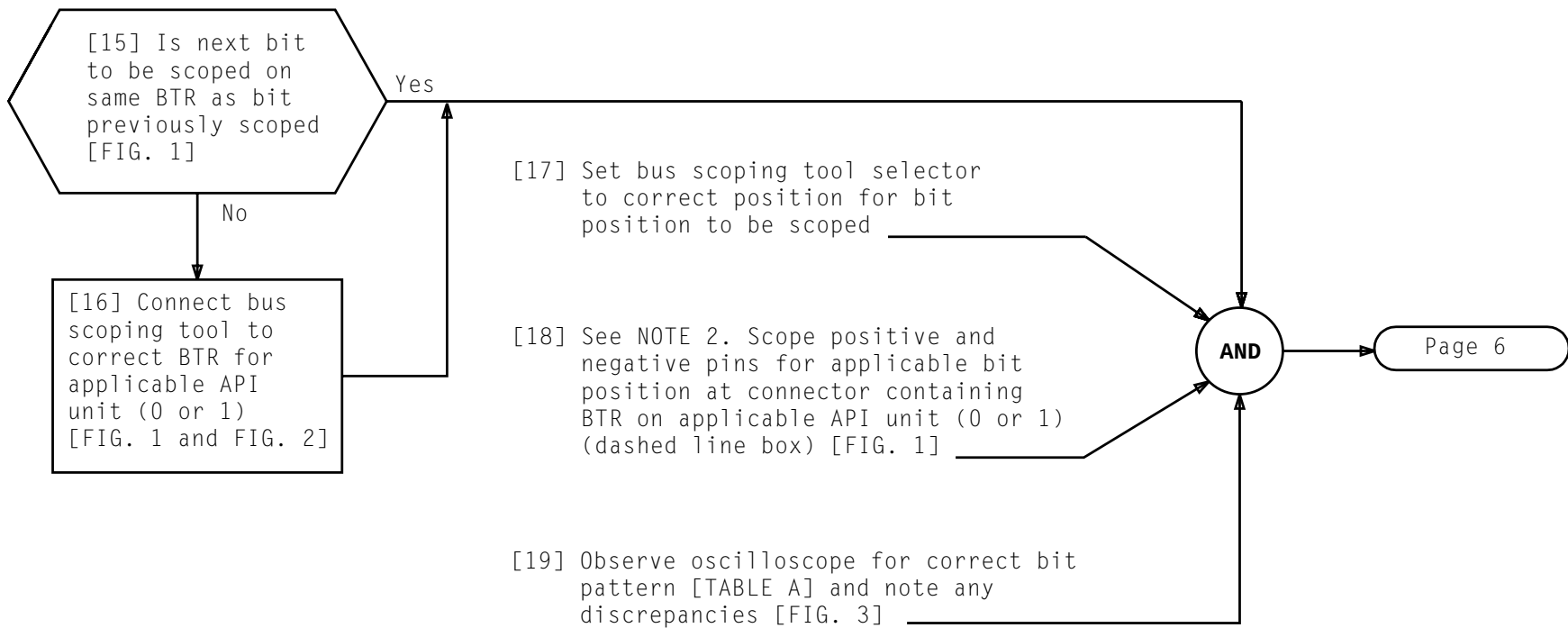


FIG. 3 – Example of Typical AUB Bit Pattern

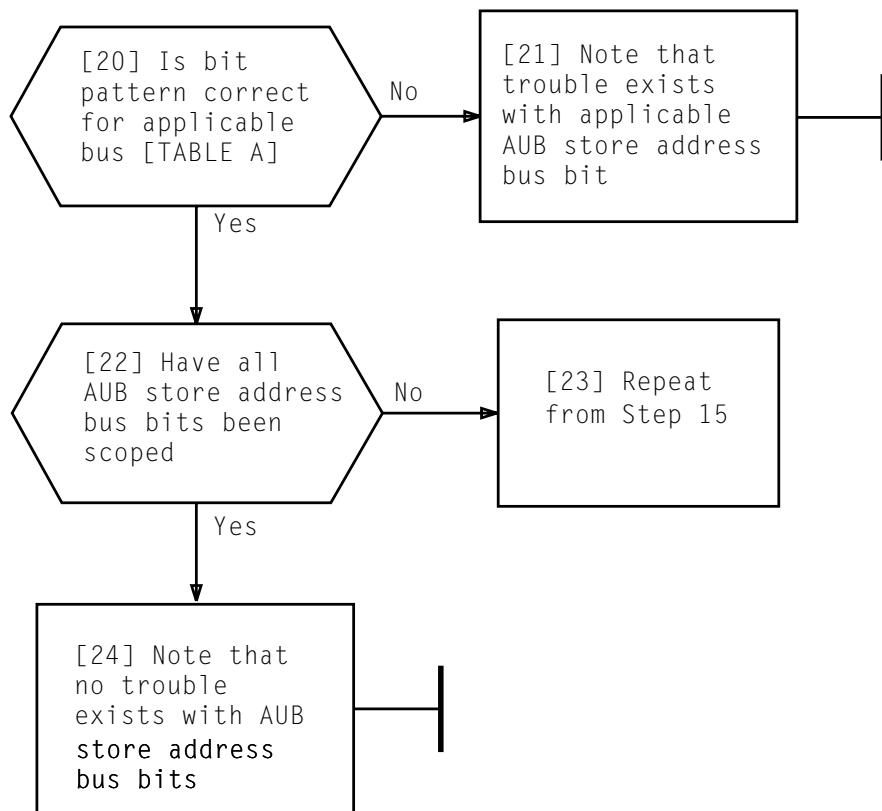
NOTE 1
Oscilloscope **CURSORS** may need to be adjusted to observe bit pattern

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SCOPE AUB 0 OR 1 STORE ADDRESS BUS BITS 0 TO 21

NOTE 2 Oscilloscope CURSORS may need to be adjusted to observe bit pattern		
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SCOPE AUB 0 OR 1 STORE ADDRESS BUS BITS 0 TO 21

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[1] At API frame where AUB reply
bus terminates, locate connectors
containing BTRs on applicable
API unit (0 or 1) at position XXX-265
[FIG. 1]

[2] Connect bus scoping tool to BTR on
applicable API unit (0 or 1) [FIG. 2]

[3] Connect one X10 probe to channel 1
of oscilloscope and positive (P) pin
of bus scoping tool [FIG. 2]

[4] Connect another X10 probe to channel
2 of oscilloscope; wrap channel 2
probe lead around channel 1 probe
lead and connect to negative (N) pin
of bus scoping tool [FIG. 2]

[5] Attach oscilloscope channel 1 and
channel 2 probe ground leads
together

[6] Review usage of bus scoping
tool [DLP-536]

[7] Set bus scoping tool selector to
position 0

AND

[8] Is oscilloscope
set up for
scoping AUB

Yes

Page 4

No

[9] Set up storage
oscilloscope for
scoping AUB
[DLP-510]

SCOPE AUB 0 OR 1 REPLY BUS BITS 0 TO 23

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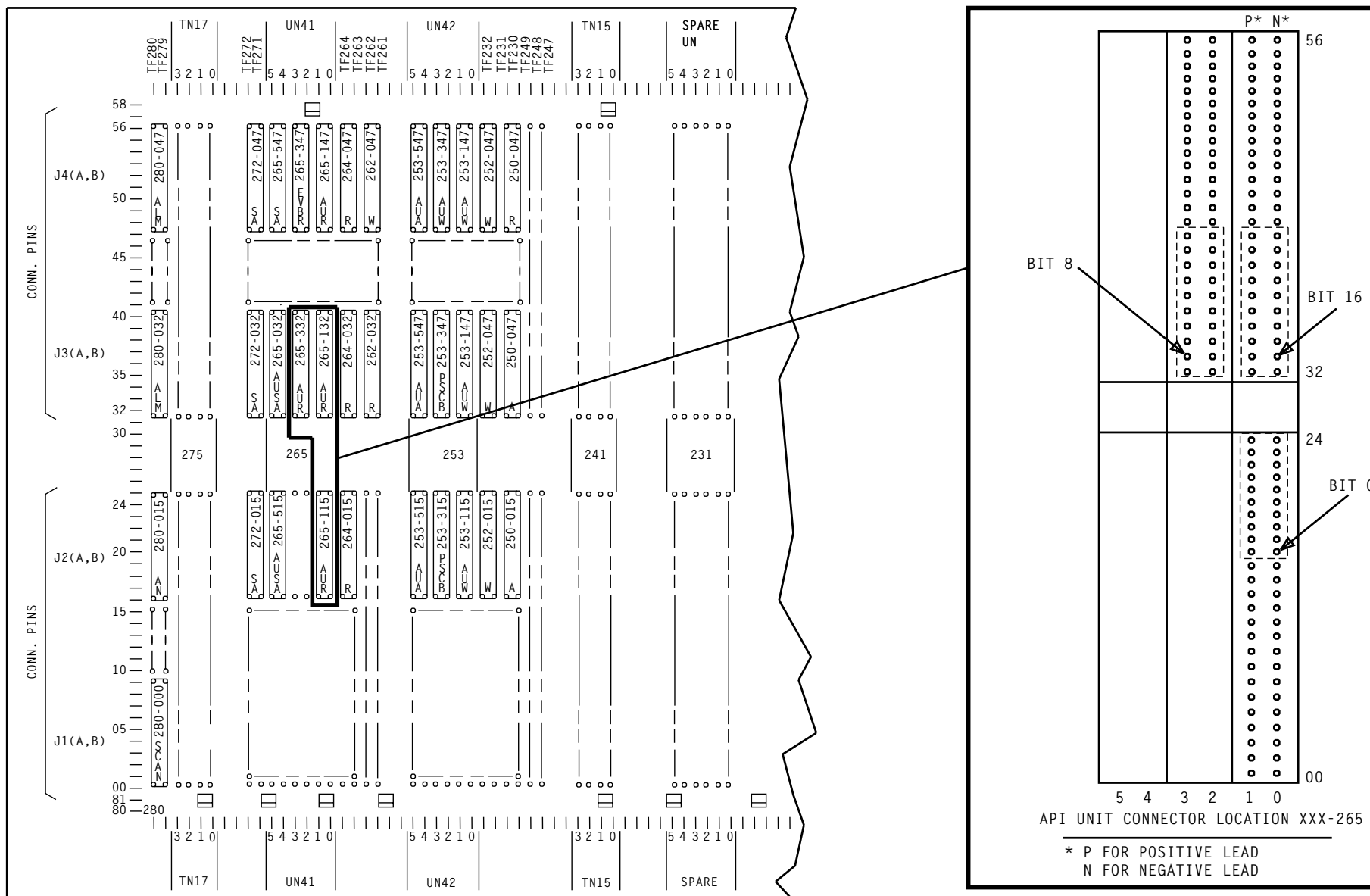


FIG. 1 - Example of API Unit (0 or 1) Connector Layout Showing AUB 0 or 1 Reply Bus Bits 0 to 23

SCOPE AUB 0 OR 1 REPLY BUS BITS 0 TO 23

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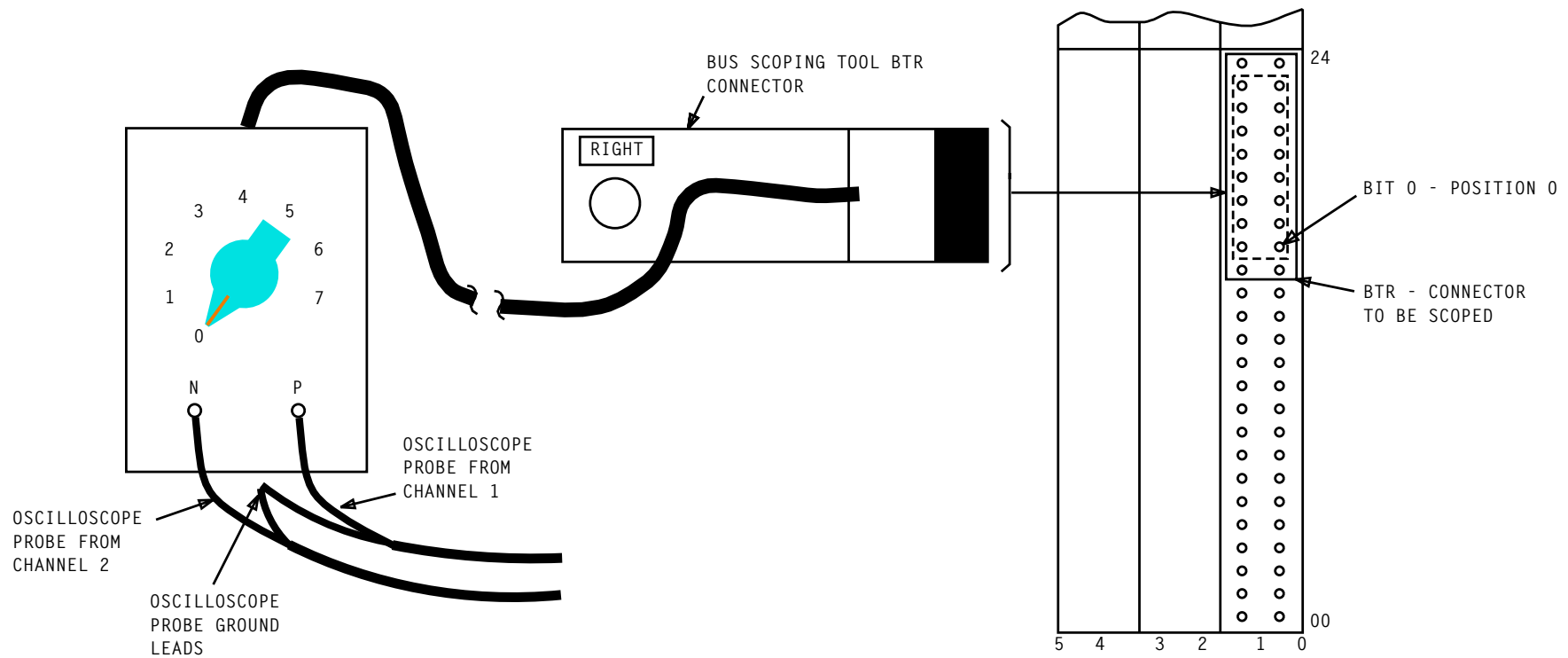


FIG. 2 – Bus Scoping Tool, Oscilloscope Probes and BTR Connections for Scoping Auxiliary Unit Bus (AUB)

SCOPE AUB 0 OR 1 REPLY BUS BITS 0 TO 23

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[10] See NOTE 1. Scope positive and negative pins for bit 0 at connector containing BTR on applicable API unit (0 or 1) (dashed line box) [FIG. 1]

[11] Observe oscilloscope for correct bit pattern [TABLE A] and note any discrepancies [FIG. 3]

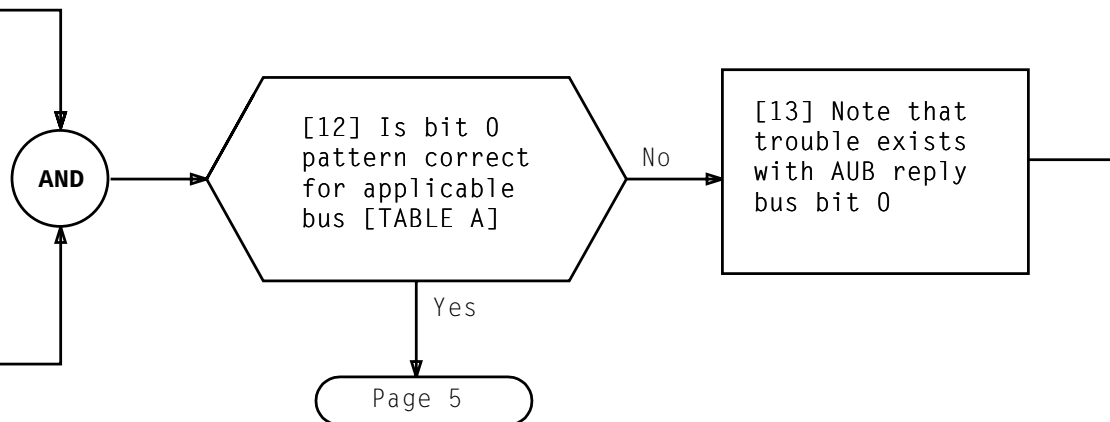


TABLE A AUB 0 OR 1 REPLY BUS BITS 0 TO 23 BIT PATTERNS					
BIT	BIT PATTERN		BIT	BIT PATTERN	
	BUS 0	BUS 1		BUS 0	BUS 1
0	01000000	00000001	12	01001100	00011001
1	01000001	00000011	13	01001101	00011011
2	01000010	00000101	14	01001110	00011101
3	01000011	00000111	15	01001111	00011111
4	01000100	00001001	16	01010000	00100001
5	01000101	00001011	17	01010001	00100011
6	01000110	00001101	18	01010010	00100101
7	01000111	00001111	19	01010011	00100111
8	01001000	00010001	20	01010100	00101001
9	01001001	00010011	21	01010101	00101011
10	01001010	00010101	22	01010110	00101101
11	01001011	00010111	23	01010111	00101111

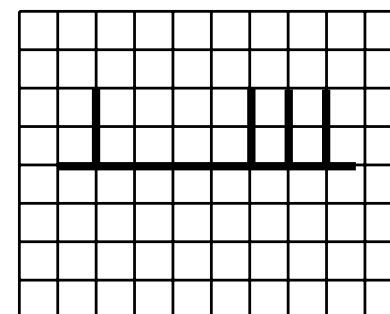
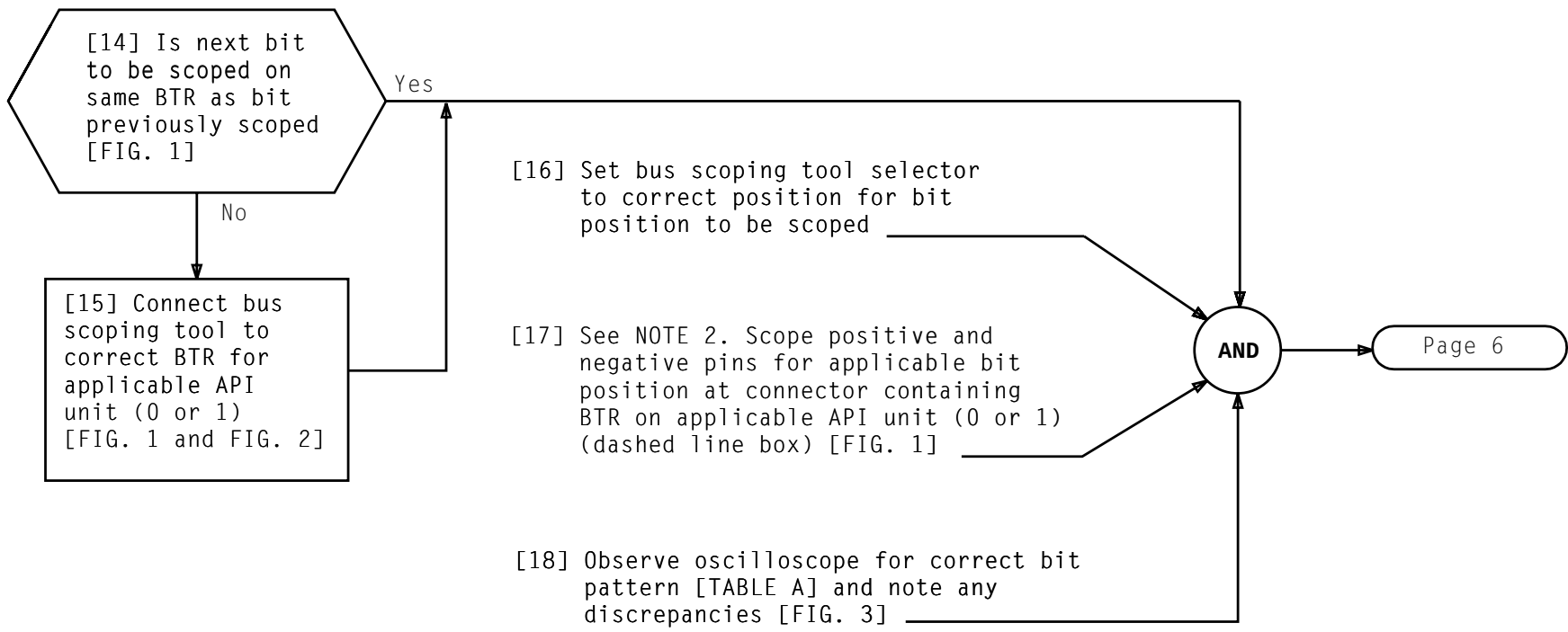


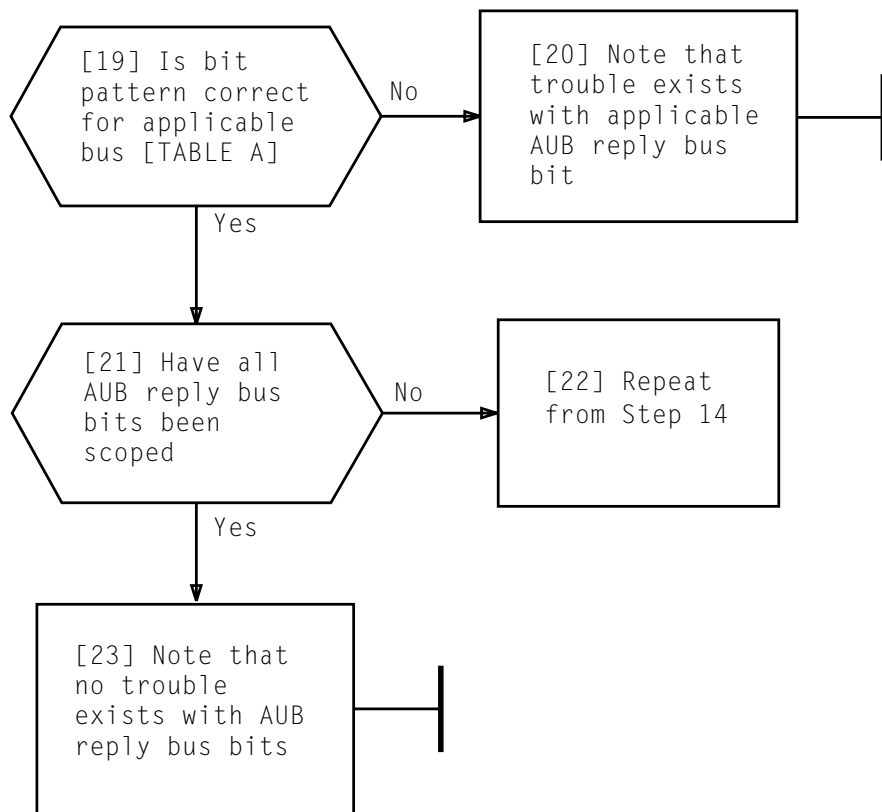
FIG. 3 – Example of Typical AUB Bit Pattern

NOTE 1 Oscilloscope CURSORS may need to be adjusted to observe bit pattern	
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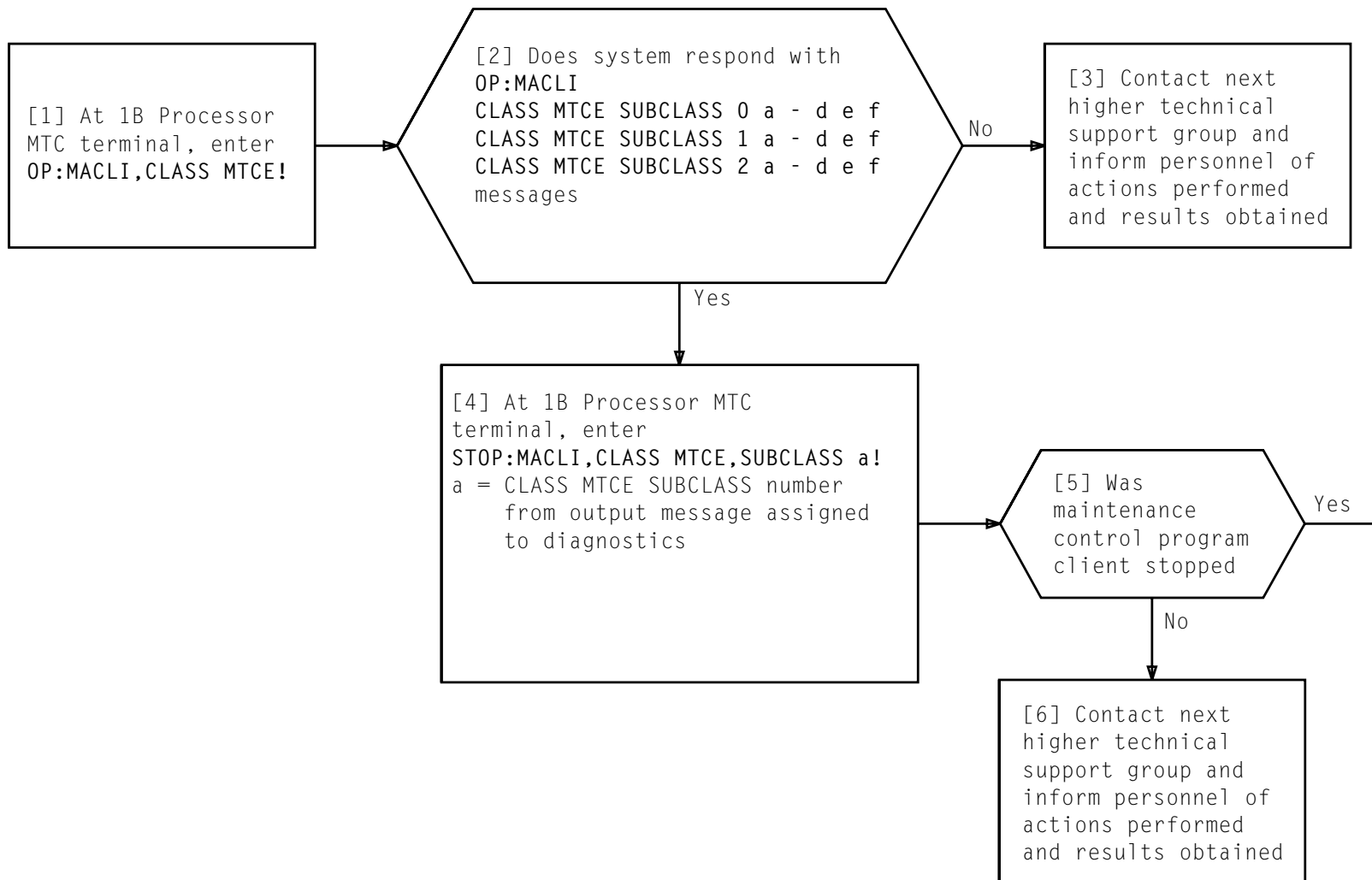
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NOTE 2			
Oscilloscope			
CURSORS may need to be adjusted to observe bit pattern			
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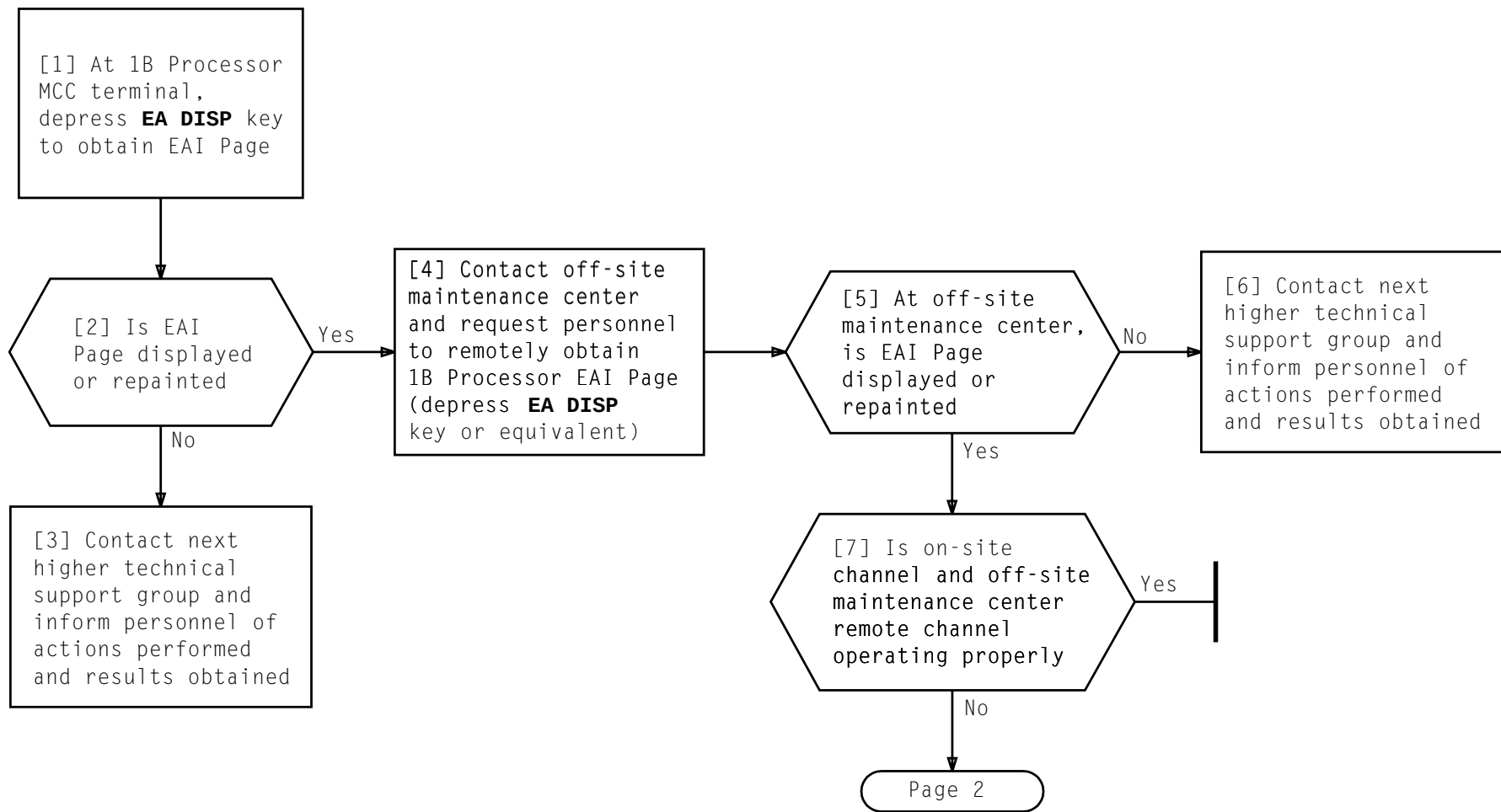
SCOPE AUB 0 OR 1 REPLY BUS BITS 0 TO 23

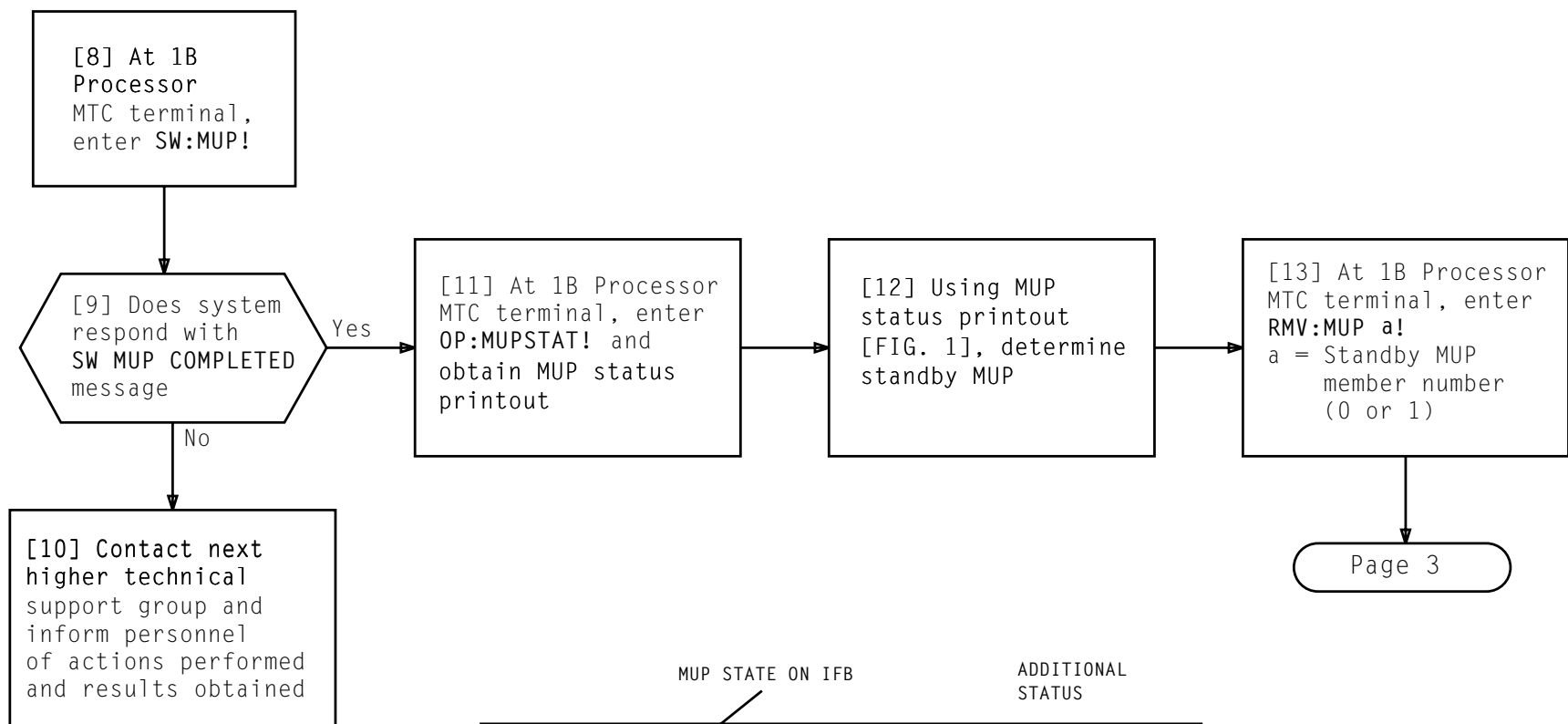
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STOP MAINTENANCE CONTROL PROGRAM CLIENT

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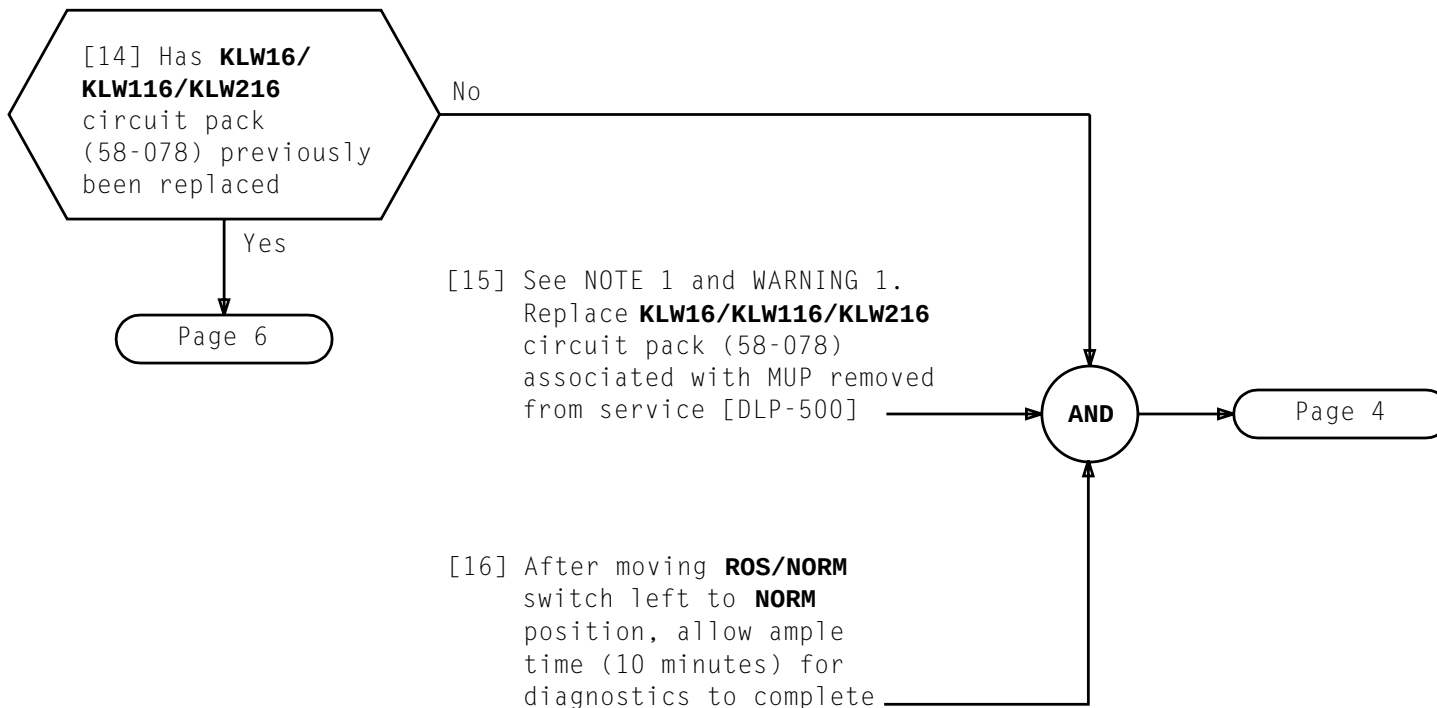


MUP STATE ON IFB		ADDITIONAL STATUS	
M42 OP:MUPSTAT			
MUP 0 -	00S	UNKNOWN	STATUS 00000001
MUP 1 -	00S	UNKNOWN	STATUS 00000001
ETHERNET -	UNKNOWN		
RS-232 PORTS	0 - UNKNOWN	1 - UNKNOWN	2 - UNKNOWN
	3 - UNKNOWN		

ETHERNET CHANNEL STATE

RS-232 CHANNEL STATE

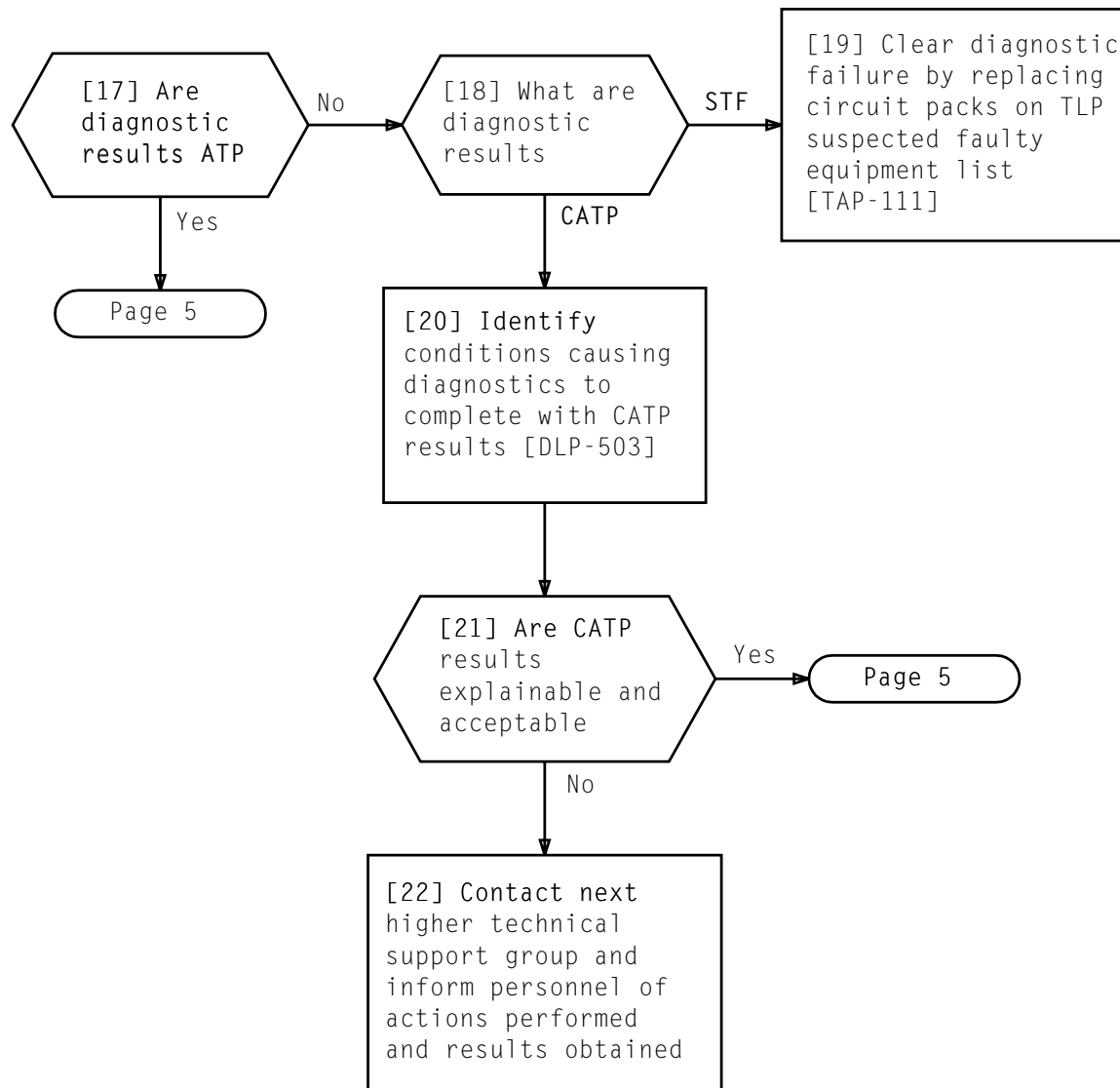
FIG. 1 – Sample Printout of MUP Status



NOTE 1
Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 1
A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

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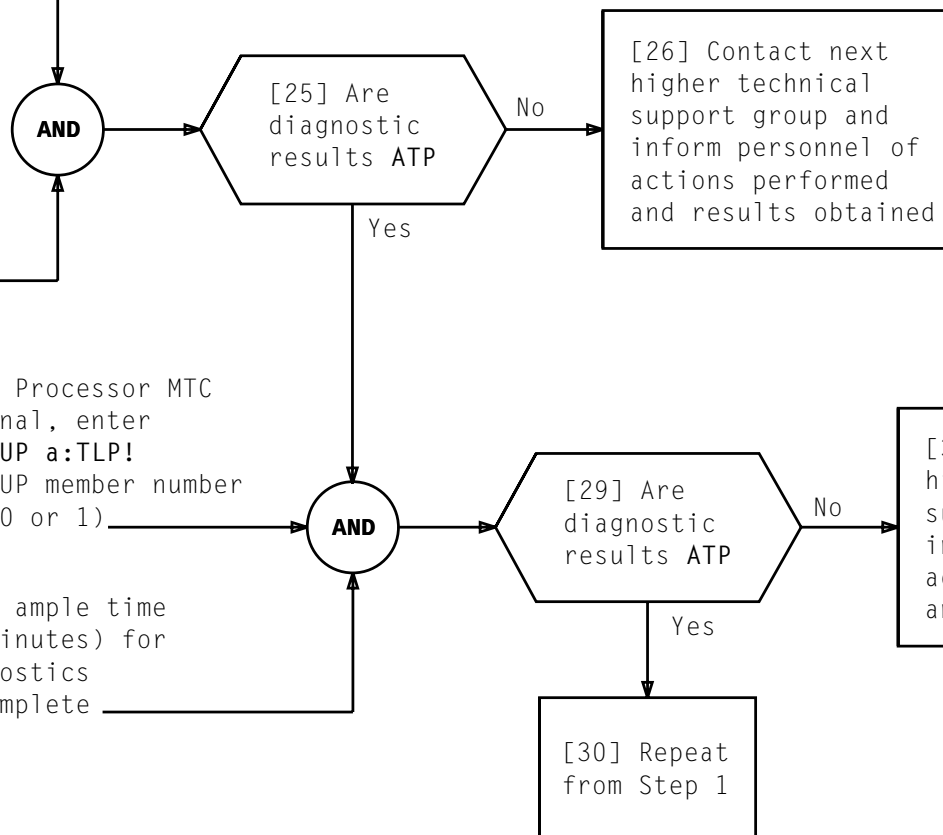


[23] At 1B Processor MTC
terminal, enter
DGN:MUP a:PH 91,TLP!
a = MUP member number
(0 or 1)

[24] Allow ample time
for diagnostics
to complete

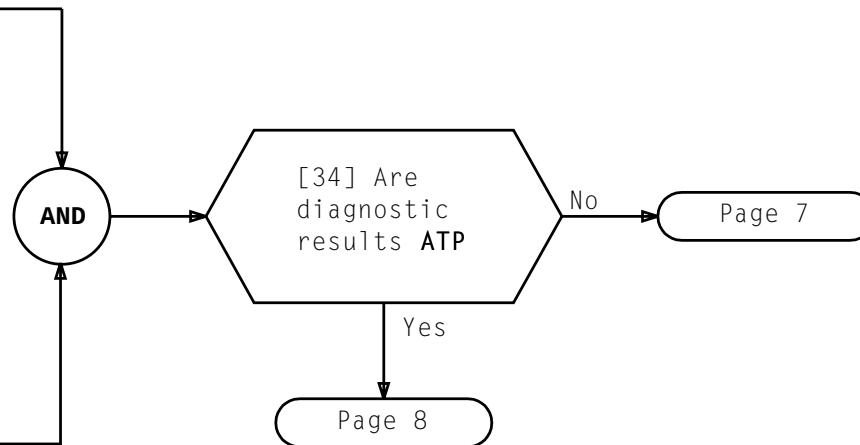
[27] At 1B Processor MTC
terminal, enter
DGN:MUP a:TLP!
a = MUP member number
(0 or 1)

[28] Allow ample time
(10 minutes) for
diagnostics
to complete



[32] See NOTE 2 and WARNING 2.
Replace **KLW16/KLW116/KLW216**
circuit pack (58-078)
previously replaced with
original pack [DLP-500]

[33] After moving **ROS/NORM**
switch left to **NORM**
position, allow ample
time (10 minutes) for
diagnostics to complete

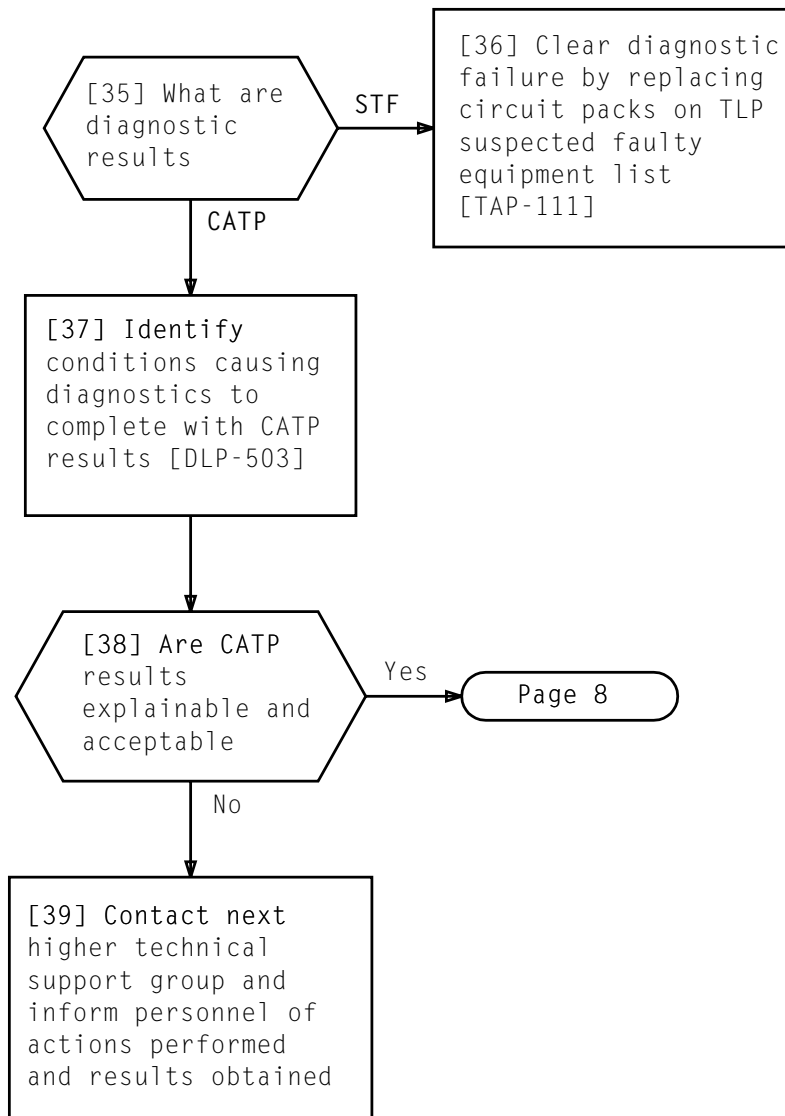


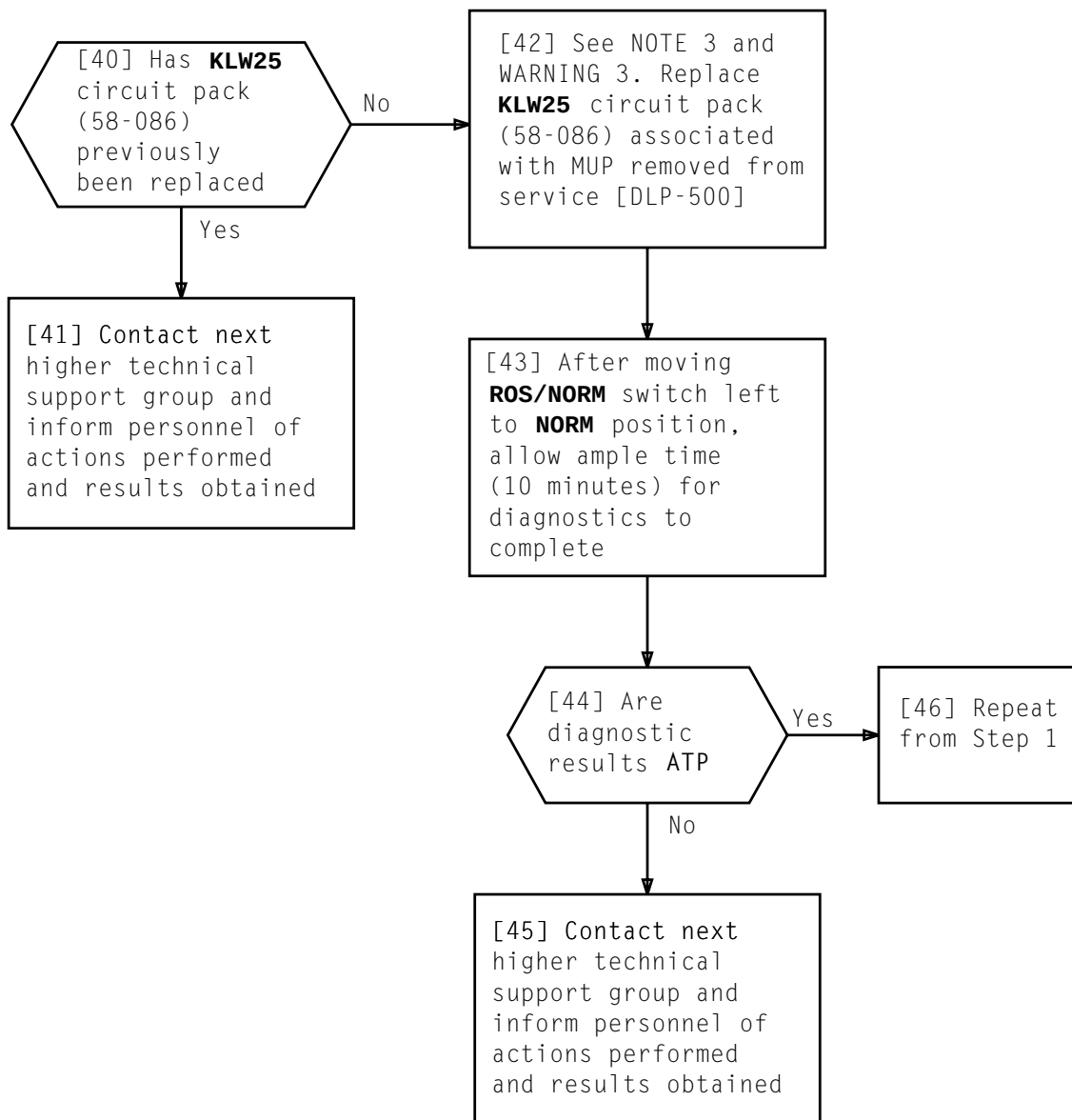
NOTE 2

Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 2

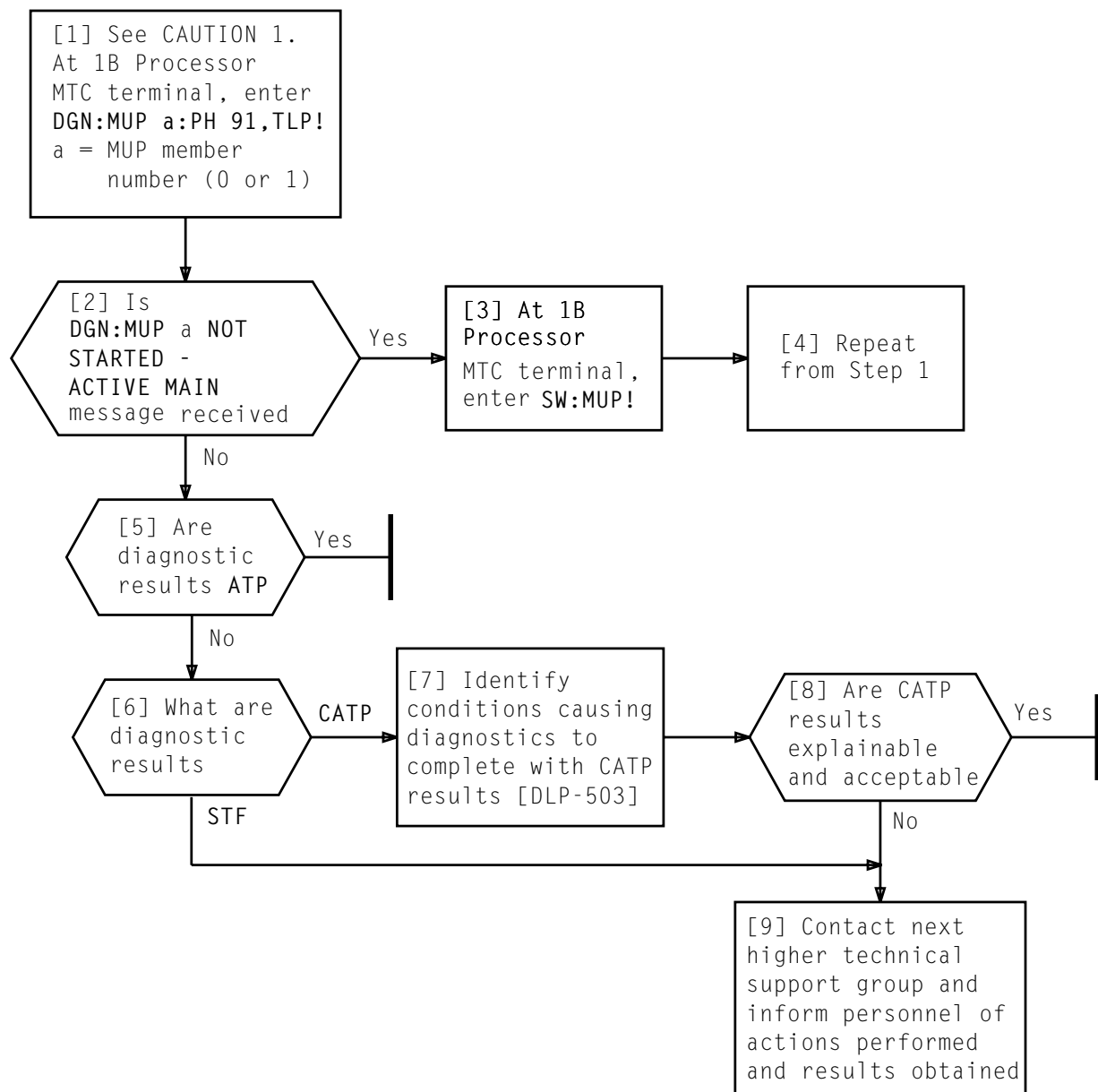
A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins





NOTE 3
Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 3
A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins



PERFORM MUP DEMAND DIAGNOSTIC PHASE 91

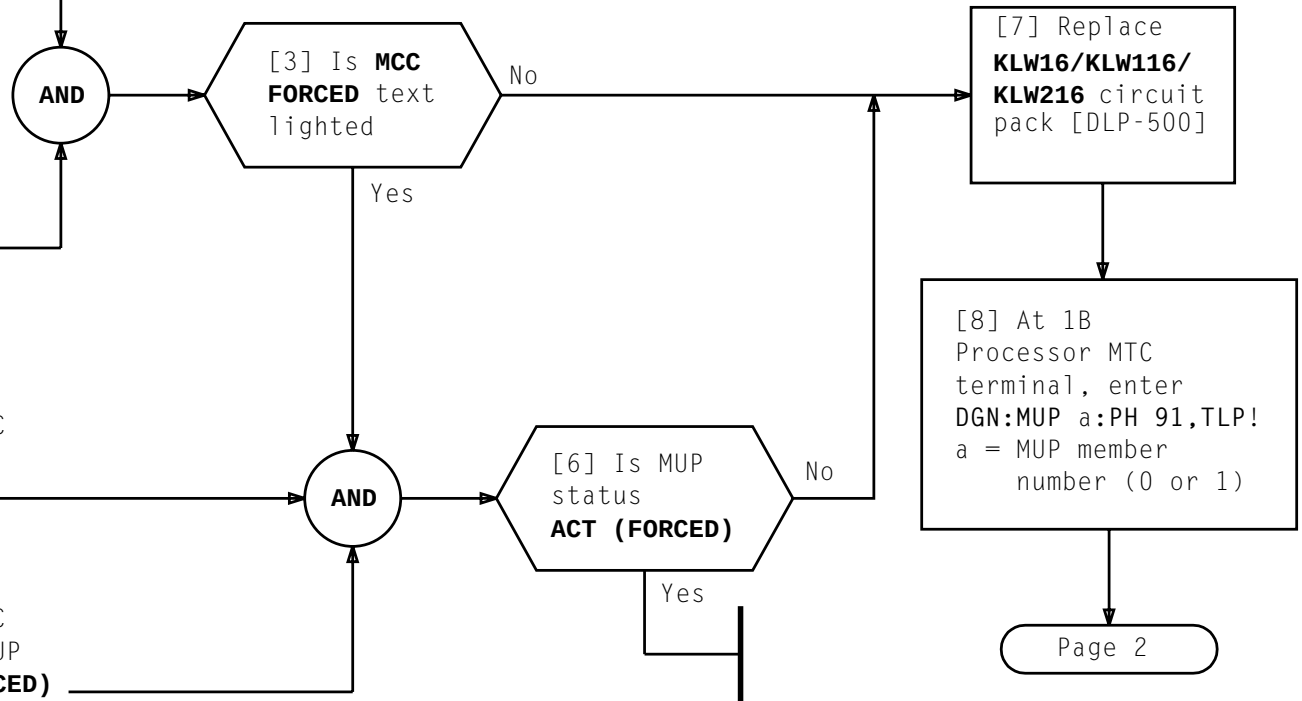
CAUTION 1 <i>MUP diagnostic Phase 91 should only be run when office personnel are on-site. Demand Phase 91 tests the MUP activity bits and a phase failure could cause loss of communications between the MUP and MCC terminal</i>		
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[1] At 1B Processor MCC terminal,
enter poke command 106 to
obtain 106 Page

[2] On 1B Processor MCC
terminal 106 Page, verify
that **MCC FORCED** text
is lighted

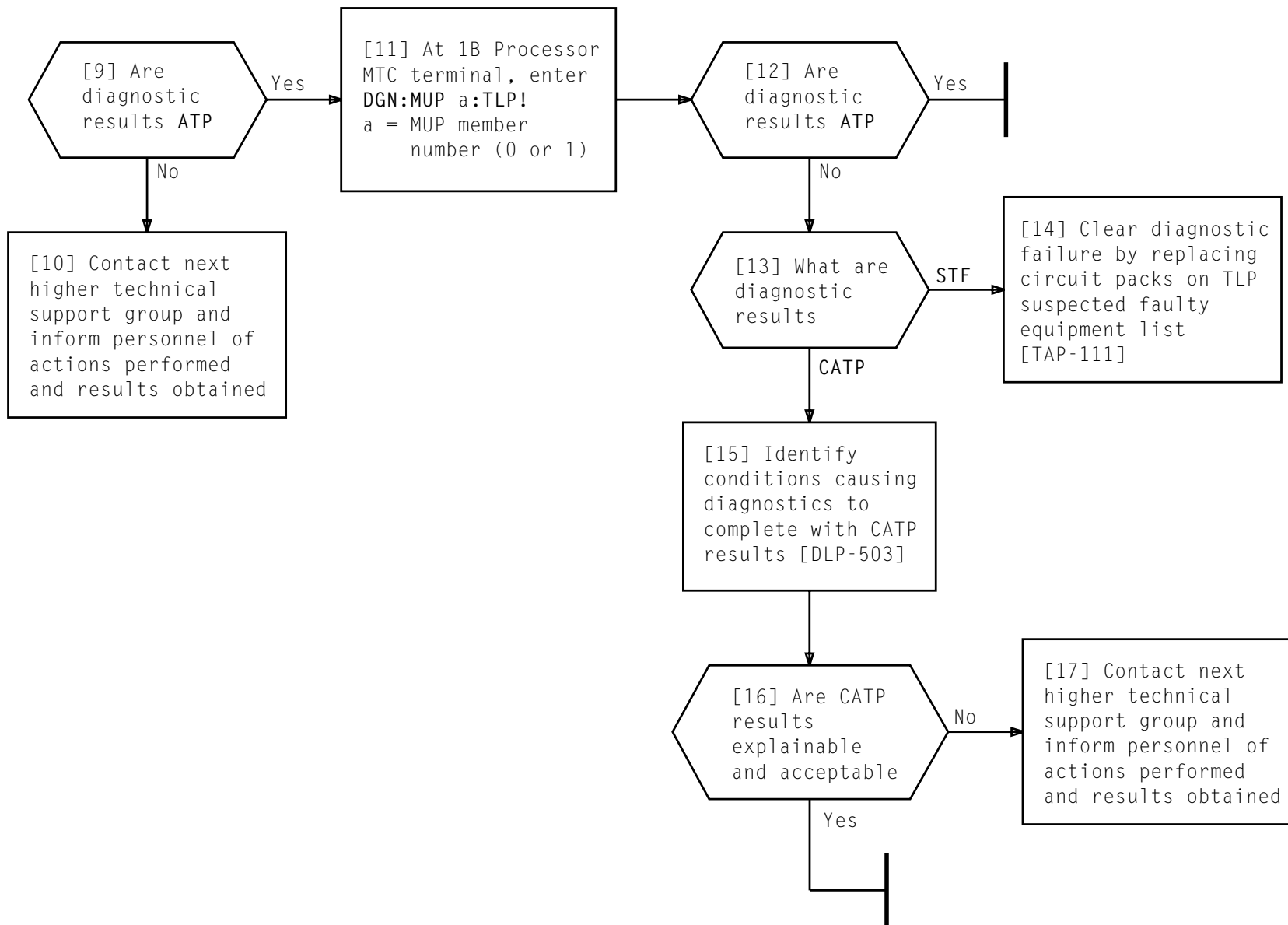
[4] At 1B Processor MTC
terminal, enter
OP:MUPSTAT!

[5] At 1B Processor MTC
terminal, verify MUP
status is **ACT (FORCED)**



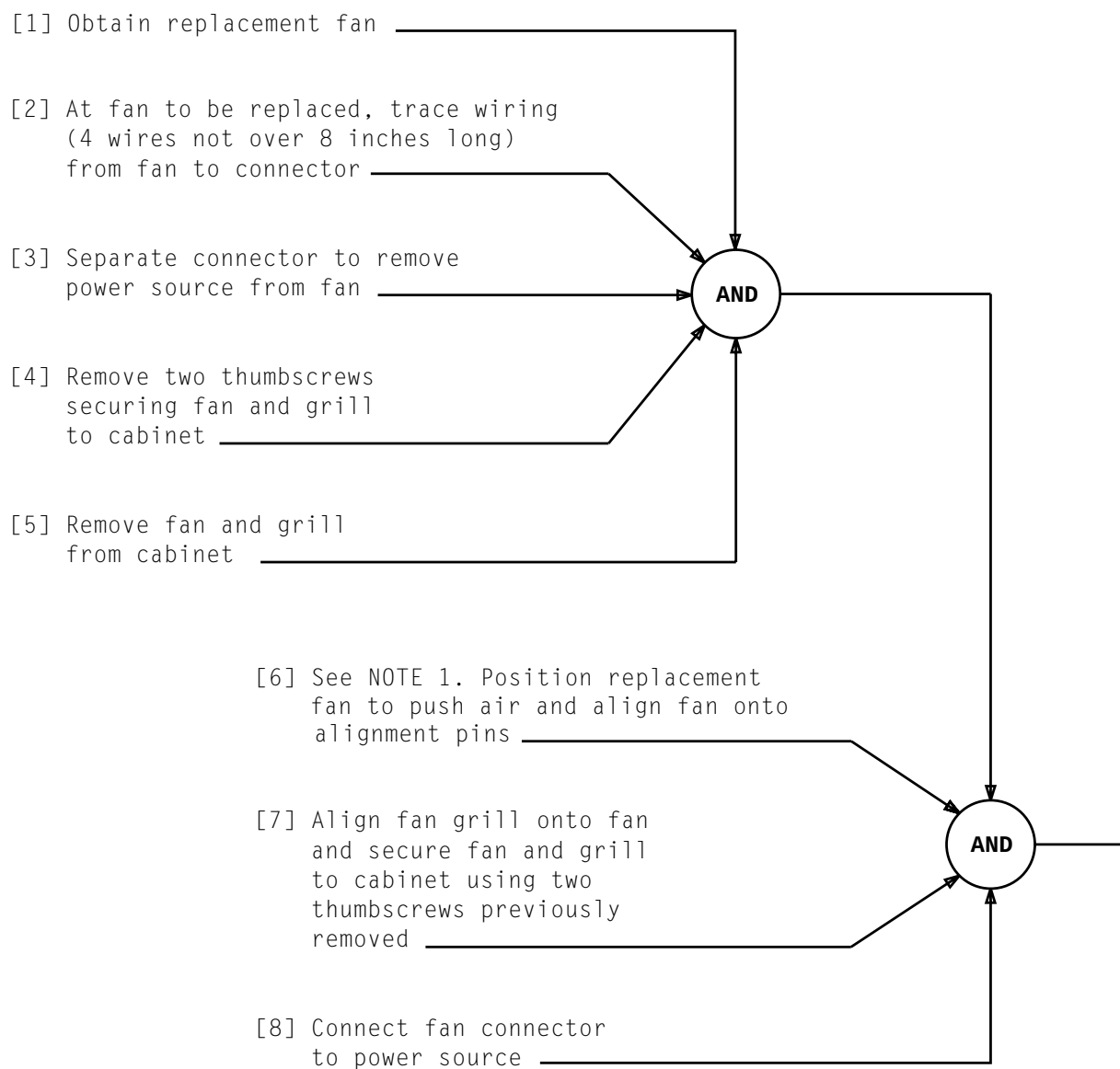
VERIFY MUP IS FORCED ACTIVE

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VERIFY MUP IS FORCED ACTIVE

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NOTE 1		
Position fan where "airflow arrow" on fan housing points into equipment bay. This positioning will allow air to be blown into cabinet.		
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[1] Obtain replacement fan controller circuit pack (KS-23913, L2) [FIG. 1]

[2] At fan controller assembly (77-000), unsecure latches securing controller assembly to cabinet [FIG. 1]

[3] Using latch handles on each side of fan controller assembly, pull (slide) fan controller assembly out until catches on slide mechanism engage

[4] Lift catches on each side of fan controller assembly slide mechanism and completely remove fan controller assembly from cabinet [FIG. 1]

[5] See WARNING 1. With fan controller assembly removed and positioned flat and securely on table, grasp connectors on each side of fan controller circuit pack and lift up to remove pack from assembly [FIG. 1]

[6] See WARNING 1. Grasp connectors on each side of replacement fan controller circuit pack and insert pack into fan controller assembly ensuring circuit pack is seated properly in center support mechanism [FIG. 1]

Fan controller assembly removed

AND

Fan controller circuit pack replaced

AND

Page 2

WARNING 1

A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

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[7] Align fan controller assembly onto slide mechanism in cabinet and slide fan controller assembly forward until catches engage

[8] Lift catches on each side of fan controller assembly slide mechanism and completely slide fan controller assembly into cabinet [FIG. 1]

[9] Secure fan controller assembly to cabinet by securing latches

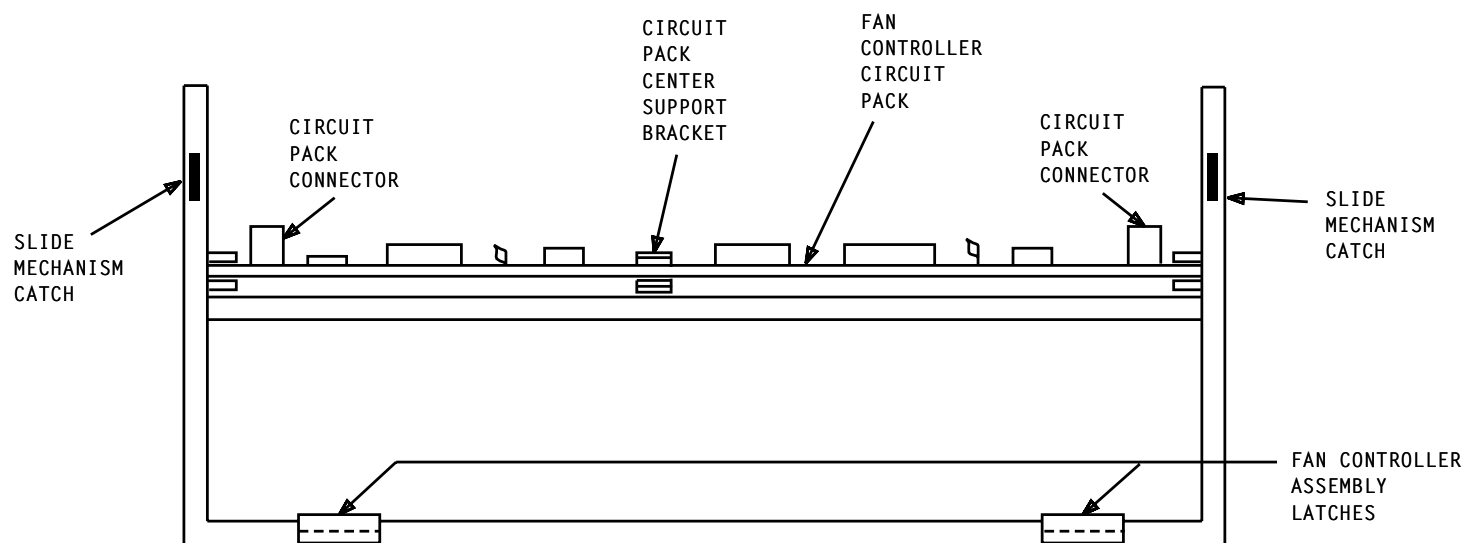
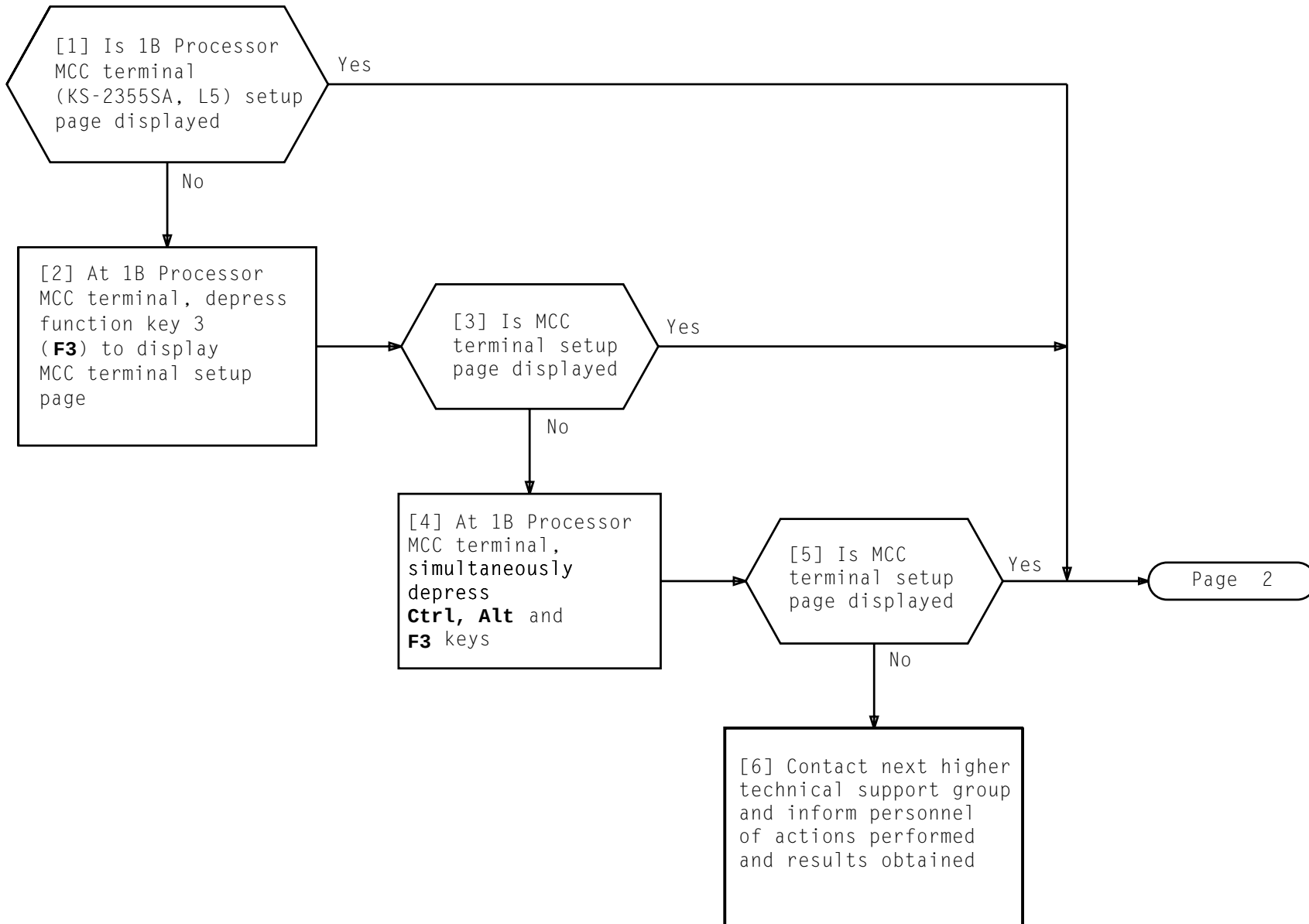


FIG. 1 – Fan Controller Assembly Layout (Top View)

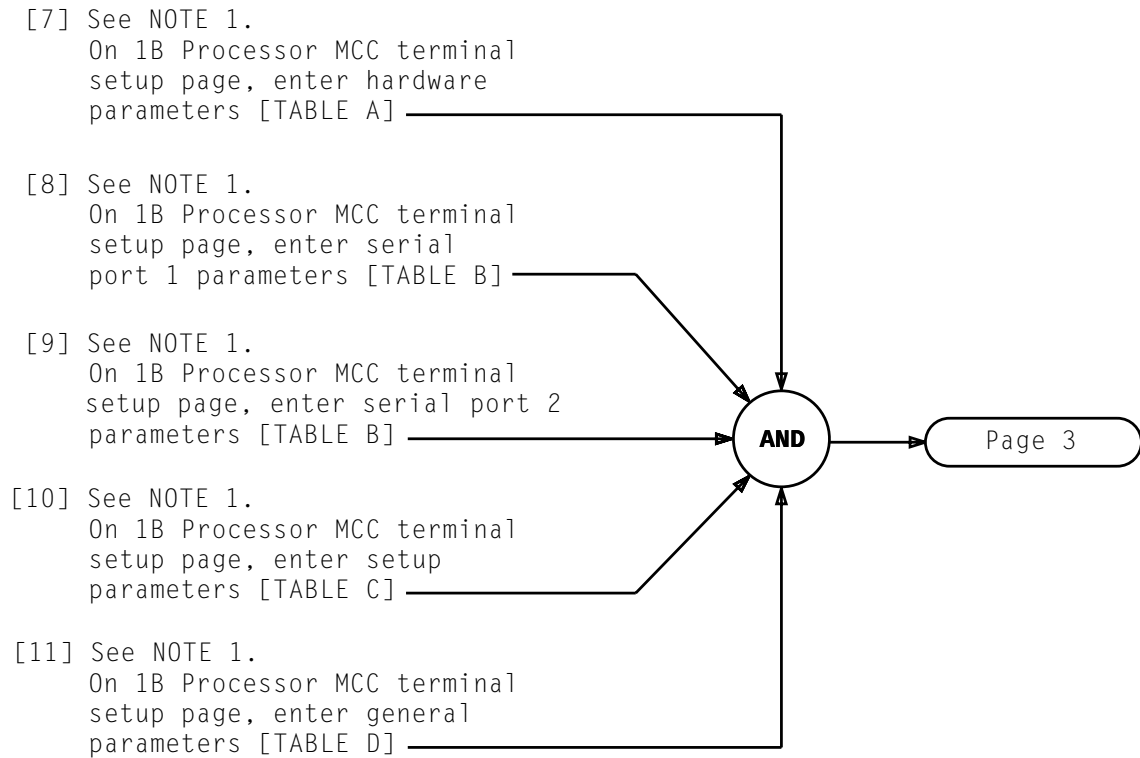
REPLACE FAN CONTROLLER CIRCUIT PACK – 1B PROCESSOR CABINET

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**OBTAIN 1B PROCESSOR MCC TERMINAL SETUP PAGE AND SET
MCC TERMINAL PARAMETERS**

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NOTE 1 When 1B Processor MCC terminal setup page is displayed, use arrow keys to select MCC terminal parameter setup option (modify, save, recall, print, factory-defaults or exit). After selecting desired setup option, use up and down arrow keys to highlight an MCC terminal parameter, use space bar to modify an MCC terminal parameter or use ESC key to return to MCC terminal parameter setup option menu		
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**OBTAIN 1B PROCESSOR MCC TERMINAL SETUP PAGE AND SET
MCC TERMINAL PARAMETERS**

[12] See NOTE 2. On 1B Processor
MCC terminal setup page, enter
display parameters [TABLE E]

[13] See NOTE 2. On 1B Processor
MCC terminal setup page, enter
keyboard parameters [TABLE F]

[14] See NOTE 2. On 1B Processor
MCC terminal setup page,
enter printer parameters
[TABLE G]

[15] On 1B Processor MCC terminal
setup page, depress **ESC** key
to return to MCC terminal
parameter setup option menu

[16] On 1B Processor MCC terminal
parameter setup option menu,
use arrow keys to highlight
SAVE option and depress
RETURN key

[17] Use arrow keys to select **YES**
option and depress **RETURN** key
to save selected parameters

[18] Use arrow keys to select **EXIT**
option and depress **RETURN** key to
exit parameter setup display page

AND

```
graph LR; 12[12] --> AND((AND)); 13[13] --> AND; 14[14] --> AND; 15[15] --> AND; 16[16] --> AND; 17[17] --> AND; 18[18] --> AND; AND --> Exit[ ]
```

NOTE 2
When 1B Processor
MCC terminal setup
page is displayed,
use arrow keys to
select MCC terminal
parameter setup
option (modify,
save, recall, print,
factory-defaults
or exit). After
selecting desired
setup option, use
up and down arrow
keys to highlight
an MCC terminal
parameter, use space
bar to modify an MCC
terminal parameter
or use **ESC** key to
return to MCC
terminal parameter
setup option menu

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**OBTAIN 1B PROCESSOR MCC TERMINAL SETUP PAGE AND SET
MCC TERMINAL PARAMETERS**

TABLE A 1B PROCESSOR MCC TERMINAL HARDWARE PARAMETERS	
PARAMETER	SETTING
OPERATING MODE	TERMINAL ONLY (2 SECONDS)
DATE	08 APR 1993
TIME	12:36:38
DISKETTE DRIVES	22921 L1 STYLE
KEYBOARD TYPE	AT&T KS-23554 STYLE
SCREEN RESOLUTION	HIGH
NUMERIC COPROCESSOR	NOT INSTALLED
PARALLEL (PORT 4)	TERMINAL (PRINTER)
PRINTER HOT-KEY	DISABLED
PRINTER TYPE	AT&T 5310 (VERSION 3.00)
FIRST BOOT DEVICE	CARDFILE
SECOND BOOT DEVICE	CARDFILE
THIRD BOOT DEVICE	RAMFILE
FOURTH BOOT DEVICE	DISKETTE
RAMFILE WRITE PROTECT	UNPROTECTED
SPEAKER VOLUME	LOUD
APPLICATION INTERRUPTS	DISABLED
SCREEN SAVER DELAY	10 MINUTES

TABLE B 1B PROCESSOR MCC TERMINAL SERIAL PORT 1 AND PORT 2 PARAMETERS	
PARAMETER	SETTING
ASSIGNMENT	TERMINAL
COMMUNICATION SPEED	9600
DATA BITS/PARITY	8 BITS/NO PARITY
HANDSHAKING	DTR SIGNAL
INTERFACE	RS-232
STOP BITS	1 STOP BIT
COMMUNICATION BUFFER	1024 BYTES
TRANSMIT LIMIT	UNLIMITED TRANSMIT

TABLE C 1B PROCESSOR MCC TERMINAL SETUP PARAMETERS	
PARAMETER	SETTING
BACKGROUND COLOR	BLACK
CURSOR COLOR	GREEN
STANDOUT COLOR	GREEN
TEXT COLOR	WHITE
TITLE COLOR	YELLOW

OBTAIN 1B PROCESSOR MCC TERMINAL SETUP PAGE AND SET MCC TERMINAL PARAMETERS

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TABLE D 1B PROCESSOR MCC TERMINAL GENERAL PARAMETERS	
PARAMETER	SETTING
CONNECTION	ON-LINE
TERMINAL MODE	KS-22921 MODE
VT100 MODE ID	VT100 IDF
VDK LOCK	USER DEFINED KEYS UNLOCKED
USER FEATURE LOCK	USER FEATURES UNLOCKED
CHARACTER SET MODE	MULTINATIONAL
MARGIN BELL	ENABLE MARGIN BELL
WARNING BELL	ENABLE WARNING BELL
NEW LINE	NO
LOCAL ECHO	NO

TABLE E 1B PROCESSOR MCC TERMINAL DISPLAY PARAMETERS	
PARAMETER	SETTING
COLUMN/ROW	24 ROWS/80 COLUMNS
SCROLL	JUMP SCROLL
AUTO WRAP	NO
VIDEO MODE	LIGHT TEXT, DARK SCREEN
CONTROL CODES	INTERPRET CONTROLS
TEXT CURSOR DISPLAY	TEXT CURSOR ON
CURSOR STYLE	BLOCK CURSOR
STATUS LINE	DEFAULT
TABS	TABS SELECTED

TABLE F 1B PROCESSOR MCC TERMINAL KEYBOARD PARAMETERS	
PARAMETER	SETTING
KEYBOARD LANGUAGE	NORTH AMERICAN
KEYPAD MODE	NUMERIC KEYPAD
CURSOR KEY MODE	NORMAL CURSOR KEYS
KEYS	TYPEWRITER KEYS
LOCK	CAPS LOCK
KEY REPEAT	AUTO REPEAT
KEYCLICK	ENABLE KEYCLICK
BREAK	ENABLE BREAK KEY
AUTO ANSWERBACK	AUTO ANSWERBACK
ANSWERBACK =	-

TABLE G 1B PROCESSOR MCC TERMINAL PRINTER PARAMETERS	
PARAMETER	SETTING
PRINTER TO HOST	NO PRINTER INPUT TO HOST
PRINTER MODE	AUTO PRINT MODE
PRINT SCREEN MODE	PRINT FULL PAGE
PRINT MONO/COLOR	MONOCHROME
PRINT PAGE WIDTH	8 1/2 INCHES WIDE
PRINT WIDTH	SAME AS CURRENT SCREEN WIDTH
PRINT TERMINATOR	NO TERMINATOR

OBTAIN 1B PROCESSOR MCC TERMINAL SETUP PAGE AND SET MCC TERMINAL PARAMETERS

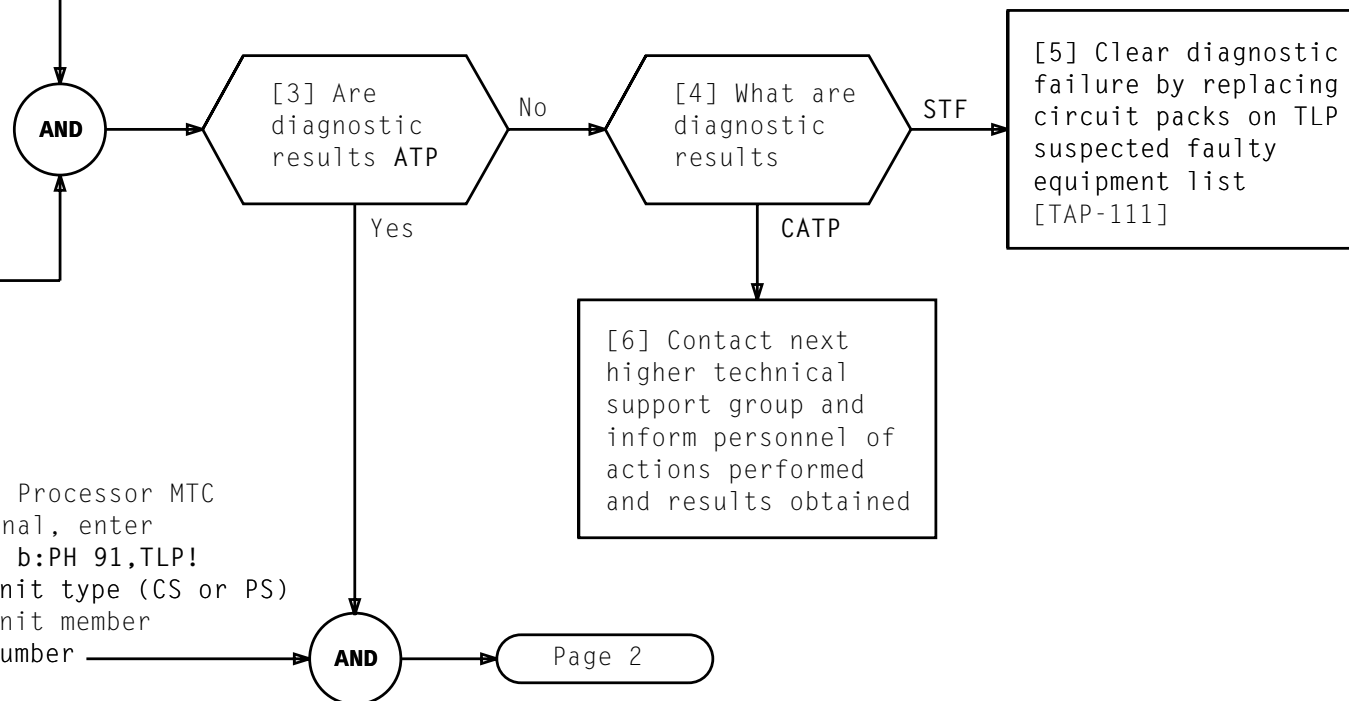
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[1] See CAUTION 1. At
1B Processor MTC
terminal, enter
DGN:a b:TLP!
a = Unit type (CS or PS)
b = Unit member
number

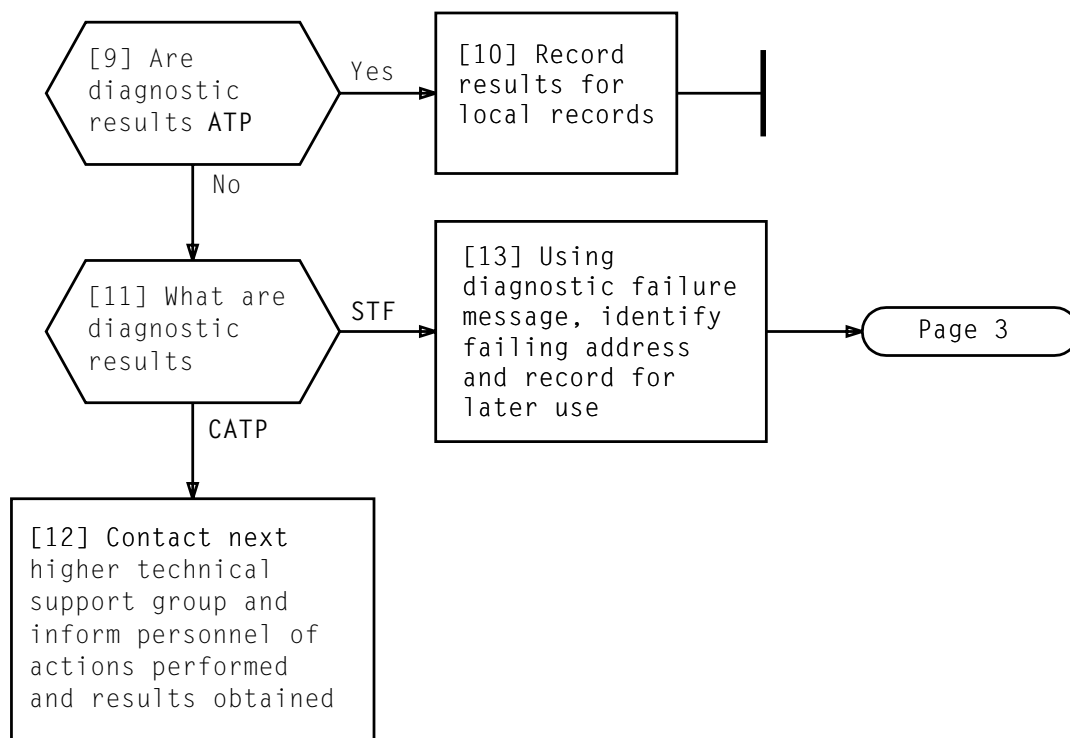
[2] Allow ample time
for diagnostics
to complete

[7] At 1B Processor MTC
terminal, enter
DGN:a b:PH 91,TLP!
a = Unit type (CS or PS)
b = Unit member
number

[8] Allow ample time
(5 to 6 minutes)
for diagnostics to
complete

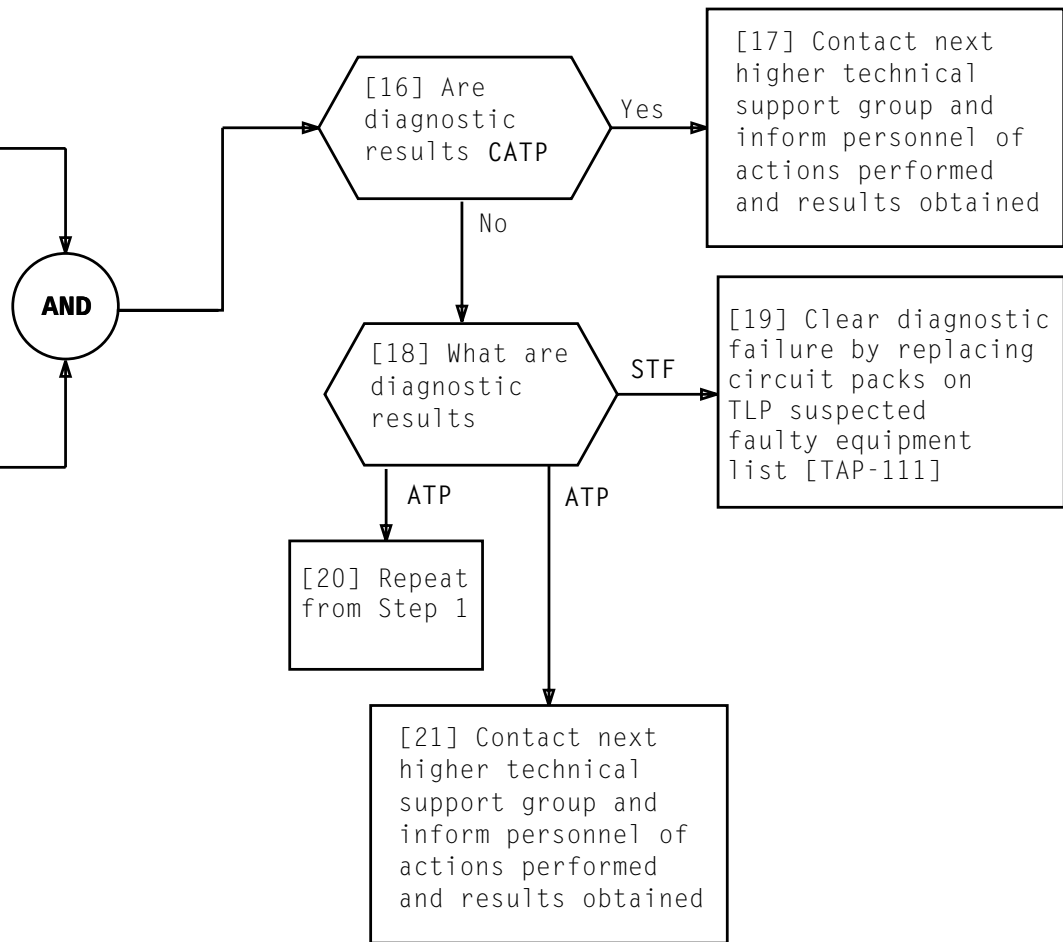


CAUTION 1 <i>Diagnostics should be performed during low-traffic period</i>	
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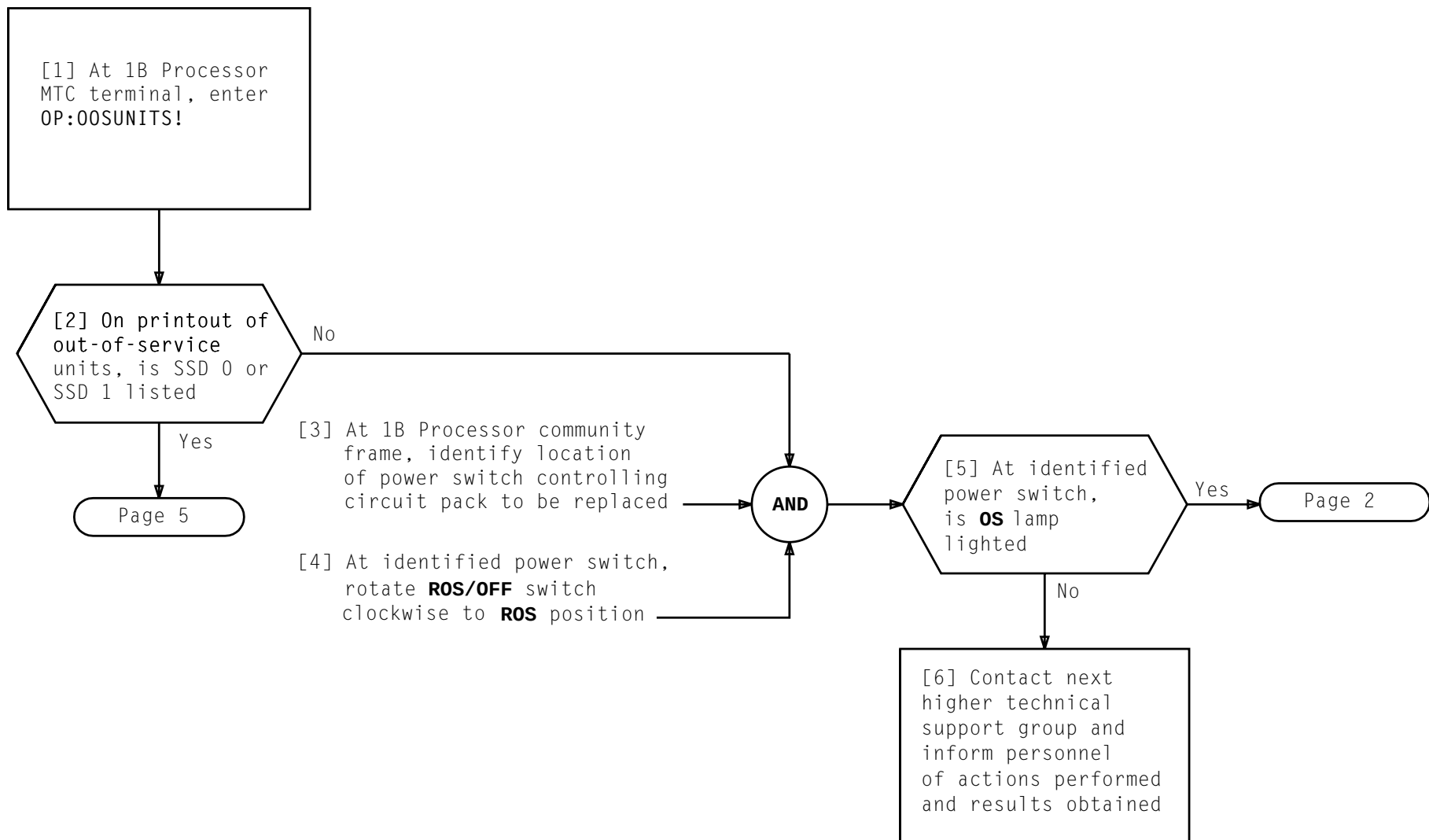


[14] At 1B Processor MTC terminal, enter
 DGN:a b:PH 97,TSTADR c,L d,
 HIDATA e,TSTPAT f,TLP!
 a = Unit type (CS or PS)
 b = Unit member number
 c = Address to be tested from
 failing Phase 91 test data
 d = Length of address block
 to be tested
 e = High test data (bits 24-31)
 f = Low test data (bits 0-23)

[15] Allow ample time (1-50 minutes
 depending upon length of address
 block to be tested) for
 diagnostics to complete



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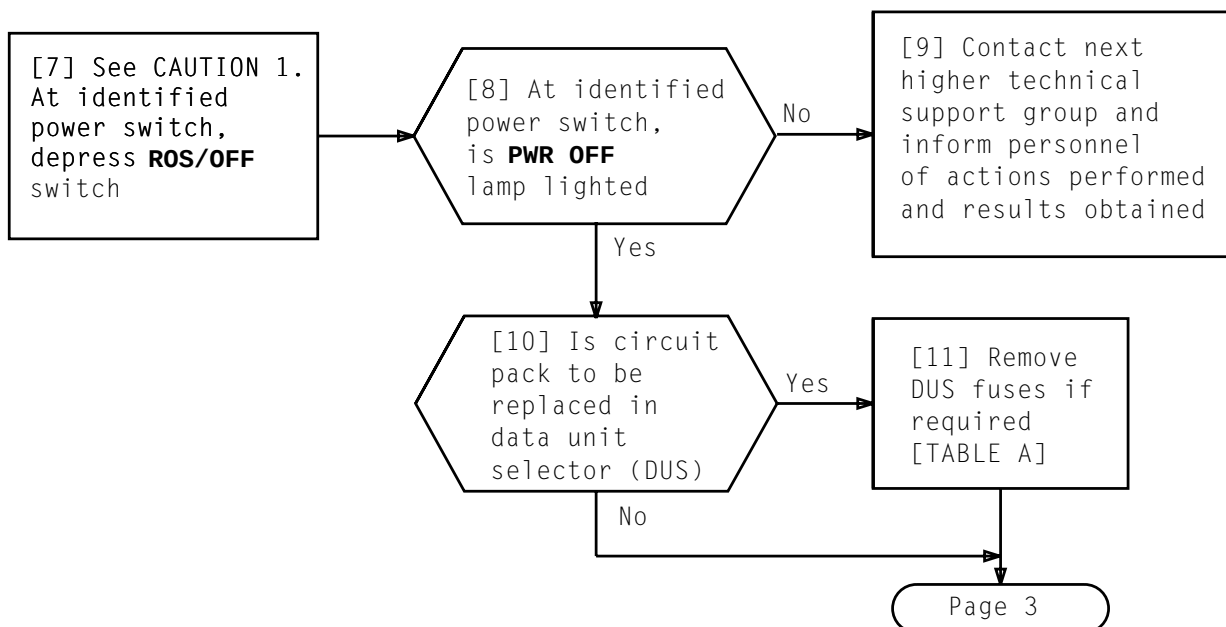


TABLE A DUS CIRCUIT PACKS REQUIRING FUSE REMOVAL		
CIRCUIT PACK LOCATION	FUSE	
	NAME	LOCATION
80-37	+24-V5	77-04
	+24-V7	77-04
76-42, 76-43, 76-45, 76-47	+24-V6	77-04

CAUTION 1
Powering down an out-of-service unit should not cause system recovery actions (interrupts, phases, etc.) to be initiated. If system recovery actions are initiated when powering down an OOS unit, another unit may be at fault. Immediately confirm that the switch is processing calls. If there are indications of a continuing outage, power up the unit previously powered down. If there are no indications of a continuing outage, determine the unit that caused the system recovery actions to be initiated and correct the fault in that unit before continuing to work on the OOS unit originally powered down

REPLACE CIRCUIT PACK – 1B PROCESSOR COMMUNITY FRAME OTHER THAN 1B PROCESSOR CABINET

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[12] Locate circuit pack
to be replaced

[13] See WARNING 1. Remove circuit
pack to be replaced

[14] Obtain replacement circuit pack
and visually inspect pack,
pack connector and backplane
connector pins for obvious
defects

[15] See WARNING 1 and NOTE 1.
Insert and properly seat
replacement pack

[16] Replace any fuses previously removed

[17] See CAUTION 2. At
identified power switch,
depress and hold **ON**
pushbutton for 2 seconds

AND

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NOTE 1

Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 1

A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

CAUTION 2

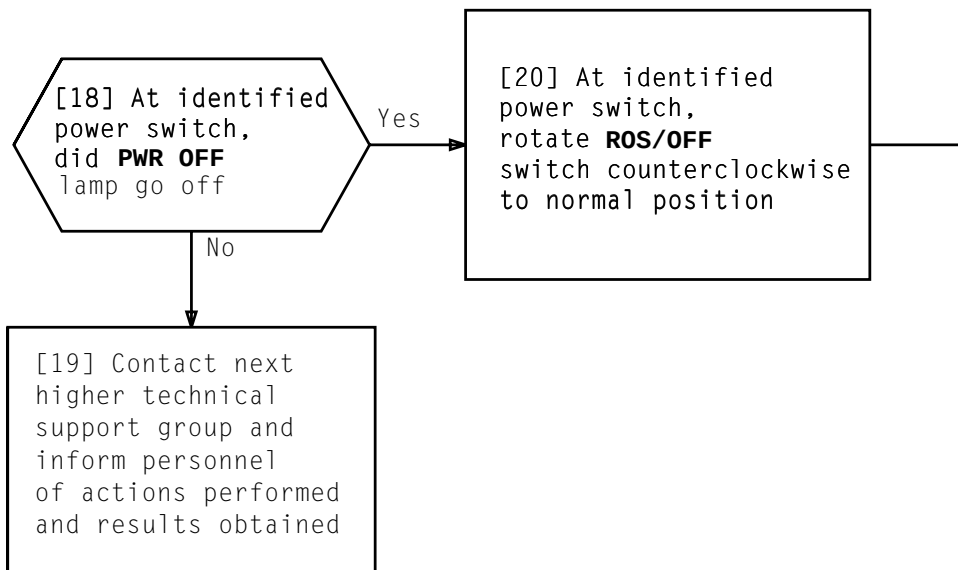
If system recovery actions (interrupts, phases, etc.) are initiated when powering up any unit (CC, CS, etc.), the suspected cause should be the unit just powered up. Therefore, the first action to take in this situation should be to power down the unit just powered up in an attempt to clear the reason that system recovery actions were initiated

**REPLACE CIRCUIT PACK — 1B PROCESSOR COMMUNITY FRAME OTHER THAN
1B PROCESSOR CABINET**

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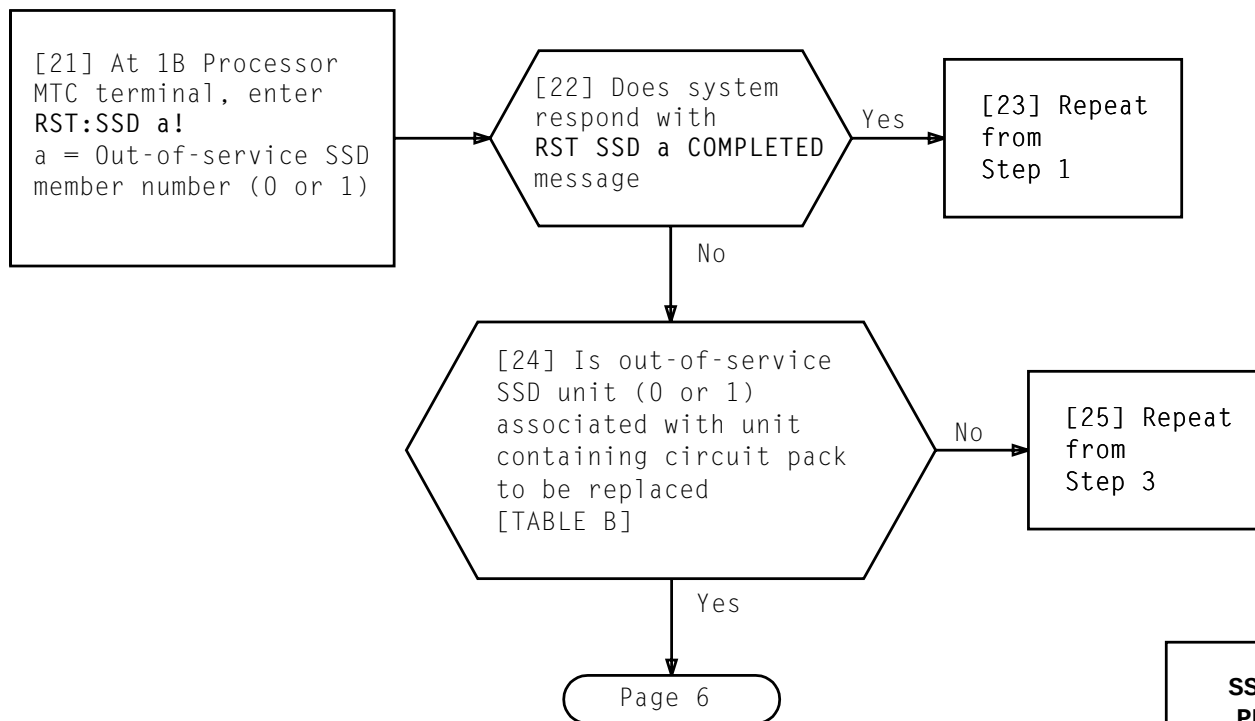


TABLE B SSD UNIT AND ASSOCIATED 1B PROCESSOR UNITS IN FRAMES OTHER THAN 1B PROCESSOR CABINET	
UNIT CONTAINING CIRCUIT PACK TO BE REPLACED	ASSOCIATED SSD UNIT
DUS 0 TUC 0 API 0	SSD 0
DUS 1 TUC 1 API 1	SSD 1

[26] See WARNING 2.
At 1B Processor community
frame, identify location
of power switch controlling
circuit pack to be replaced

[27] At identified power switch,
rotate **ROS/OFF** switch
clockwise to **ROS** position

[28] At identified power switch,
depress **ROS/OFF** switch

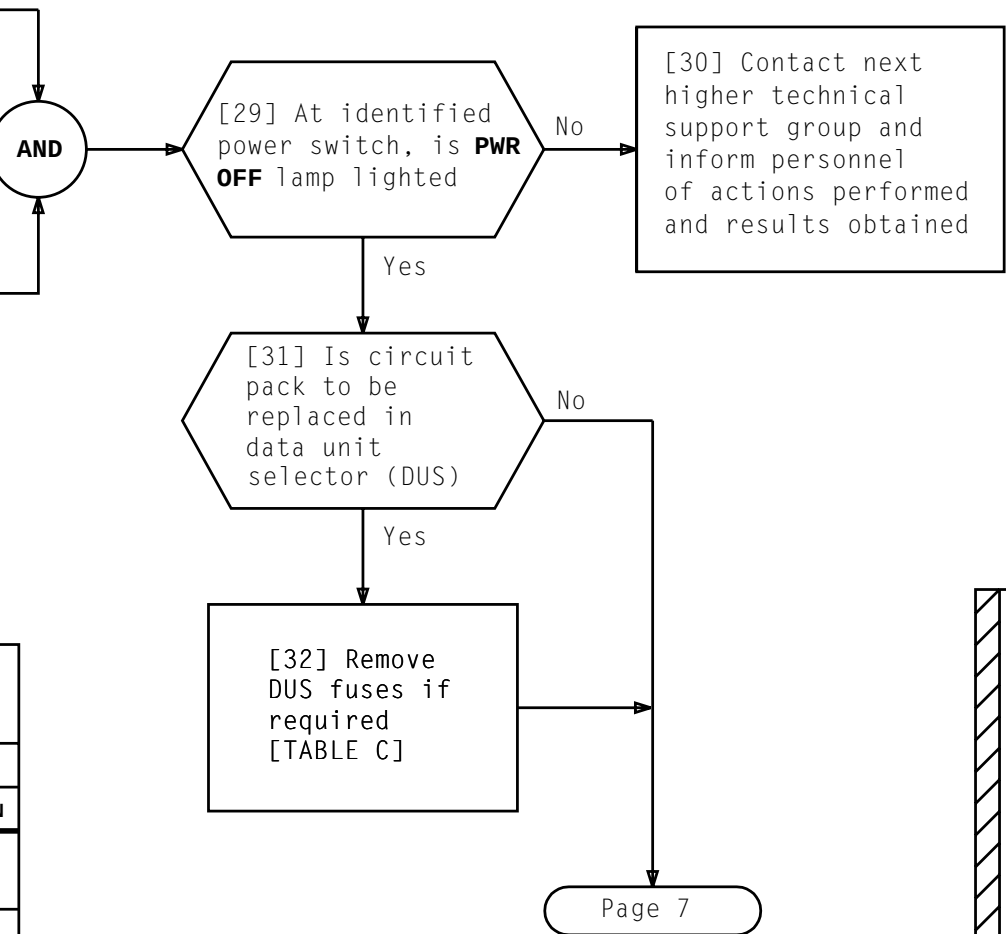
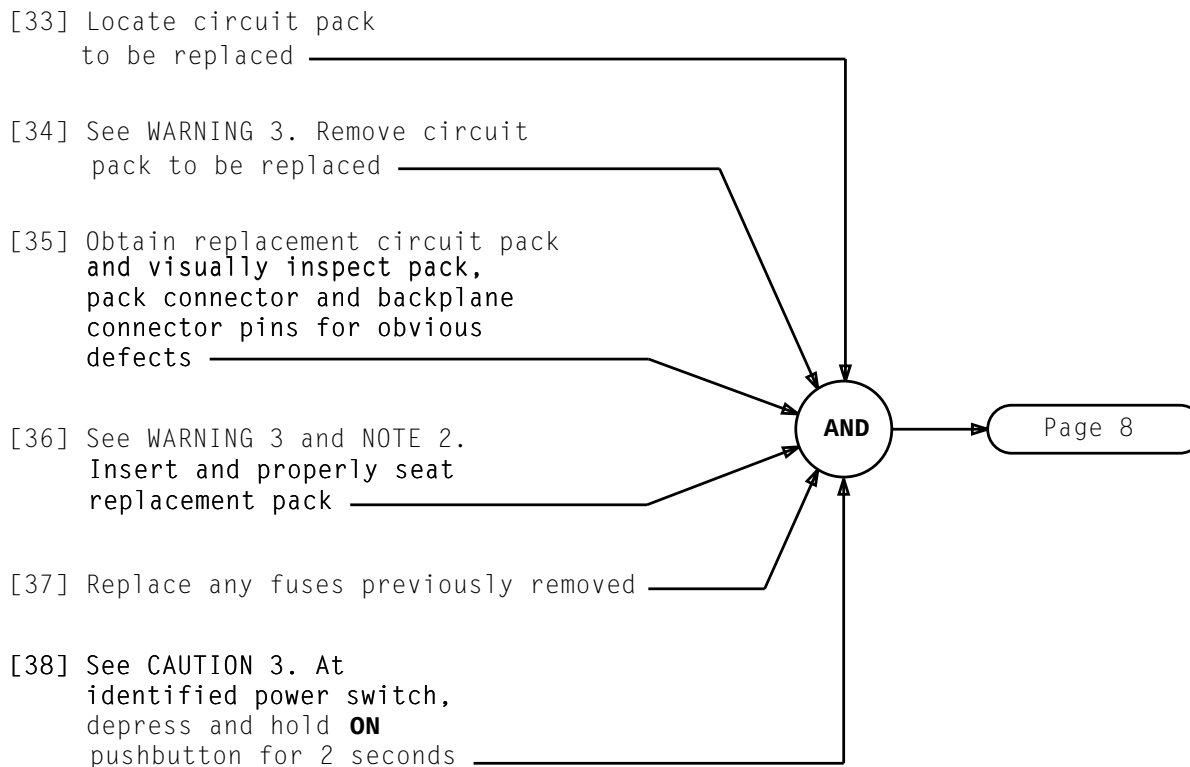


TABLE C DUS CIRCUIT PACKS REQUIRING FUSE REMOVAL		
CIRCUIT PACK LOCATION	FUSE	
	NAME	LOCATION
80-37	+24-V5	77-04
	+24-V7	77-04
76-42, 76-43, 76-45, 76-47	+24-V6	77-04

WARNING 2
Extreme caution must be taken to ensure circuit pack replacement is being performed in the correct unit. Consulting next higher technical support group before manually overriding power switch may be required per local practice

REPLACE CIRCUIT PACK – 1B PROCESSOR COMMUNITY FRAME OTHER THAN 1B PROCESSOR CABINET

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NOTE 2

Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 3

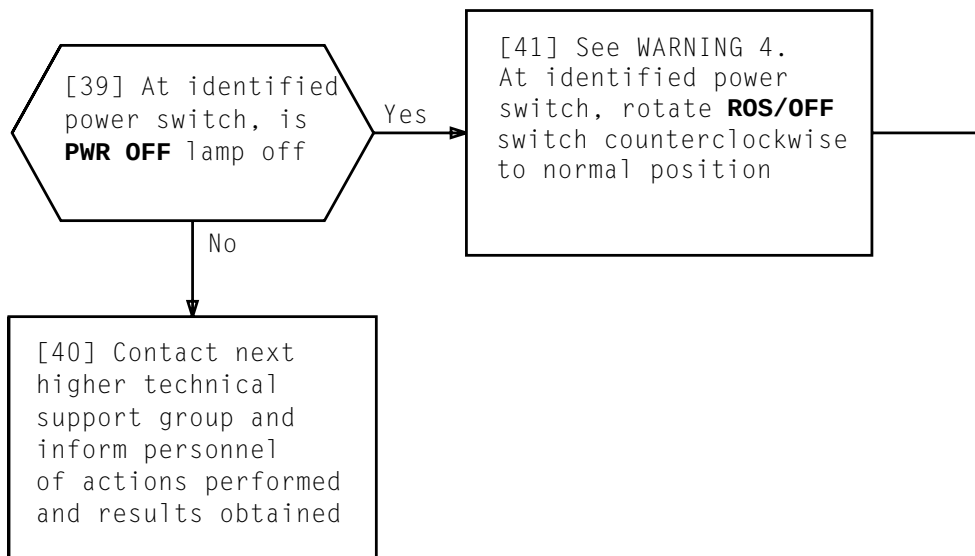
A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

CAUTION 3

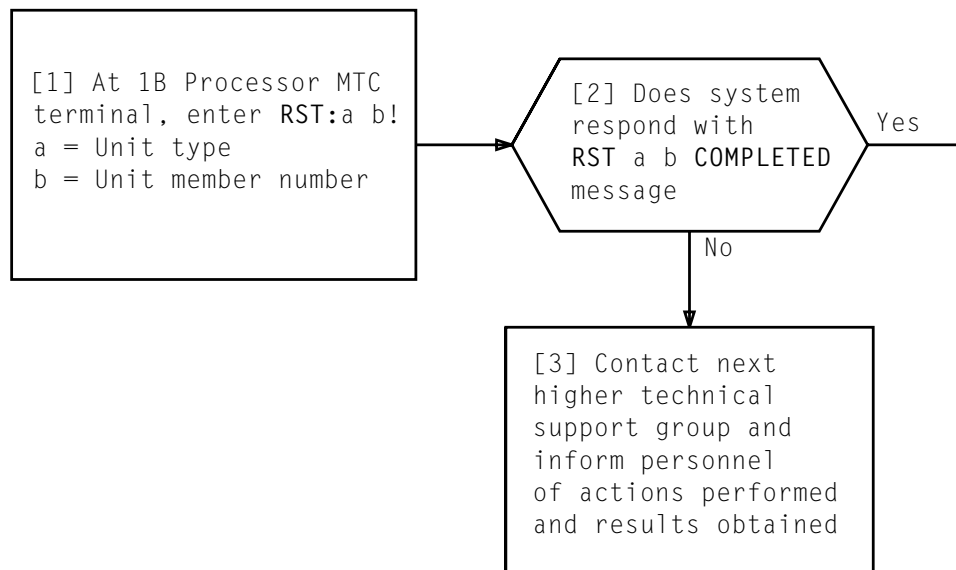
If system recovery actions (interrupts, phases, etc.) are initiated when powering up any unit (CC, CS, etc.), the suspected cause should be the unit just powered up. Therefore, the first action to take in this situation should be to power down the unit just powered up in an attempt to clear the reason that system recovery actions were initiated

REPLACE CIRCUIT PACK — 1B PROCESSOR COMMUNITY FRAME OTHER THAN 1B PROCESSOR CABINET

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WARNING 4
Extreme caution must still be taken from this point forward due to the SSD unit controlling the power switch scan and signal distributor points being out-of-service. Thus, any OS and ACK lamp responses controlled via these scan and signal distributor points must be ignored until the out-of-service SSD unit is diagnosed, repaired and restored to service. Consulting next higher technical support group before proceeding may be required per local practice



RESTORE 1B PROCESSOR COMMUNITY UNIT TO SERVICE

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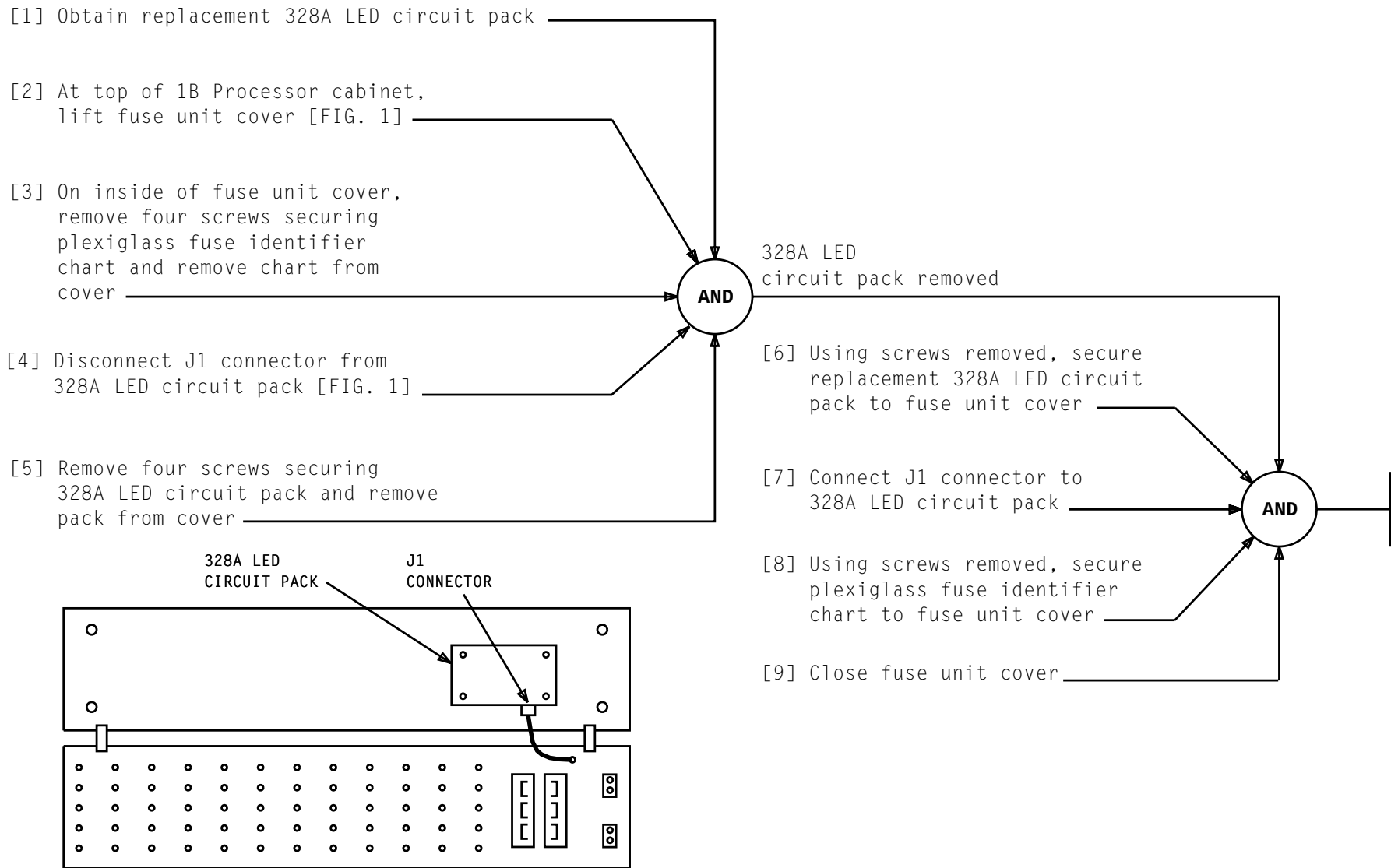


FIG. 1 - Fuse Unit and 328A LED Circuit Pack Placement

REPLACE FUSE ALARM/POWER ALARM/COOLING ALARM 328A LED CIRCUIT PACK – 1B PROCESSOR CABINET

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[1] Lift air filter compartment cover and
remove air filter [FIG. 1]

[2] Insert clean air filter

[3] Lower air filter compartment
cover and ensure cover is
completely closed

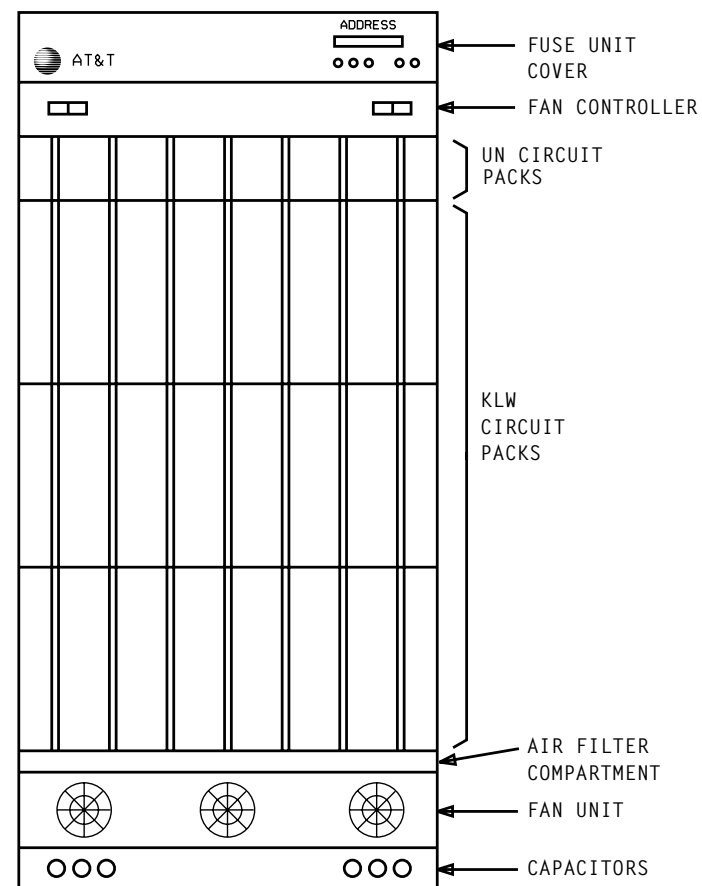
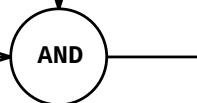


FIG. 1 - 1B Processor Cabinet Layout

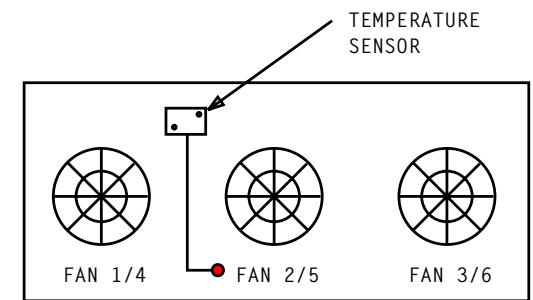
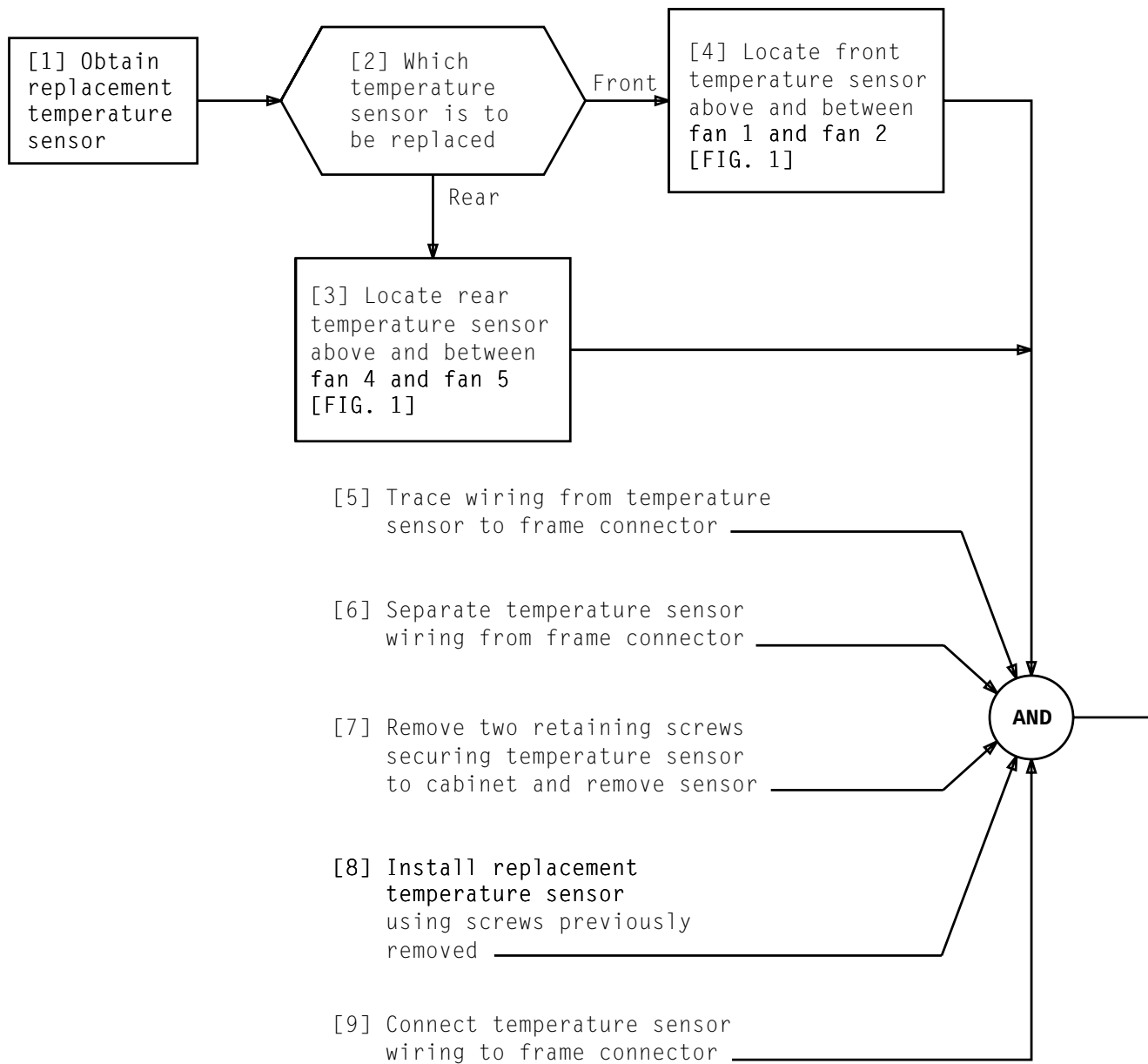
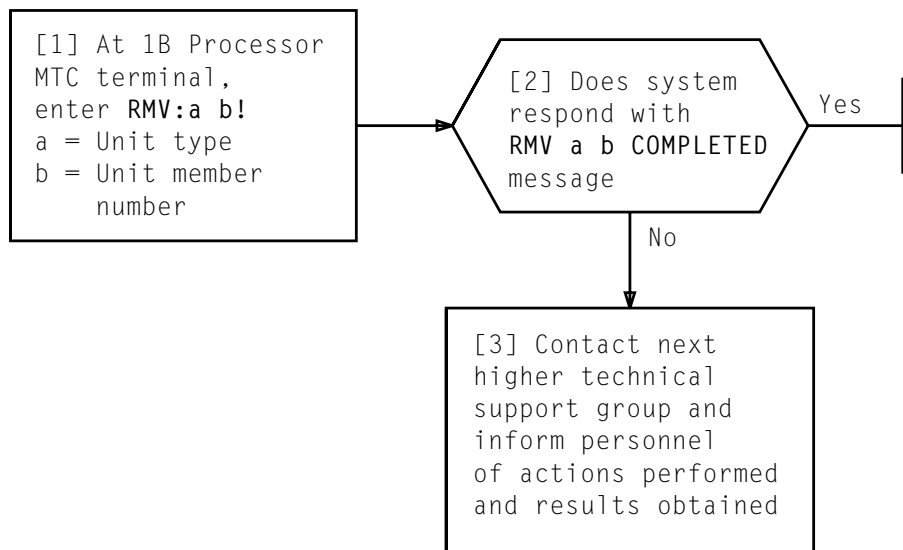
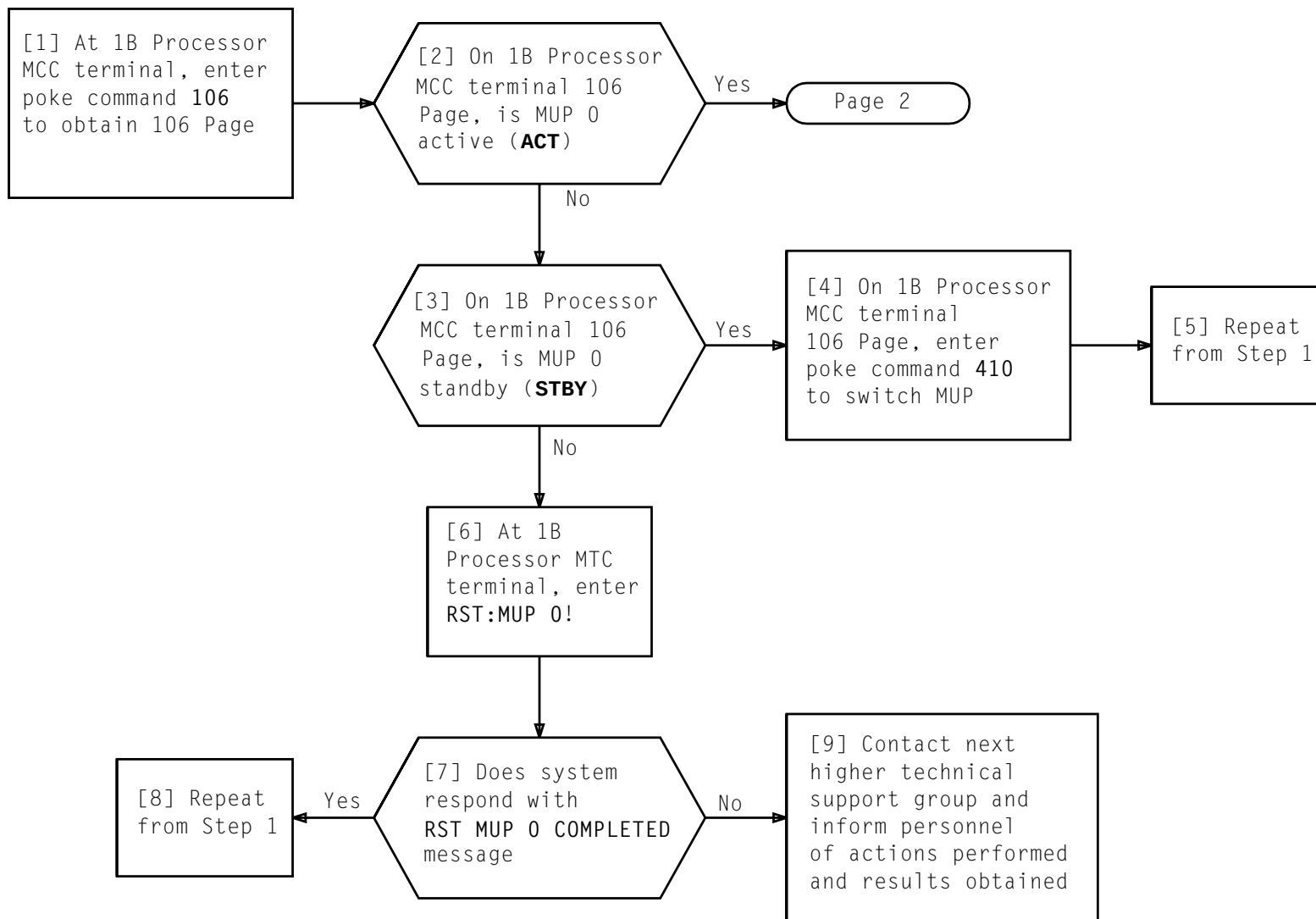


FIG. 1 - Front/Rear Fan Unit Temperature Sensor Locations



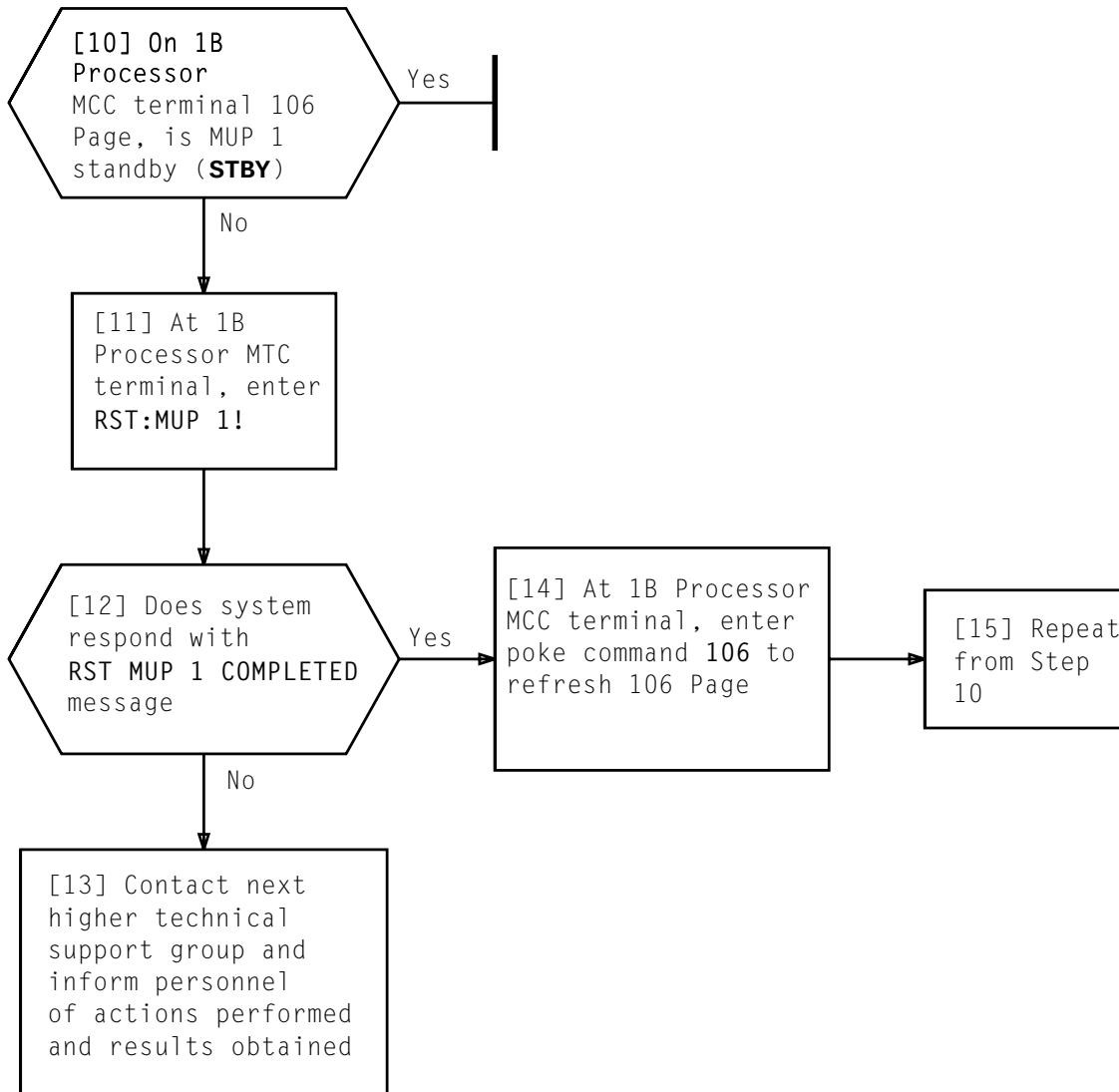
REMOVE 1B PROCESSOR COMMUNITY UNIT FROM SERVICE

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**CONFIGURE 1B PROCESSOR WHERE MUP 0 IS ACTIVE (NOT FORCED)
AND MUP 1 IS STANDBY**

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**CONFIGURE 1B PROCESSOR WHERE MUP 0 IS ACTIVE (NOT FORCED)
AND MUP 1 IS STANDBY**

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[1] At top of 1B Processor cabinet, lift fuse unit cover (bezel) and identify **FUSE ALARM CIRCUIT CARD** location (81-146)

[2] Remove thumb screws securing fuse circuit card cover to cabinet

[3] Carefully remove fuse circuit card cover

[4] See WARNING 1. Using fuse/fuse card removal tool, insert hooked end of tool into hole on top edge of **FUSE ALARM CIRCUIT CARD** and pull outward to unseat card from connector

[5] Remove **FUSE ALARM CIRCUIT CARD** from card cage

[6] Obtain known good replacement card and visually inspect card, card connector and backplane connector pins for obvious defects

[7] See WARNING 1 and NOTE 1. Insert and properly seat replacement card

AND

Page 2

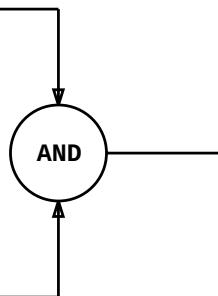
NOTE 1

Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 1

A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

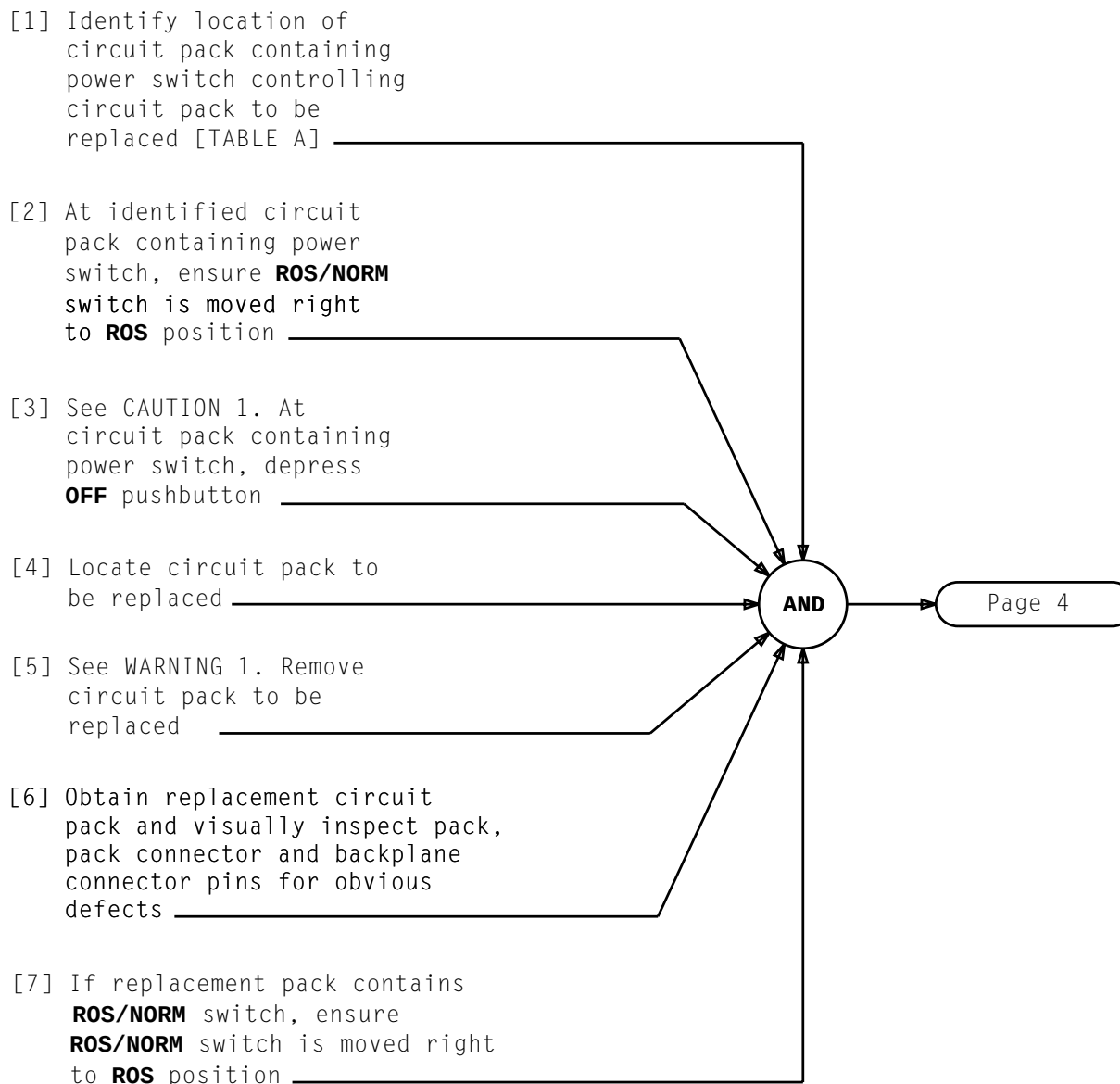
[8] Carefully place fuse circuit card
cover into position and secure
to cabinet using thumbscrews
previously removed



[9] At top of 1B Processor cabinet, gently
close fuse unit cover (bezel)

REPLACE FUSE ALARM CIRCUIT CARD — 1B PROCESSOR CABINET

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WARNING 1 <i>A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins</i>
CAUTION 1 <i>Powering down an out-of-service unit should not cause system recovery actions (interrupts, phases, etc.) to be initiated. If system recovery actions are initiated when powering down an OOS unit, another unit may be at fault. Immediately confirm that the switch is processing calls. If there are indications of a continuing outage, power up unit previously powered down. If there are no indications of a continuing outage, determine the unit that caused the system recovery actions to be initiated and correct the fault in that unit before continuing to work on the OOS unit originally powered down</i>

TABLE A
1B PROCESSOR UNIT POWER SWITCH IDENTIFIERS AND LOCATIONS

UNIT	CIRCUIT PACK TO BE REPLACED		CIRCUIT PACK CONTAINING POWER SWITCH		UNIT	CIRCUIT PACK TO BE REPLACED		CIRCUIT PACK CONTAINING POWER SWITCH	
	IDENTIFIER	LOCATION	IDENTIFIER	LOCATION		IDENTIFIER	LOCATION	IDENTIFIER	LOCATION
CC	KLW03	41-104	KLW11	41-014	AUI (Contd)	UN338	70-144	KLW18	58-120
	KLW04	41-112					70-160		
	KLW05/KLW105/KLW205	41-096					70-176		
	KLW06	41-054			MUP	KLW16/KLW116/ KLW216	58-078	KLW25	58-086
	KLW07	41-078					58-086		
	KLW08	41-046			CS	KLW01	24-006	Self- Powered	Same Location
	KLW09	41-038					24-014		
	KLW10/KLW210	41-030					24-022		
	KLW11	41-014					24-030		
	KLW12	58-014					24-038		
	KLW13	58-070					24-046		
	KLW14	58-038					24-054		
	KLW17/KLW117/KLW217	41-086					24-062		
	KLW19	41-070					24-070		
	KLW20	58-062					24-078		
	KLW21	58-046					24-104		
	KLW22/KLW122/KLW222	41-120					24-112		
	KLW24	41-062					24-128		
	KLW28	41-022					24-136		
	UN339	70-014					24-144		
		70-030					24-152		
		70-070					24-160		
		70-086					24-168		
	UN340	70-038					24-176		
		70-062							
AUI	KLW18	58-120	KLW18	58-120	PS	KLW02	41-128	Self- Powered	Same Location
	UN338	70-096					41-136		
		70-112					41-144		
		70-128					41-152		

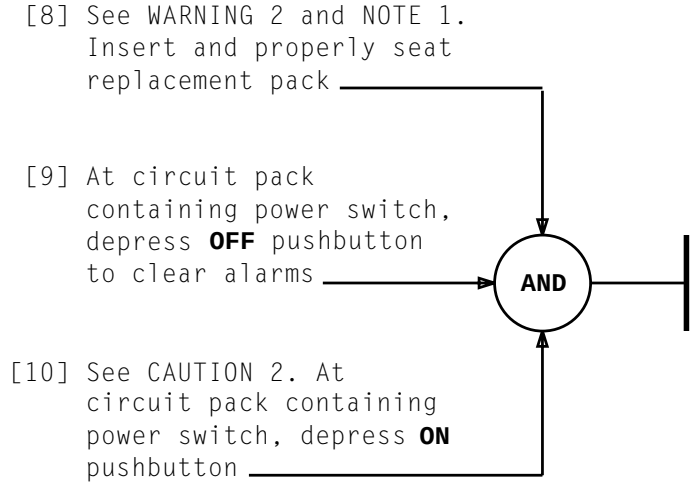
REPLACE CIRCUIT PACK ASSOCIATED WITH POWER GROUP POWER ALARM

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TABLE A (Contd)									
1B PROCESSOR UNIT POWER SWITCH IDENTIFIERS AND LOCATIONS									
UNIT	CIRCUIT PACK TO BE REPLACED		CIRCUIT PACK CONTAINING POWER SWITCH		UNIT	CIRCUIT PACK TO BE REPLACED		CIRCUIT PACK CONTAINING POWER SWITCH	
	IDENTIFIER	LOCATION	IDENTIFIER	LOCATION		IDENTIFIER	LOCATION	IDENTIFIER	LOCATION
PS (Contd)	KLW02	41-160	Self- Powered	Same Location					
		41-168							
		41-176							
SSD	KLW15	58-168	Self- Powered	Same Location					
XPWR	KLW23	24-030	Self- Powered	Same Location					
CALL STORE BUS 0 BUFFER	KLW26	24-086	Self- Powered	Same Location					
CALL STORE BUS 1 BUFFER	KLW27	24-096	Self- Powered	Same Location					
FAN SYSTEM	FC	77-000	NA	NA					

REPLACE CIRCUIT PACK ASSOCIATED WITH POWER GROUP POWER ALARM

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NOTE 1

Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding.

WARNING 2

A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

CAUTION 2

If system recovery actions (interrupts, phases, etc.) are initiated when powering up any unit (CC, CS, etc.), the suspected cause should be the unit just powered up. Therefore, the first action to take in this situation should be to power down the unit just powered up in an attempt to clear the reason that system recovery actions were initiated

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

[2] Using APS status printout
[FIG. 1], determine standby
(SBY) API member number and
record for later use

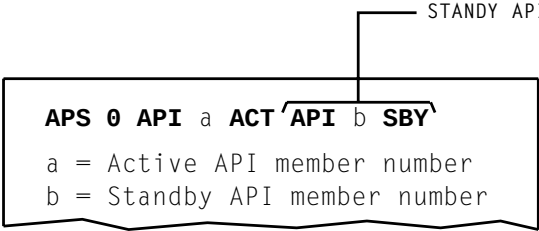


FIG. 1 – Sample OP:APSTATUS Printout

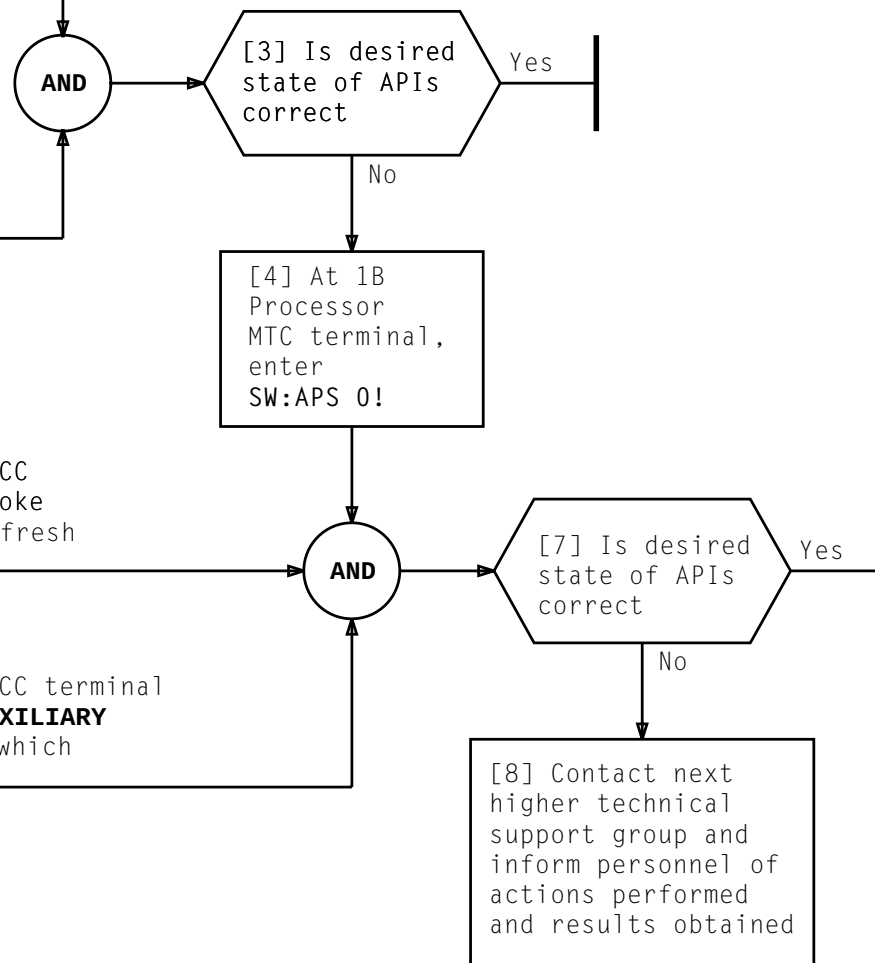
DETERMINE STANDBY API

[1] At 1B Processor MCC terminal, enter poke command 118 to obtain 118 Page

[2] On 1B Processor MCC terminal 118 Page under **AUXILIARY UNITS**, determine which API is active

[5] At 1B Processor MCC terminal, enter poke command 118 to refresh 118 Page

[6] On 1B Processor MCC terminal 118 Page under **AUXILIARY UNITS**, determine which API is active



SWITCH APIs

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[1] See WARNING 1. Ensure bus scoping tool BTR connector is connected to applicable BTR [FIG. 1]

[2] Ensure oscilloscope channel 1 probe is connected to positive (P) pin of bus scoping tool bit selector box [FIG. 1]

[3] Ensure oscilloscope channel 2 probe is connected to negative (N) pin of bus scoping tool bit selector box [FIG. 1]

[4] Ensure oscilloscope channel 1 and channel 2 probe ground leads are connected together [FIG. 1]

[5] Using scoping tool bit selector box, rotate selector to applicable position for bit to be scoped [TABLE A]



TABLE A BUS SCOPING TOOL BIT SELECTOR BOX BIT SELECTOR POSITIONS			
BIT	ASSOCIATED BUS SCOPING TOOL SELECTOR POSITION	BIT	ASSOCIATED BUS SCOPING TOOL SELECTOR POSITION
0	0	12	4
1	1	13	5
2	2	14	6
3	3	15	7
4	4	16	0
5	5	17	1
6	6	18	2
7	7	19	3
8	0	20	4
9	1	21	5
10	2	22	6
11	3	23	7

WARNING 1

Bus scoping tool is designed to be used as an aid when scoping the auxiliary unit bus (AUB) in the 1B Processor community. Use of this tool to scope any other circuitry within the 1B Processor community could possibly cause service interruptions and/or equipment damage

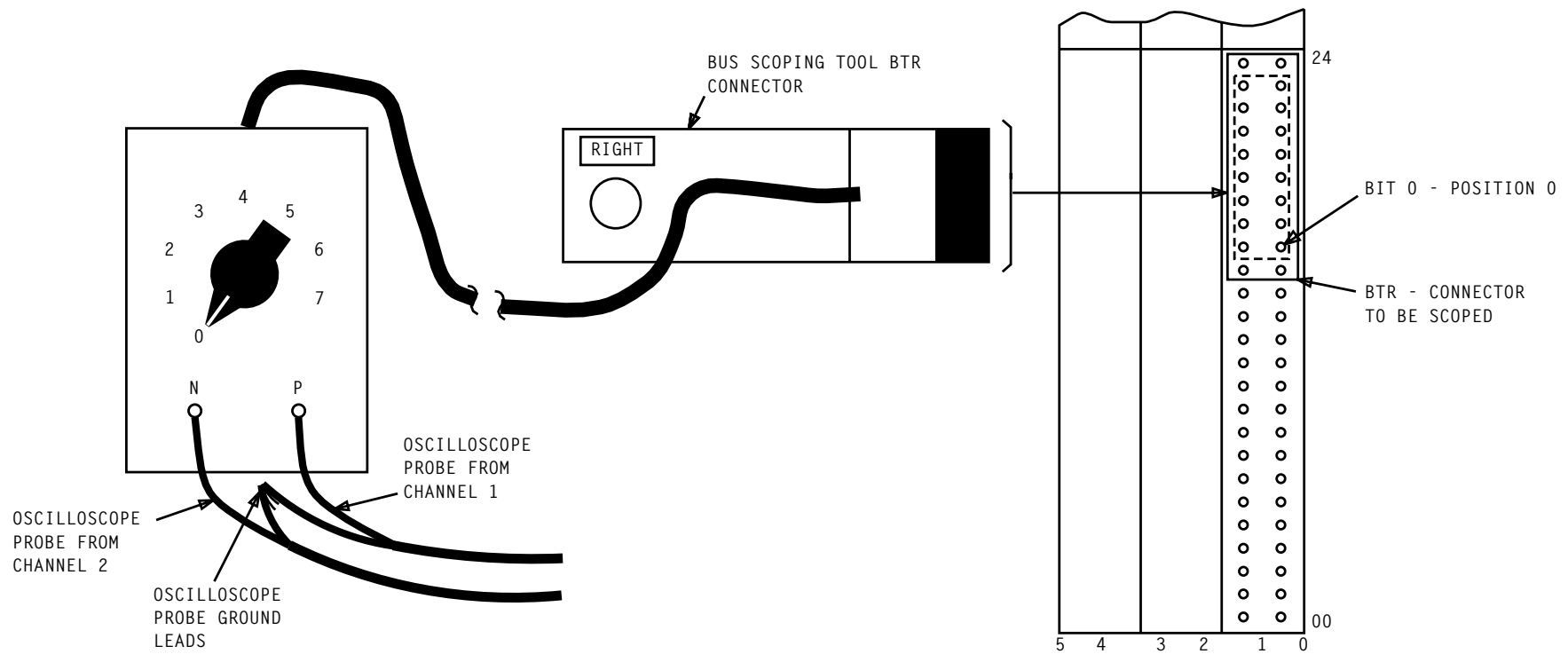


FIG. 2 – Bus Scoping Tool, Oscilloscope Probes and BTR Connections for Scoping Auxiliary Unit Bus (AUB)

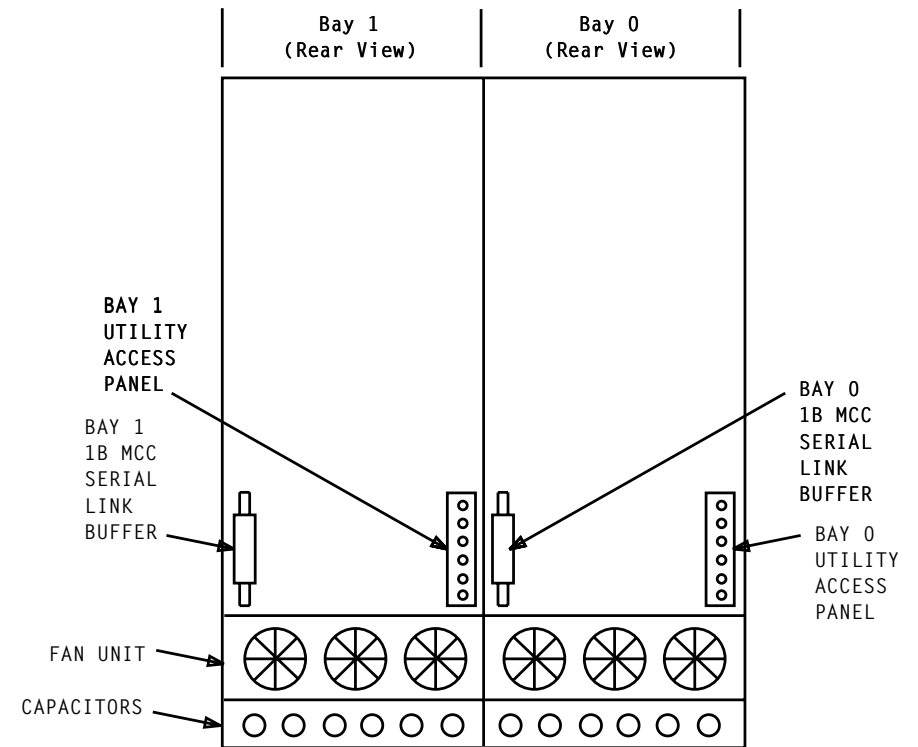
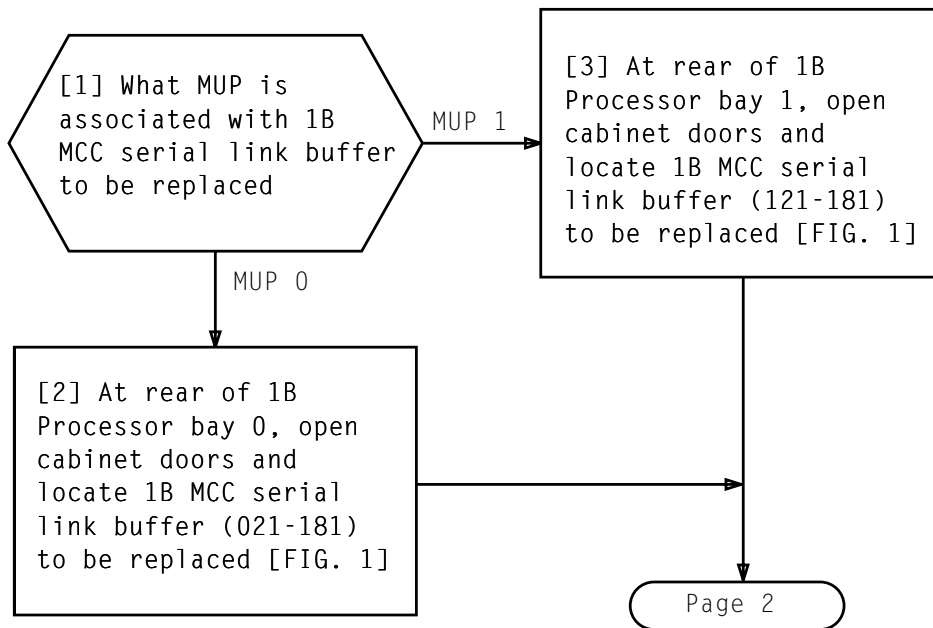
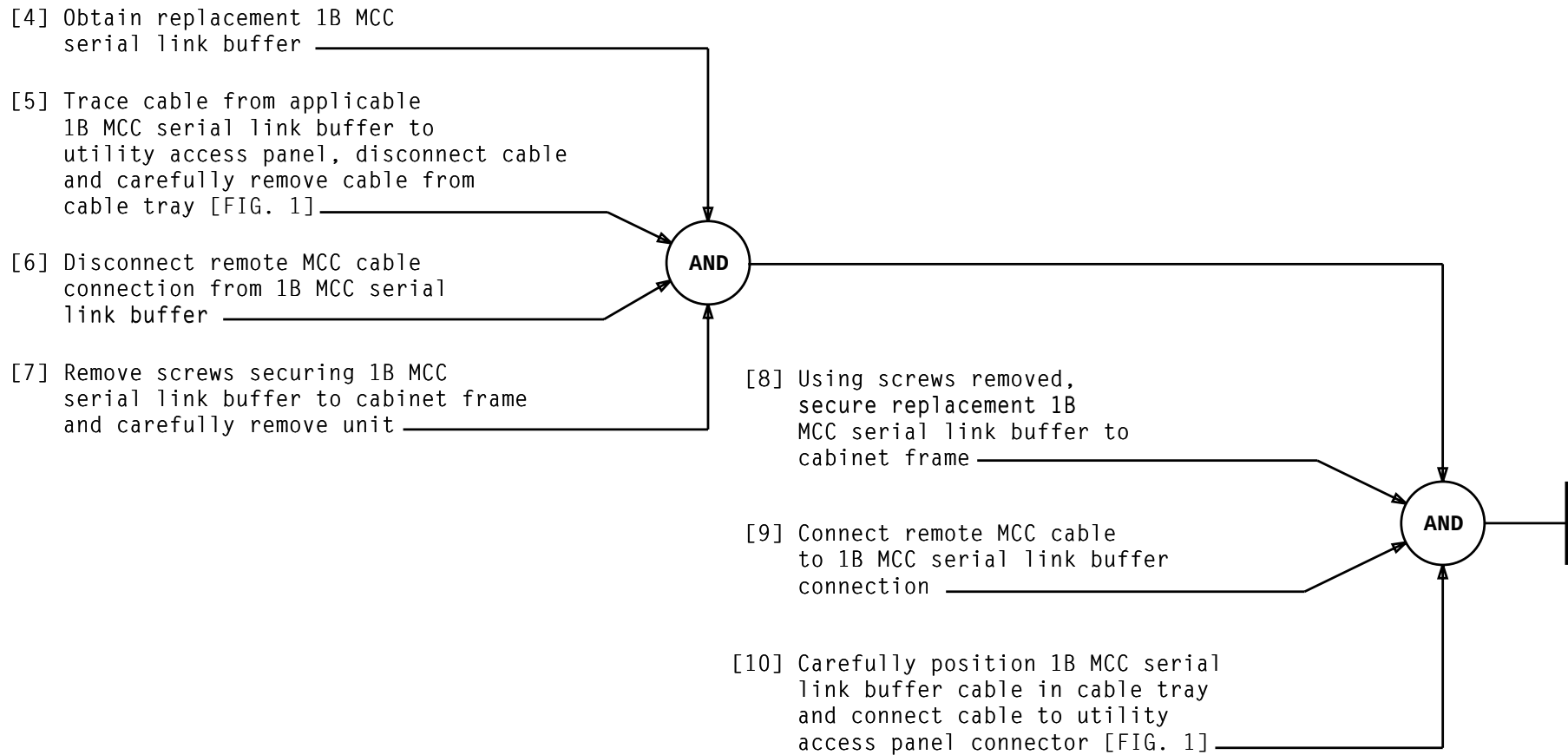
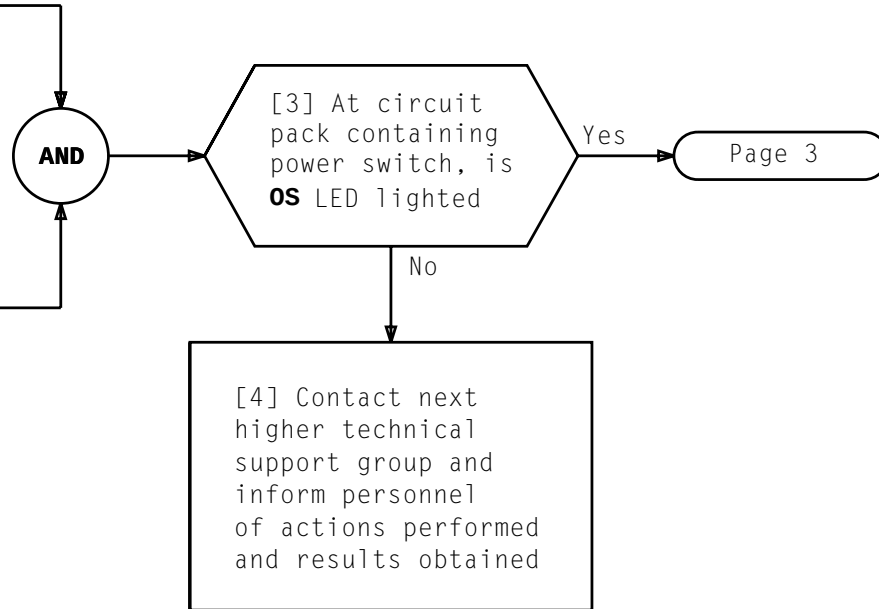


FIG. 1 - Rear View of 1B Processor Cabinet (Bay 0 and 1) Showing Location of 1B MCC Serial Link Buffer



[1] Identify location of circuit pack containing power switch controlling circuit pack associated with pin to be replaced [TABLE A]

[2] At identified circuit pack containing power switch, move **ROS/NORM** switch right to **ROS** position



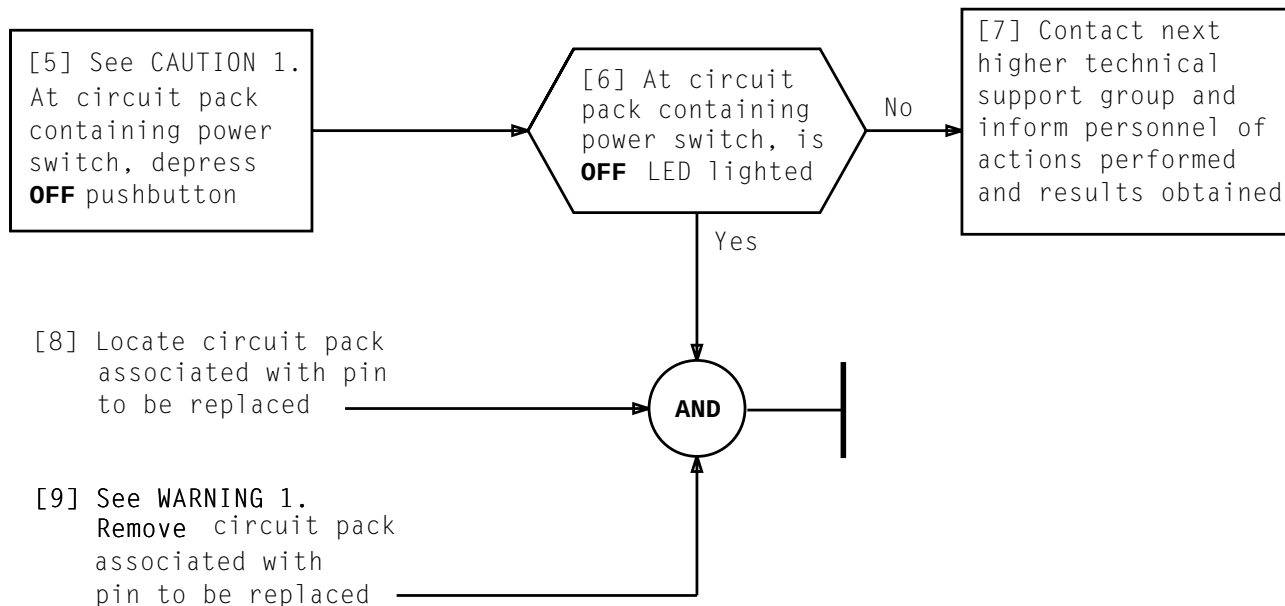
REMOVE CIRCUIT PACK ASSOCIATED WITH BACKPLANE PIN TO BE REPLACED

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TABLE A 1B PROCESSOR UNIT POWER SWITCH IDENTIFIERS AND LOCATIONS												
CIRCUIT PACK ASSOCIATED WITH PIN TO BE REPLACED		CIRCUIT PACK CONTAINING POWER SWITCH		CIRCUIT PACK ASSOCIATED WITH PIN TO BE REPLACED		CIRCUIT PACK CONTAINING POWER SWITCH		CIRCUIT PACK ASSOCIATED WITH PIN TO BE REPLACED		CIRCUIT PACK CONTAINING POWER SWITCH		
IDENTIFIER	LOCATION	IDENTIFIER	LOCATION	IDENTIFIER	LOCATION	IDENTIFIER	LOCATION	IDENTIFIER	LOCATION	IDENTIFIER	LOCATION	
KLW03	41-104	KLW11	41-014	KLW18	58-120	KLW18	58-120	KLW02	41-128	Self- Powered	Same Location	
KLW04	41-112			UN338	70-096				41-136			
KLW05/KLW105/ KLW205	41-096				70-112				41-144			
					70-128				41-152			
KLW06	41-054				70-144				41-160			
KLW07	41-078				70-160				41-160			
KLW08	41-046				70-176				41-176			
KLW09	41-038			KLW16/KLW116/ KLW216	58-078	KLW25	58-086	KLW15	58-168	Self- Powered	Same Location	
KLW10/KLW210	41-030							KLW23	24-030	Self- Powered	Same Location	
KLW11	41-014			KLW01	24-006	Self- Powered	Same Location		KLW26	24-086	Self- Powered	Same Location
KLW12	58-014				24-014			KLW27		24-096	Self- Powered	Same Location
KLW13	58-070				24-022				FC	77-000	NA	NA
KLW14	58-038				24-030							
KLW17/KLW117/ KLW217	41-086				24-038							
					24-046							
KLW19	41-070				24-054							
KLW20	58-062				24-062							
KLW21	58-046				24-070							
KLW22/KLW122/ KLW222	41-120				24-078							
					24-104							
KLW24	41-062				24-112							
KLW28	41-022				24-120							
UN339	70-014				24-128							
	70-030				24-136							
	70-070				24-144							
	70-086				24-152							
UN340	70-038				24-160							
	70-062				24-168							
					24-176							

REMOVE CIRCUIT PACK ASSOCIATED WITH BACKPLANE PIN TO BE REPLACED

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WARNING 1 <i>A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins</i>	
CAUTION 1 <i>Powering down an out-of-service unit should not cause system recovery actions (interrupts, phases, etc.) to be initiated. If system recovery actions are initiated when powering down an OOS unit, another unit may be at fault. Immediately confirm that the switch is processing calls. If there are indications of a continuing outage, power up the unit previously powered down. If there are no indications of a continuing outage, determine the unit that caused the system recovery actions to be initiated and correct the fault in that unit before continuing to work on the OOS unit originally powered down</i>	

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[1] Obtain circuit pack to be installed and visually inspect pack, pack connector and backplane connector pins for obvious defects

[2] If circuit pack to be installed contains **ROS/NORM** switch, ensure **ROS/NORM** switch is moved right to **ROS** position

[3] See WARNING 1 and NOTE 1. Insert and properly seat replacement pack

[4] At circuit pack containing power switch, depress **OFF** pushbutton to clear alarms

[5] See CAUTION 1. At circuit pack containing power switch, depress **ON** pushbutton

AND

Page 2

NOTE 1

Excessive force is not required to properly seat circuit packs. If equal pressure applied at top and bottom of circuit pack (using pack seating mechanism) does not smoothly seat circuit pack, identify reason that circuit pack cannot be properly seated before proceeding

WARNING 1

A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads, or connector pins

CAUTION 1

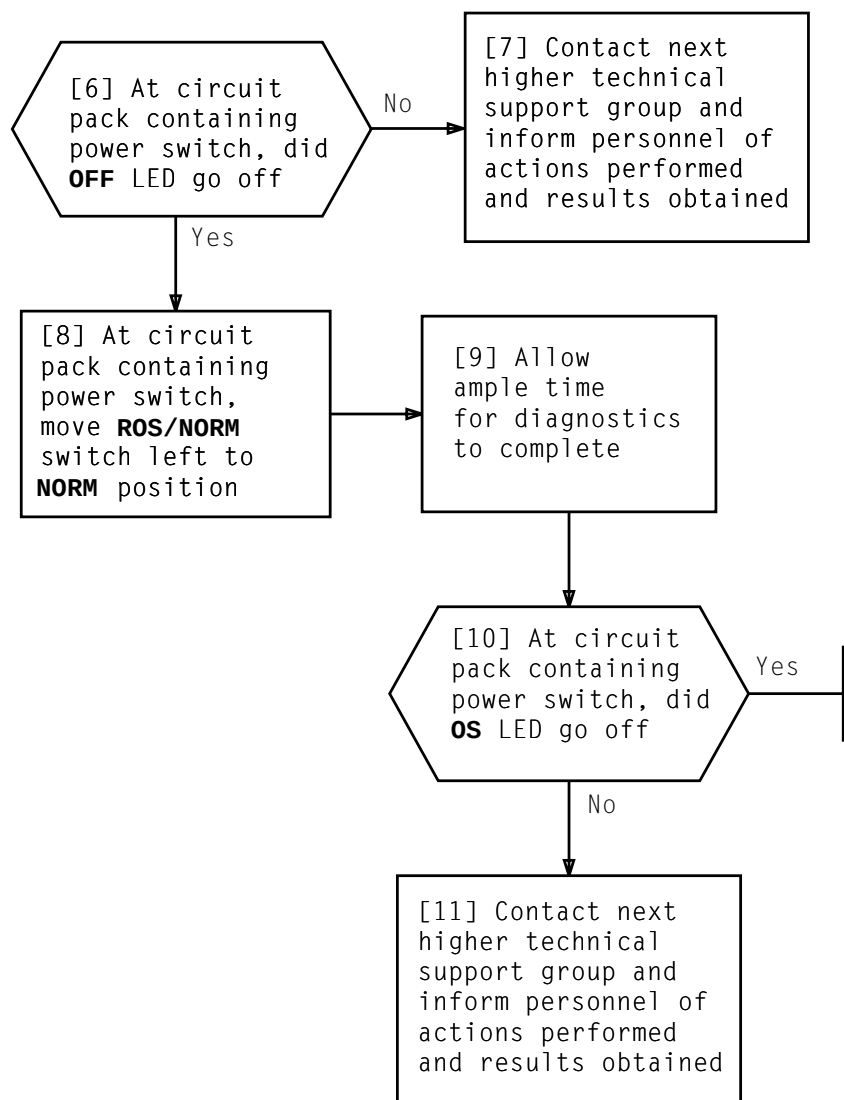
If system recovery actions (interrupts, phases, etc.) are initiated when powering up any unit (CC, CS, etc.), the suspected cause should be the unit just powered up. Therefore, the first action to take in this situation should be to power down the unit just powered up in an attempt to clear the reason that system recovery actions were initiated

INSTALL CIRCUIT PACK ASSOCIATED WITH BACKPLANE PIN PREVIOUSLY REPLACED

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INSTALL CIRCUIT PACK ASSOCIATED WITH BACKPLANE PIN PREVIOUSLY REPLACED

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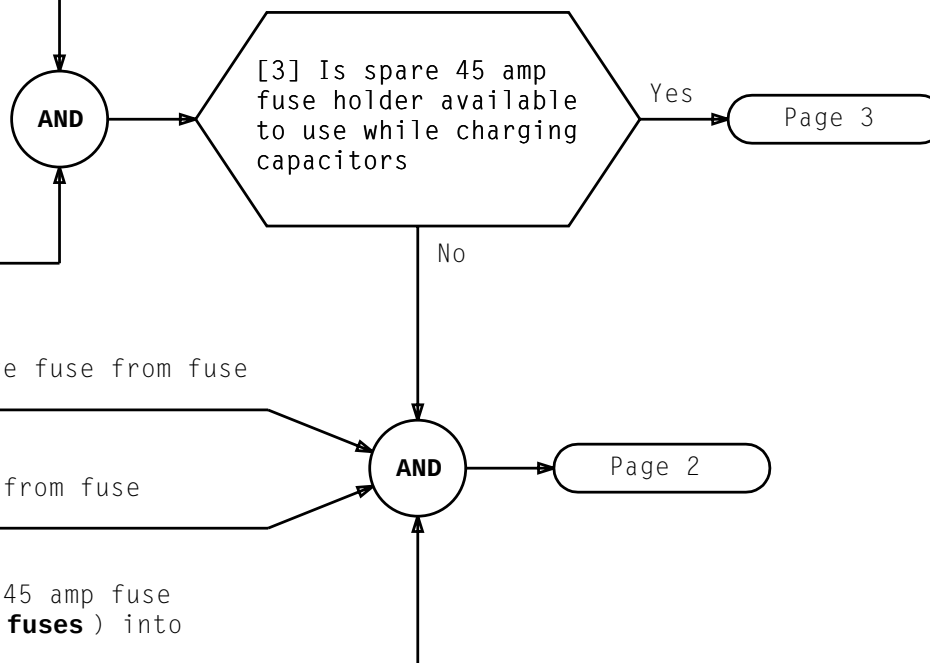
[1] Obtain replacement 45 amp cartridge fuse and indicator fuse ensuring amperage rating is same as indicator fuse to be replaced

[2] Grasp 45 amp fuse holder handle and pull outward to remove fuse holder from fuse panel

[4] Remove blown 45 amp cartridge fuse from fuse holder

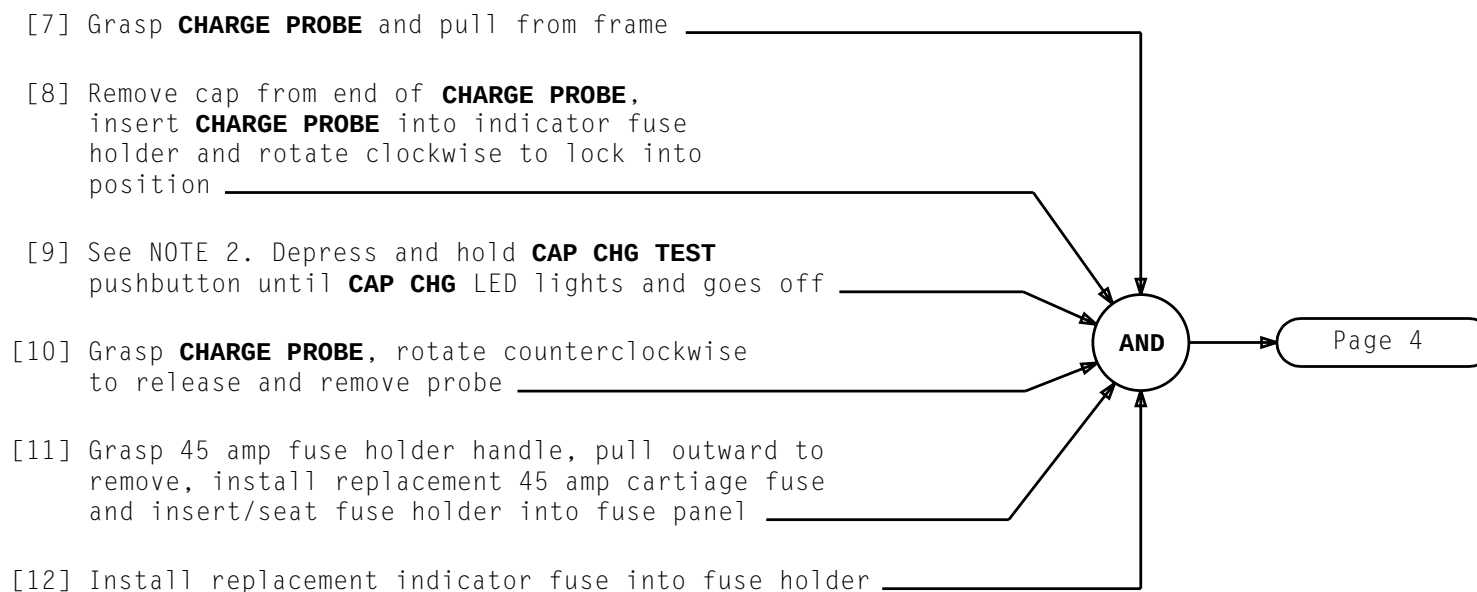
[5] Remove blown indicator fuse from fuse holder

[6] See NOTE 1. Insert and seat 45 amp fuse holder (**without replacement fuses**) into fuse panel



NOTE 1 Replacement 45 amp cartridge fuse and indicator fuse must not be inserted and seated into fuse holder until after capacitors have been charged		
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CHARGE CAPACITORS AND REPLACE BLOWN 45 AMP FUSE – BATTERY DISTRIBUTION FUSE BOARD (BDFB) FRAME



CHARGE CAPACITORS AND REPLACE BLOWN 45 AMP FUSE – BATTERY DISTRIBUTION FUSE BOARD (BDFB) FRAME

NOTE 2

45 amp fuse holder must be removed from fuse panel, 45 amp replacement fuse installed and fuse holder inserted/seated into fuse panel within 12 seconds after **CAP CHG** LED goes off. Otherwise replacement fuse will blow again

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[13] Obtain spare 45 amp fuse holder and ensure no cartridge fuse or indicator fuse is installed in holder

[14] Obtain 45 amp fuse holder containing blown fuses and remove blown 45 amp cartridge fuse and indicator fuse

[15] Insert and seat replacement 45 amp cartridge fuse and indicator fuse into fuse holder previously removed

[16] Insert and seat **spare** 45 amp fuse holder (**without replacement fuses**) into fuse panel

[17] Grasp **CHARGE PROBE** and pull from frame

[18] Remove cap from end of **CHARGE PROBE**, insert **CHARGE PROBE** into indicator fuse holder and rotate clockwise to lock into position

[19] See NOTE 3. Depress and hold **CAP CHG TEST** pushbutton until **CAP CHG** LED lights and goes off

[20] Grasp **CHARGE PROBE**, rotate counterclockwise to release and remove probe

[21] Grasp **spare** 45 amp fuse holder handle in fuse panel, pull outward to remove and insert replacement 45 amp fuse holder (**loaded with replacement fuses**) into fuse panel

AND

AND

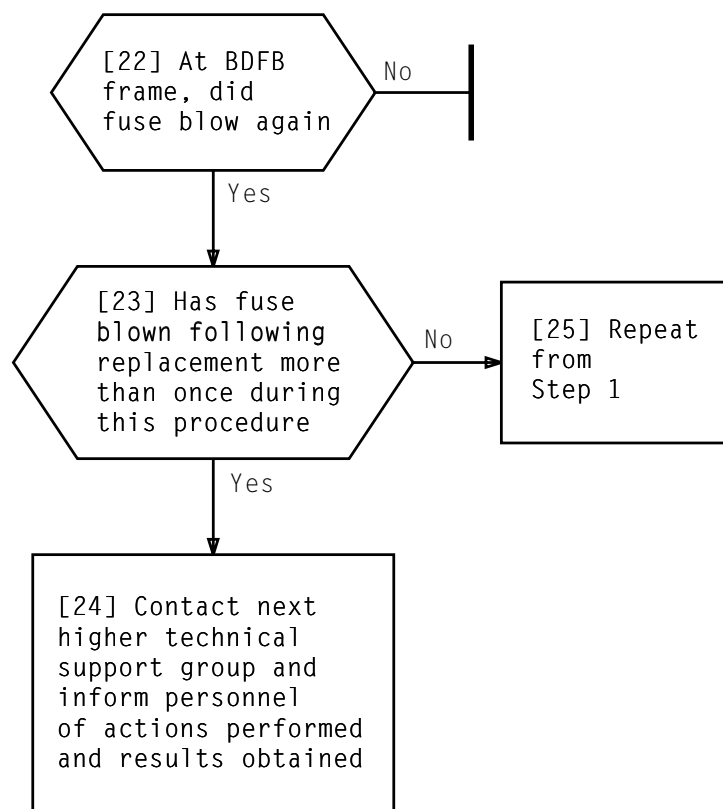
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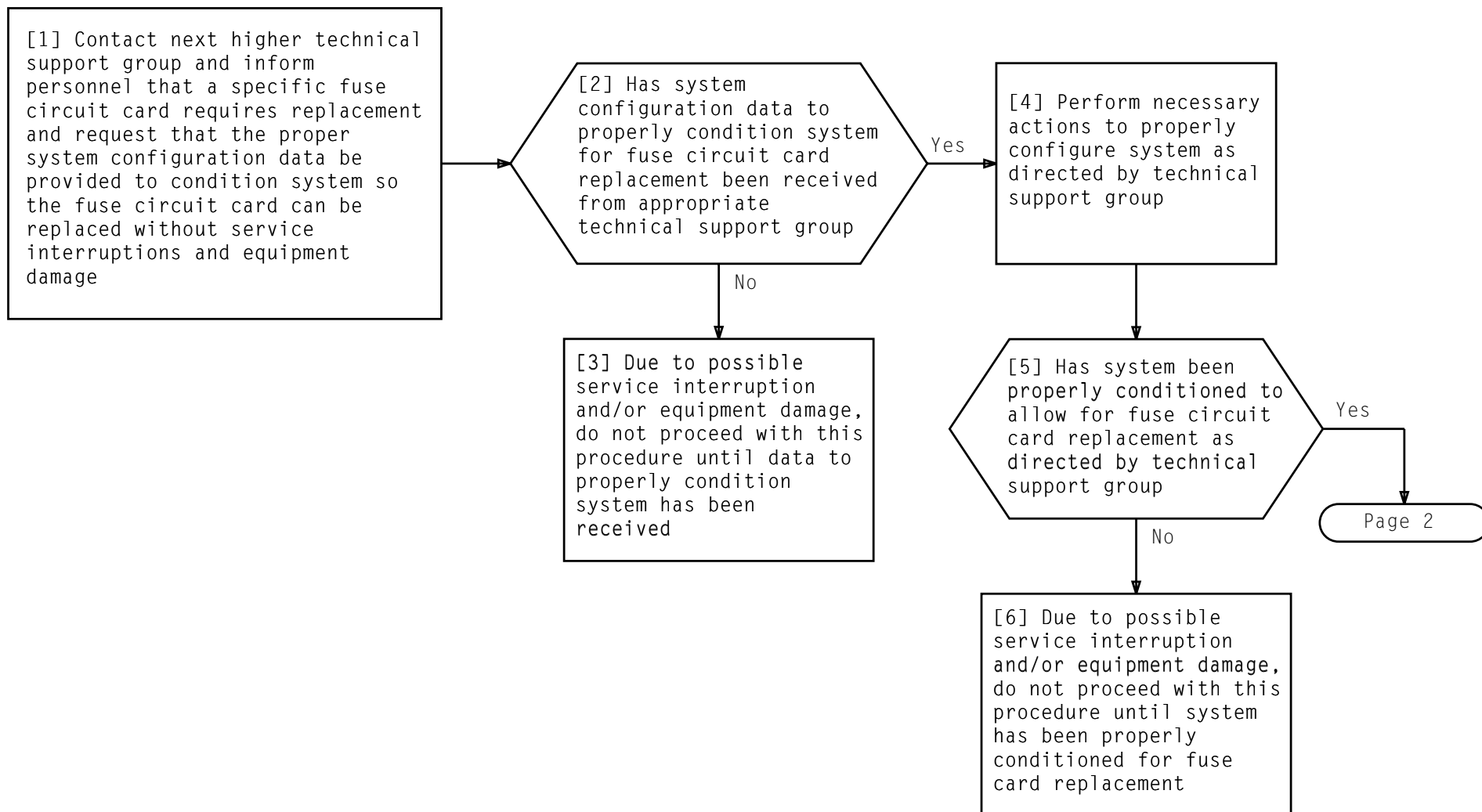
NOTE 3

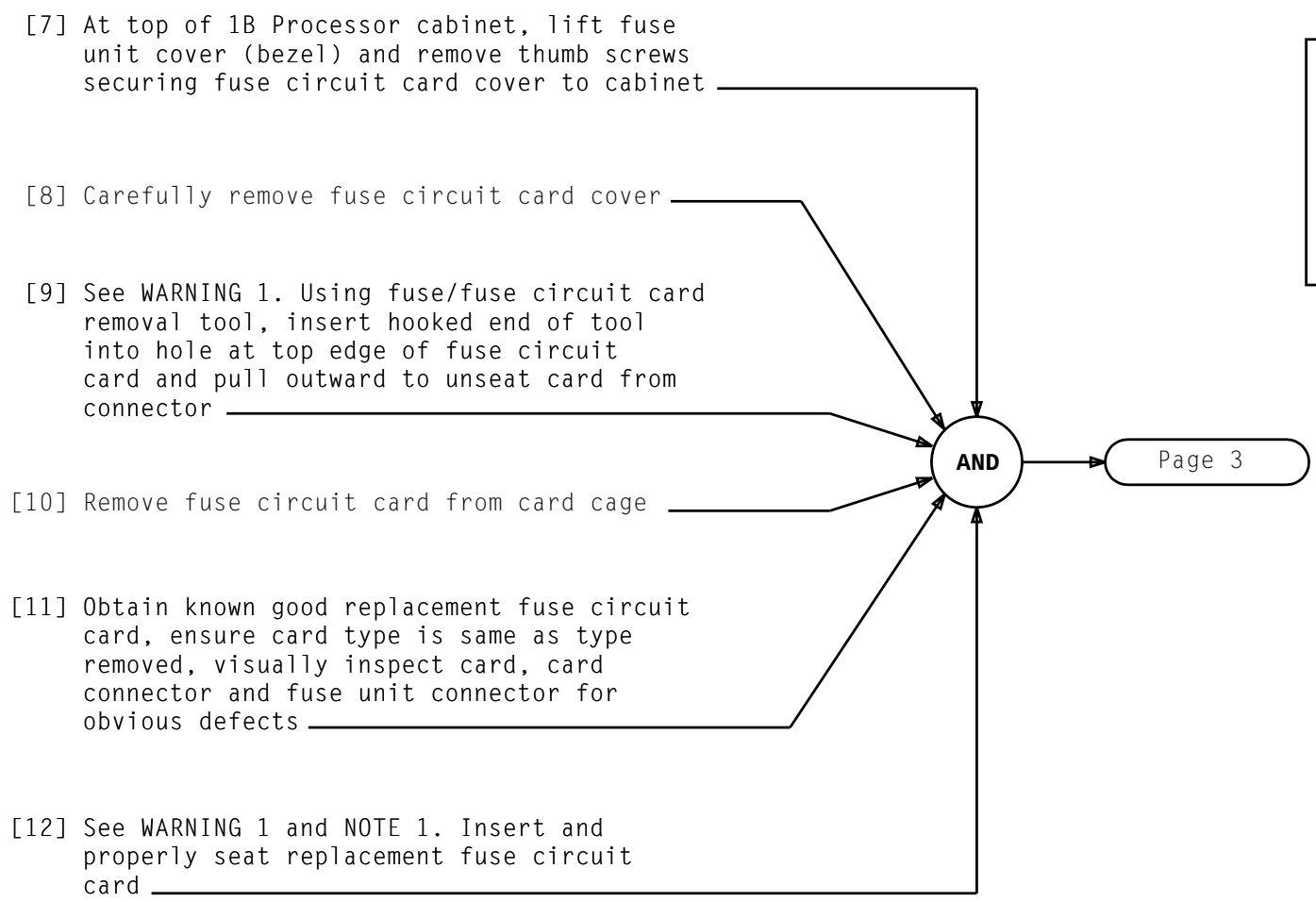
Spare fuse holder (**without replacement fuses**) must be removed and replacement fuse holder (loaded with replacement fuses) must be inserted/seated into fuse unit within 12 seconds after **CAP CHG** LED goes off. Otherwise, replacement fuses will blow again

CHARGE CAPACITORS AND REPLACE BLOWN 45 AMP FUSE – BATTERY DISTRIBUTION FUSE BOARD (BDFB) FRAME

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NOTE 1
Excessive force is not required to properly seat fuse circuit card. If equal pressure applied at top and bottom of card does not smoothly seat card, identify reason that card cannot be properly seated before proceeding

WARNING 1
A grounded antistatic wrist strap (R-4987 or equivalent) must be worn when handling circuit packs. The wrist strap must be connected to a ground common to the circuit pack ground. When appropriate wrist strap is not available, always touch grounded (exposed) metal before handling circuit pack in any manner. Never pass an unprotected circuit pack to an ungrounded person or touch components, leads or connector pins

[13] At top of 1B Processor cabinet,
carefully place fuse circuit card cover
into position and secure to cabinet
using thumb screws previously
removed

[14] Gently close fuse unit cover (bezel)

[15] Perform necessary actions to restore
system back to its normal duplexed
state

[16] Contact technical support group aiding in the
replacement of fuse circuit card and inform
personnel that replacement was successful and
system has been restored to its normal
duplexed state

[17] Record corrective action for local records

AND

```
graph LR; S13[13] --> AND((AND)); S14[14] --> AND; S15[15] --> AND; S16[16] --> AND; S17[17] --> AND; AND --> T[ ]
```

- 1. Identify and note absolute address to be converted
- 2. See NOTE 1. Obtain address space map for applicable generic (PK4A002)
- 3. Using address space map [FIG. 1] and absolute address to be converted, identify program identification (PIDENT) and STRIP containing address. (For example, using FIG. 1, if absolute address to be converted is 11261737, the PIDENT and STRIP containing the address would be FERACONT and AD, respectively)
- 4. Using octal arithmetic, subtract identified PIDENT and STRIP starting address from absolute address to be converted to relative address [FIG. 2]

End of procedure

STARTING ADDRESS FOR PIDENT AND STRIP		PIDENT		STRIP	
000C11254470	12	10	FERACOMM	DF	FERACOMM_AA
000C11254502	105	69	FERACOMM	DG	FERACOMM_AA
000C11254610	316	206	FERACOMM	DH	FERACOMM_AA
000C11255126	1042	546	FERACOMM	EA	FERACOMM_AA
000C11256170	267	183	FERACOMM	GE	FERACOMM_AA
000C11256460	2441	1313	FERACONT	AA	FERACONT_AA
000C11261122	254	172	FERACONT	AB	FERACONT_AA
000C11261376	156	110	FERACONT	AC	FERACONT_AA
000C11261554	401	257	FERACONT	AD	FERACONT_AA
000C11262156	136	94	FERACONT	AE	FERACONT_AA
000C11262314	76	62	FERACONT	AF	FERACONT_AA
000C11262412	66	54	FERACONT	AG	FERACONT_AA

FIG. 1 – Sample From Address Space Map

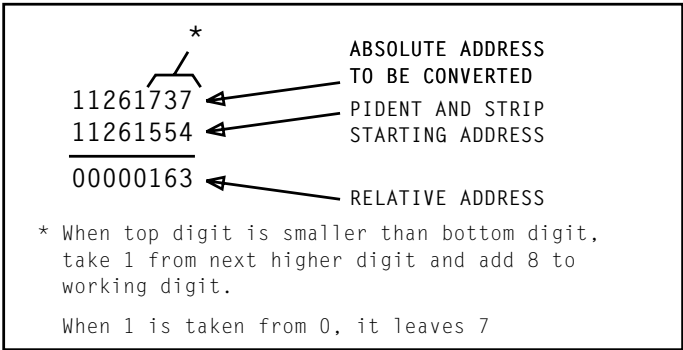


FIG. 2 – Sample of Octal Subtraction Used To Convert Absolute Address To Relative Address

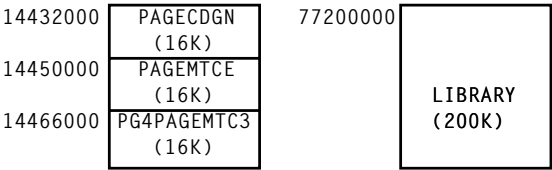
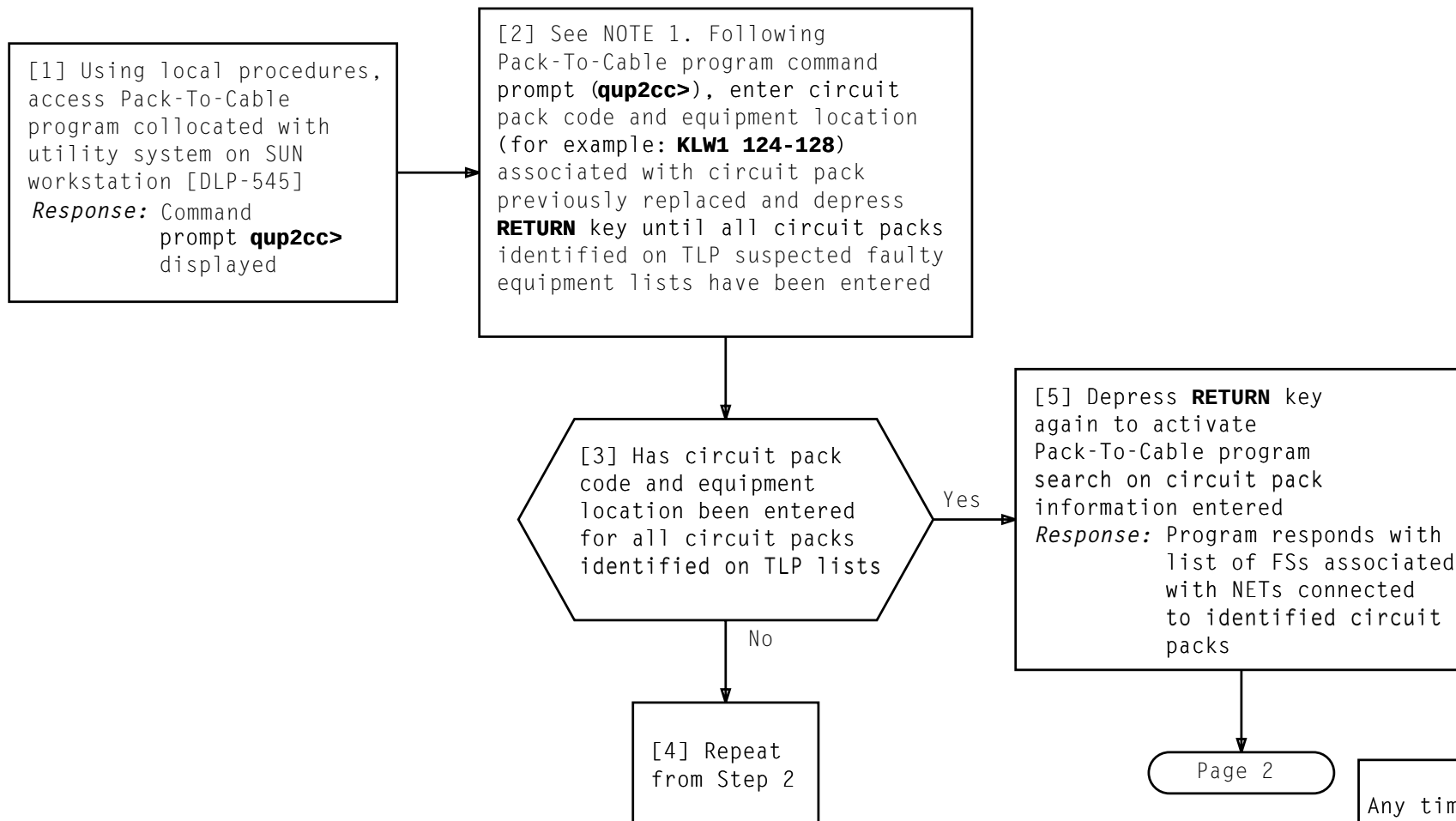


FIG. 3 – Memory Areas Not In Address Space Map

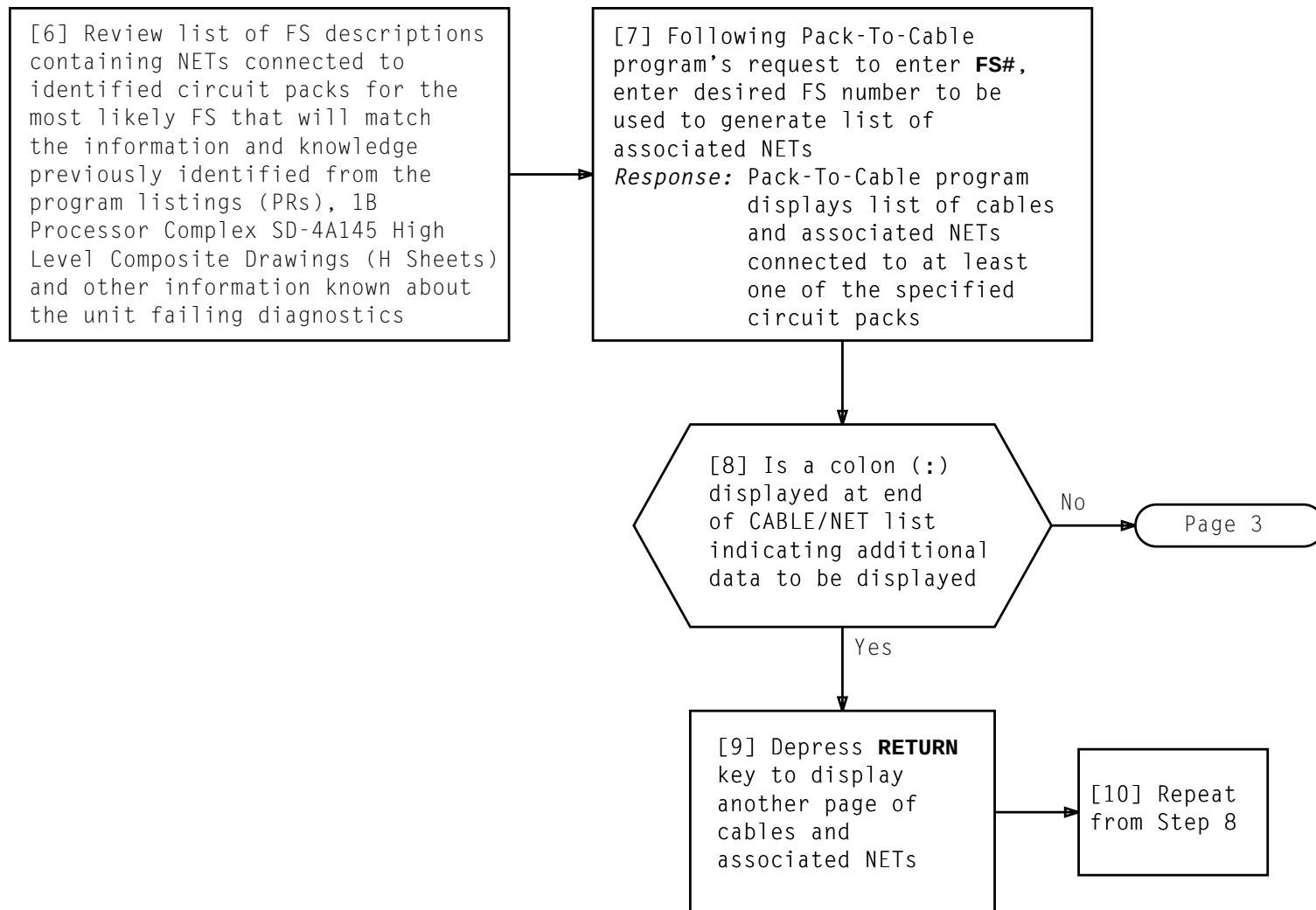
NOTE
GULP, DGN and LIBRARY paging areas [FIG. 3] are not included in the address space map. Contact next higher technical support group if address to be converted is in these areas

CONVERT ABSOLUTE ADDRESS TO RELATIVE ADDRESS



NOTE 1		
Any time after the Pack-To-Cable program prompt (qup2cc>) is received, the help command can be entered to display a description of the program usage		
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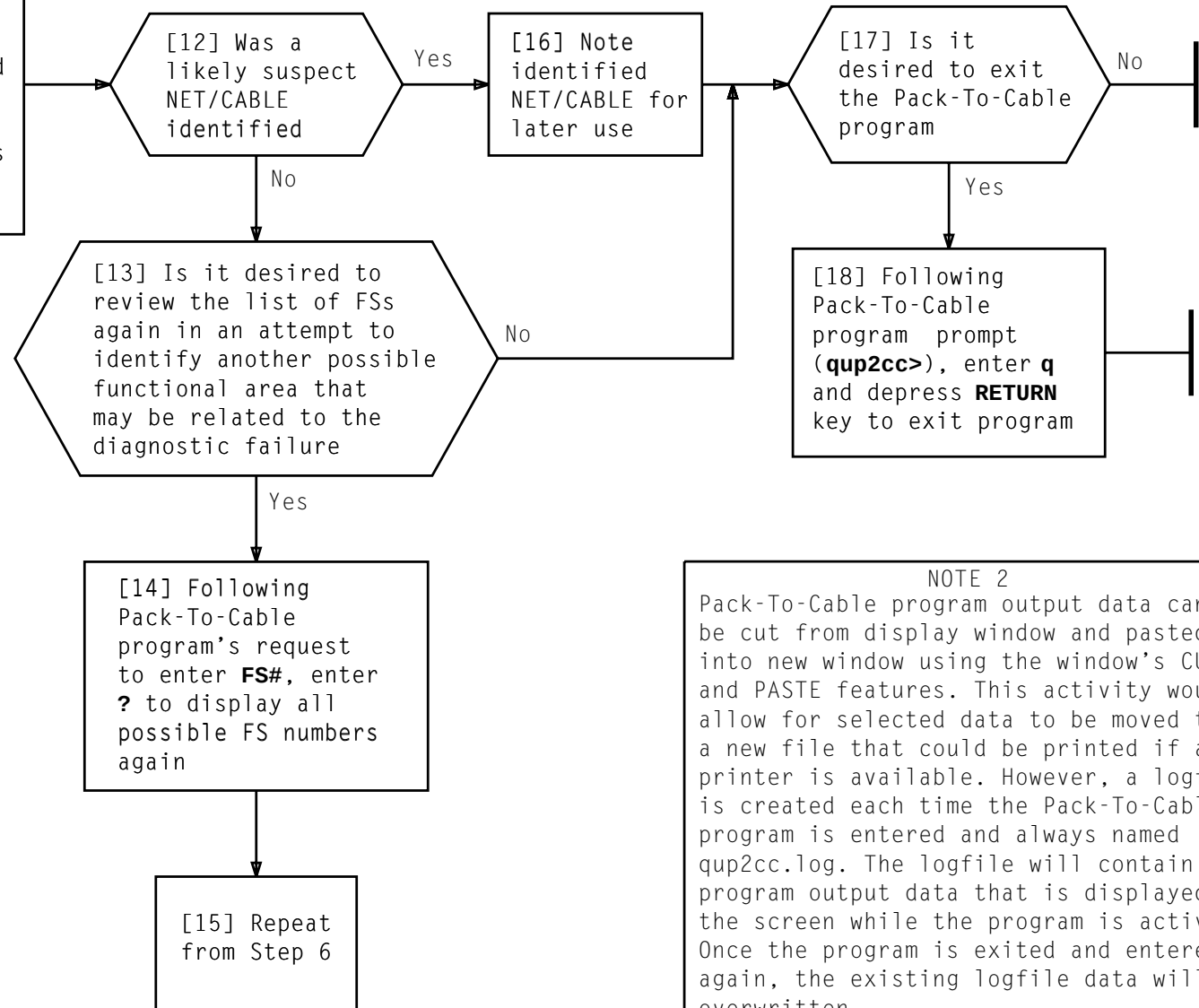
ACCESS PACK-TO-CABLE PROGRAM AND IDENTIFY MOST SUSPECT NET RELATED TO CIRCUIT PACKS PREVIOUSLY REPLACED AND FUNCTIONAL AREA FAILING DIAGNOSTIC TESTS



ACCESS PACK-TO-CABLE PROGRAM AND IDENTIFY MOST SUSPECT NET RELATED TO CIRCUIT PACKS PREVIOUSLY REPLACED AND FUNCTIONAL AREA FAILING DIAGNOSTIC TESTS

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[11] See NOTE 2. Using display window's right scroll bar, move through and review list of suspect NETs and associated cables [FIG. 1] in an attempt to identify the most likely suspect NET/CABLE that matches failing diagnostic data



NOTE 2
Pack-To-Cable program output data can be cut from display window and pasted into new window using the window's CUT and PASTE features. This activity would allow for selected data to be moved to a new file that could be printed if a printer is available. However, a logfile is created each time the Pack-To-Cable program is entered and always named qup2cc.log. The logfile will contain all program output data that is displayed to the screen while the program is active. Once the program is exited and entered again, the existing logfile data will be overwritten

ACCESS PACK-TO-CABLE PROGRAM AND IDENTIFY MOST SUSPECT NET RELATED TO CIRCUIT PACKS PREVIOUSLY REPLACED AND FUNCTIONAL AREA FAILING DIAGNOSTIC TESTS

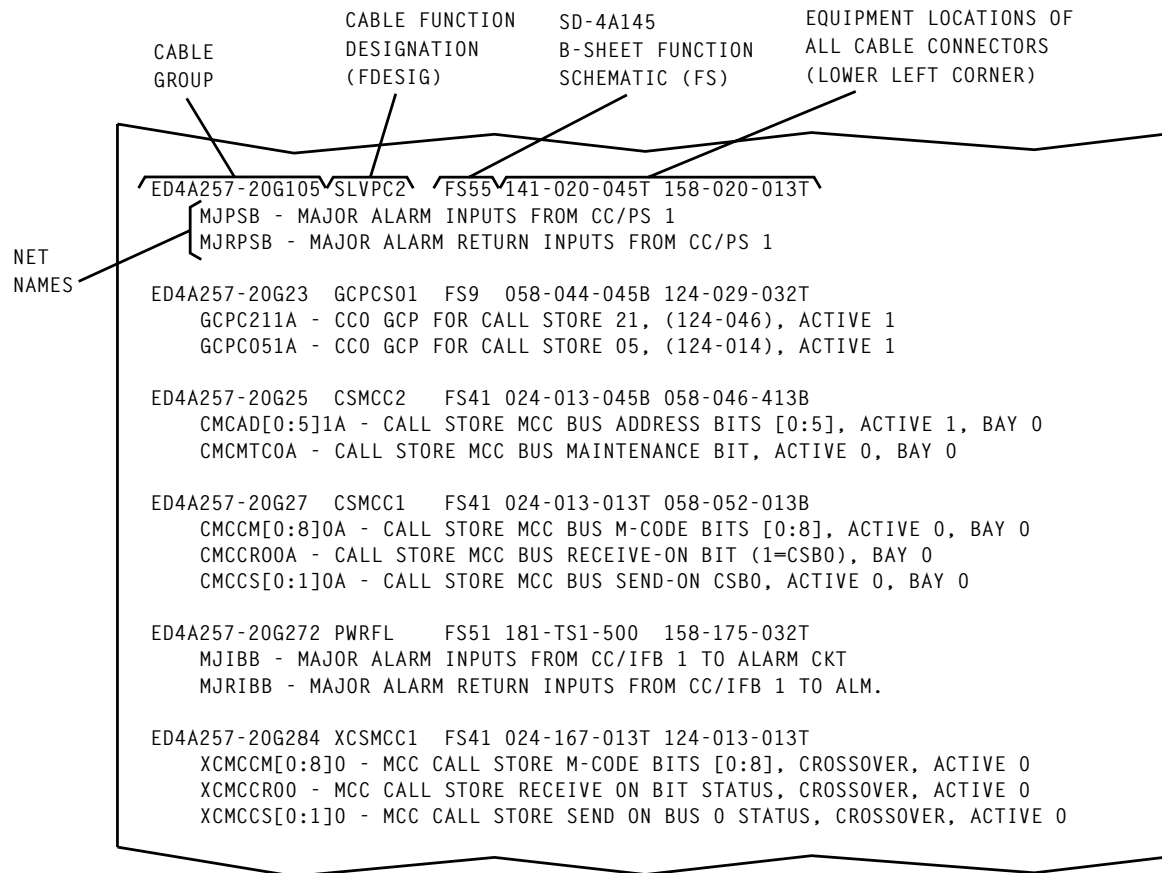
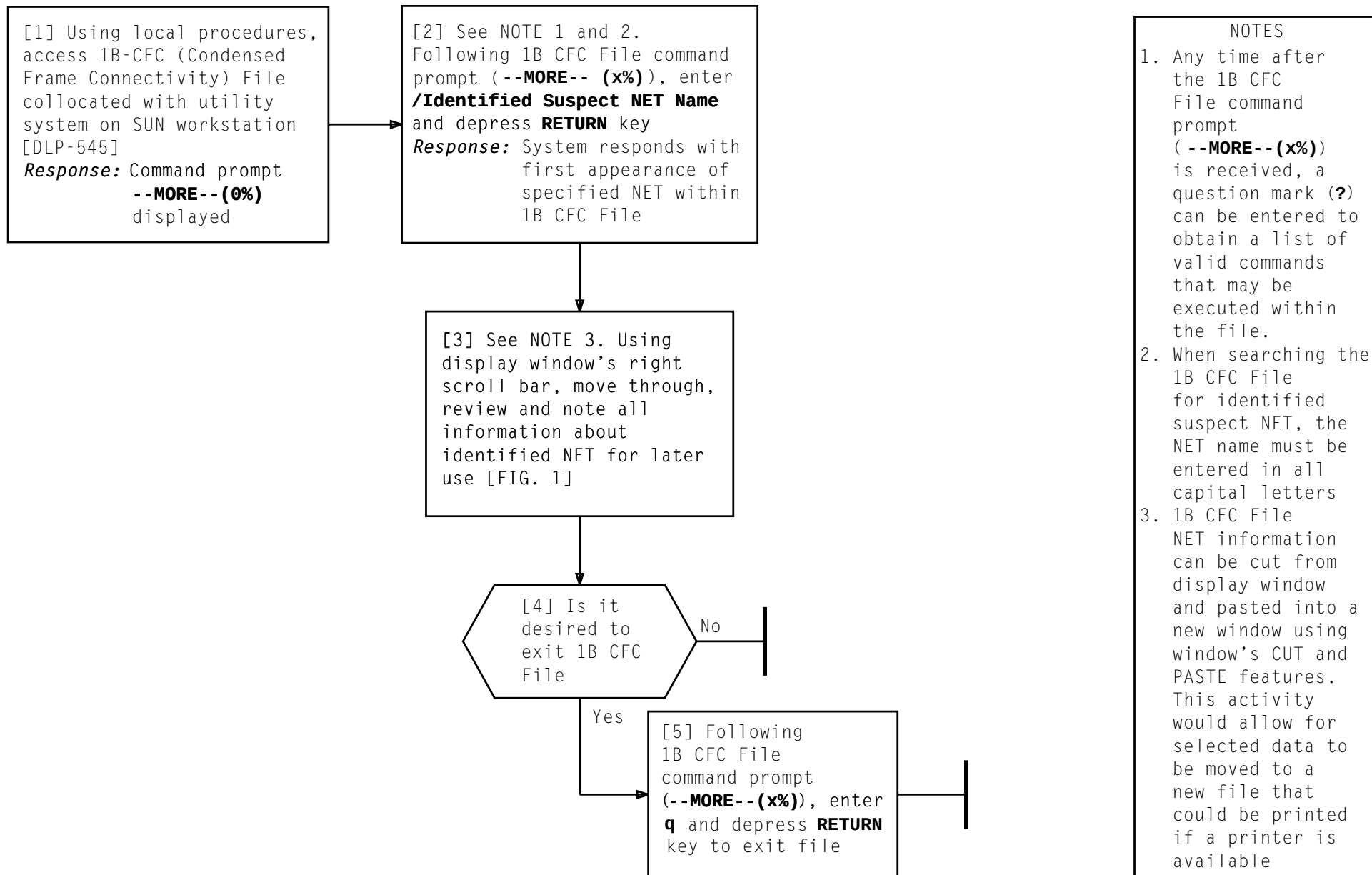


FIG. 1 - Sample Pack-To-Cable Program Output Showing List Of Cables And Associated NETs Related To Specified Circuit Packs And Functional Area

ACCESS PACK-TO-CABLE PROGRAM AND IDENTIFY MOST SUSPECT NET RELATED TO CIRCUIT PACKS PREVIOUSLY REPLACED AND FUNCTIONAL AREA FAILING DIAGNOSTIC TESTS

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ACCESS 1B CFC (CONDENSED FRAME CONNECTIVITY) FILE AND IDENTIFY EQUIPMENT PLUG-ON LOCATIONS ASSOCIATED WITH NET

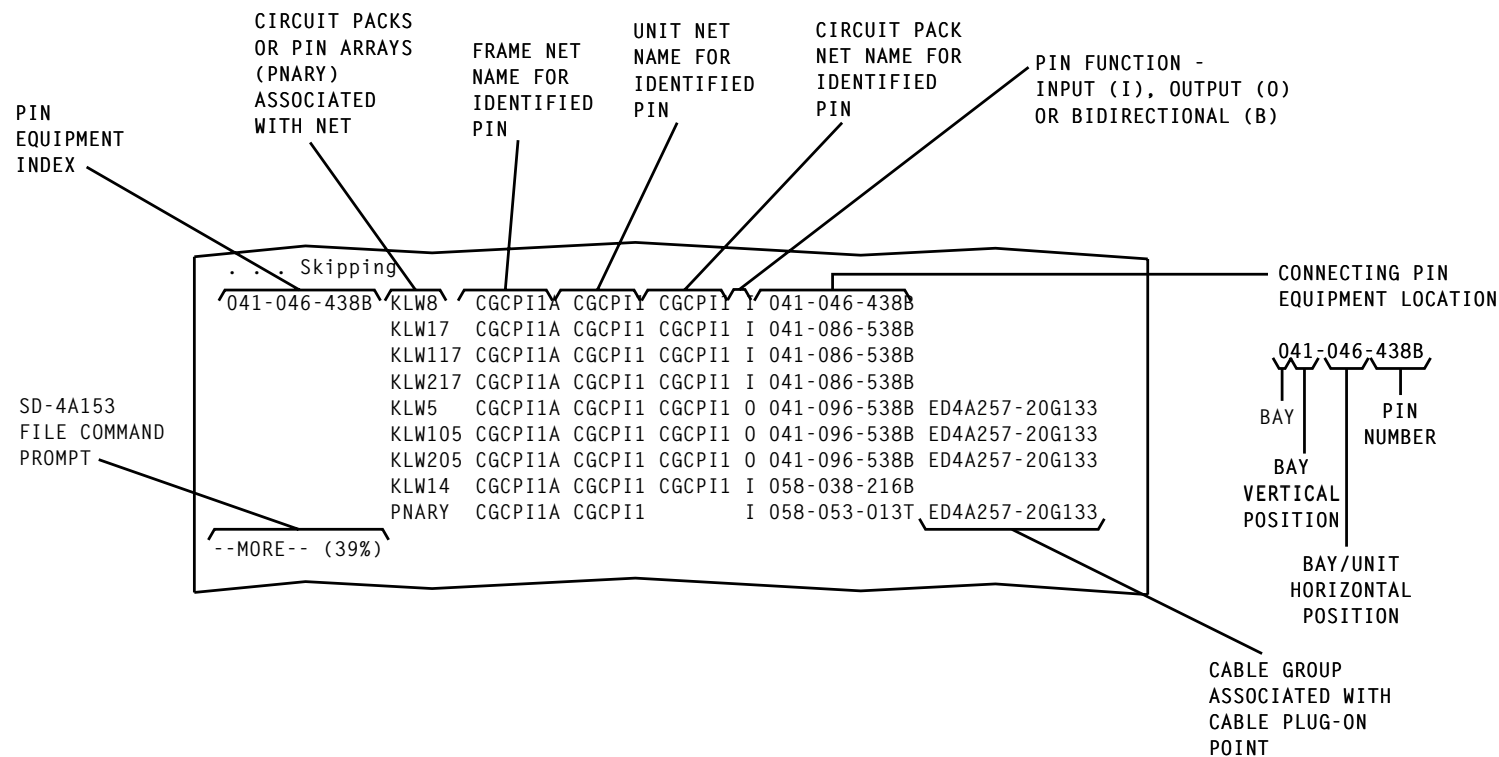
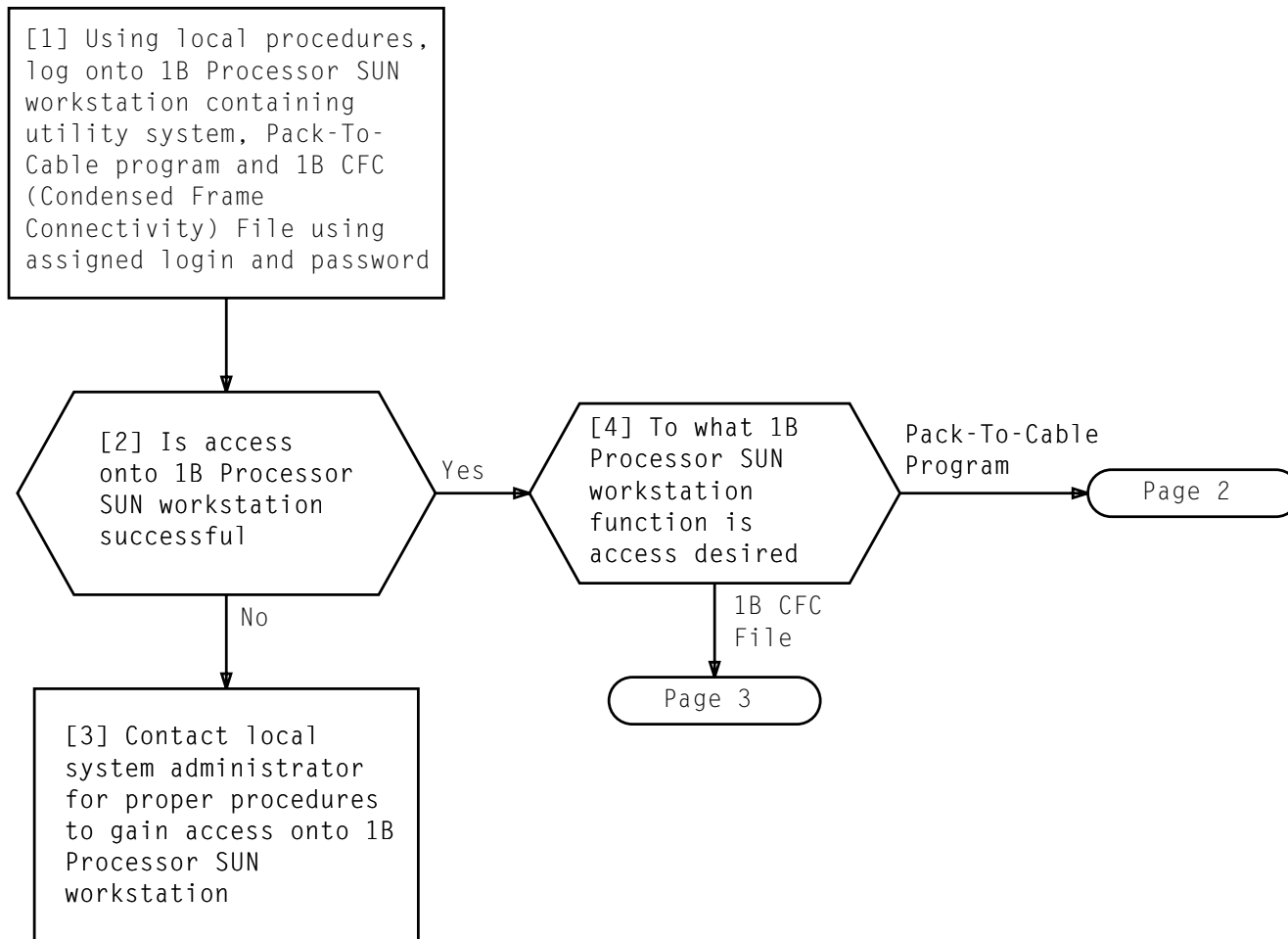


FIG 1 – Sample 1B CFC File Output Showing Information For Specified NET Name



OBTAIN ACCESS TO PACK-TO-CABLE PROGRAM OR 1B CFC (CONDENSED FRAME CONNECTIVITY) FILE

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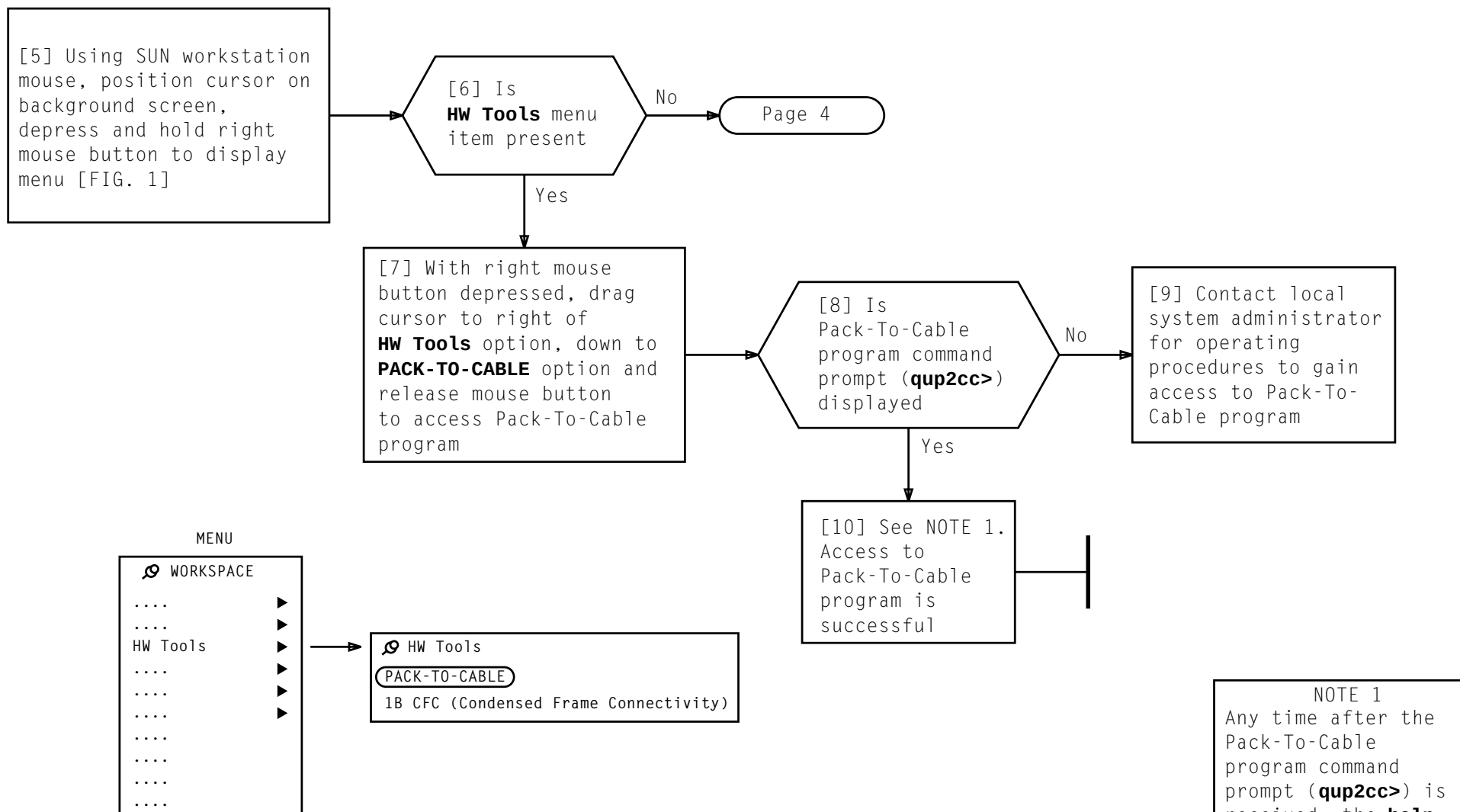


FIG. 1 – Illustration Showing SUN Workstation Workspace Menu

OBTAIN ACCESS TO PACK-TO-CABLE PROGRAM OR 1B CFC (CONDENSED FRAME CONNECTIVITY) FILE

NOTE 1
Any time after the Pack-To-Cable program command prompt (**qup2cc>**) is received, the **help** command can be entered to display a description of the program usage

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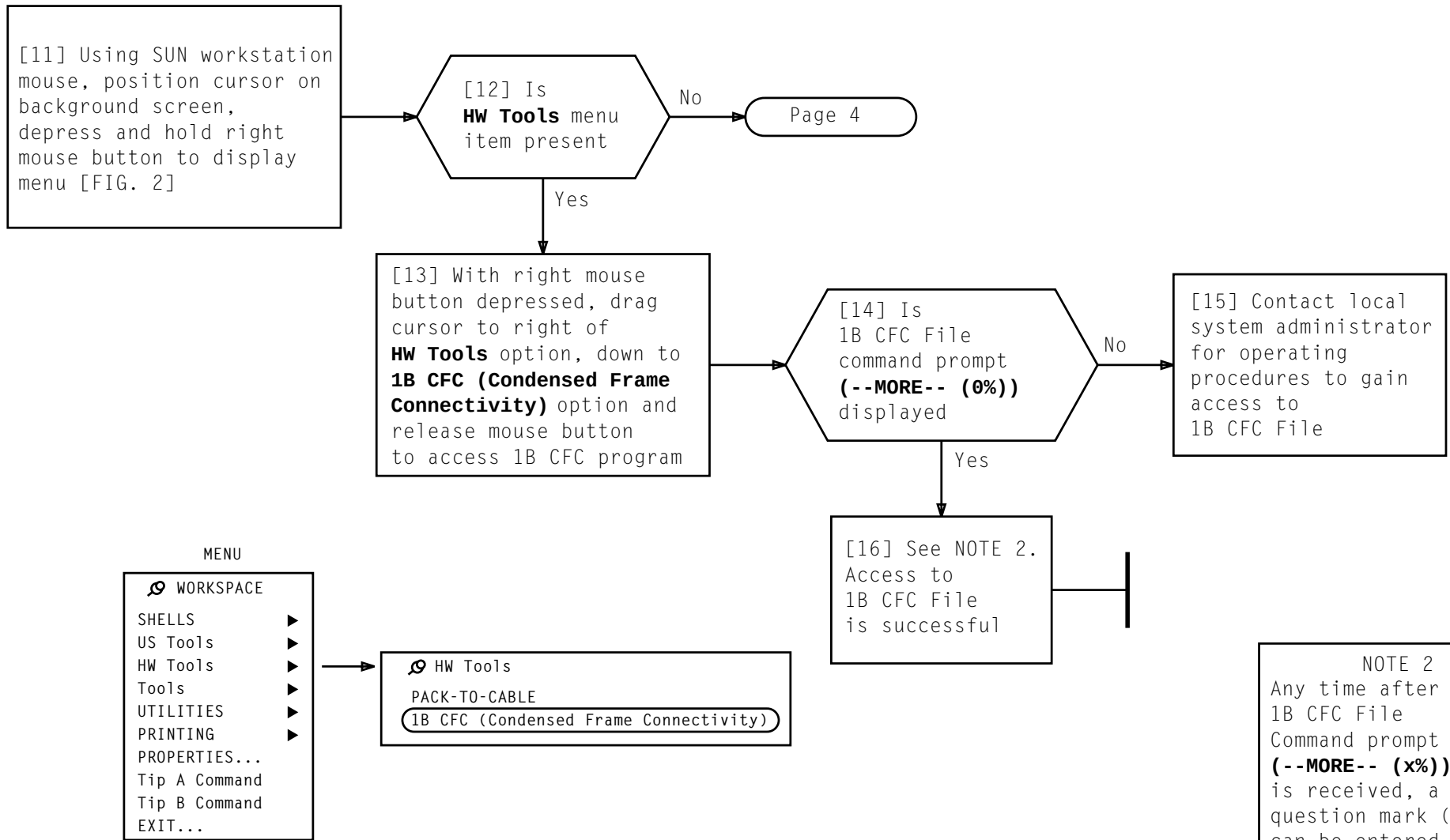
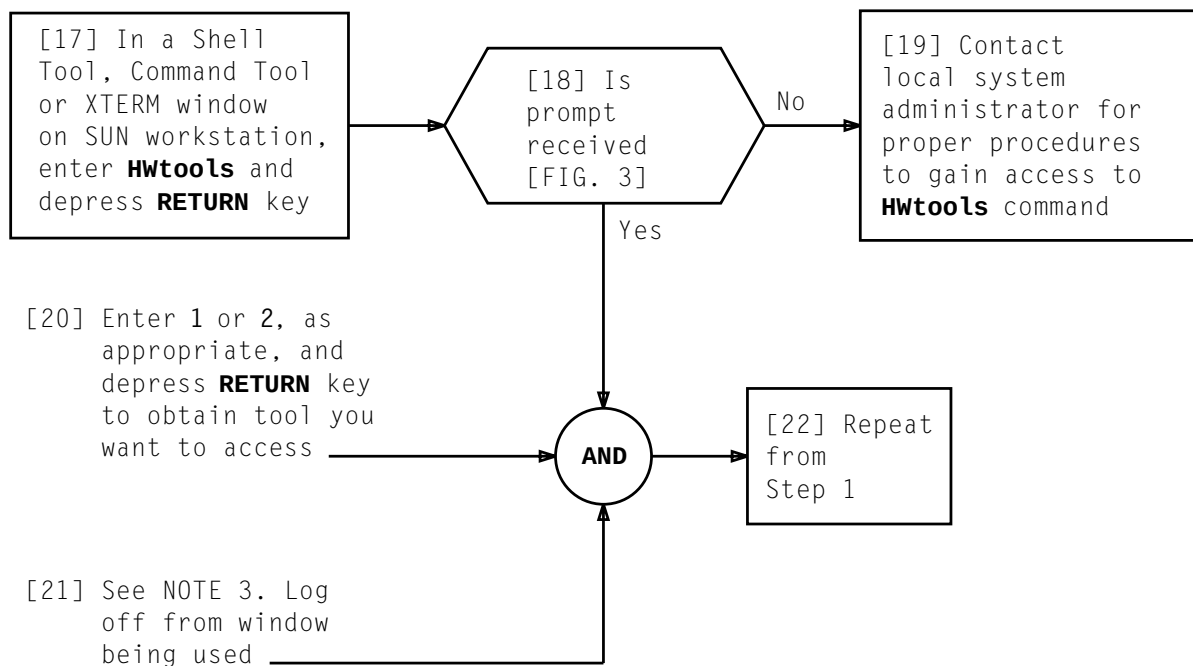


FIG. 2 – Illustration Showing SUN Workstation Workspace Menu

OBTAIN ACCESS TO PACK-TO-CABLE PROGRAM OR 1B CFC (CONDENSED FRAME CONNECTIVITY) FILE

NOTE 2 Any time after the 1B CFC File Command prompt (---MORE--- (x%)) is received, a question mark (?) can be entered to obtain a list of valid commands that may be executed within the file	
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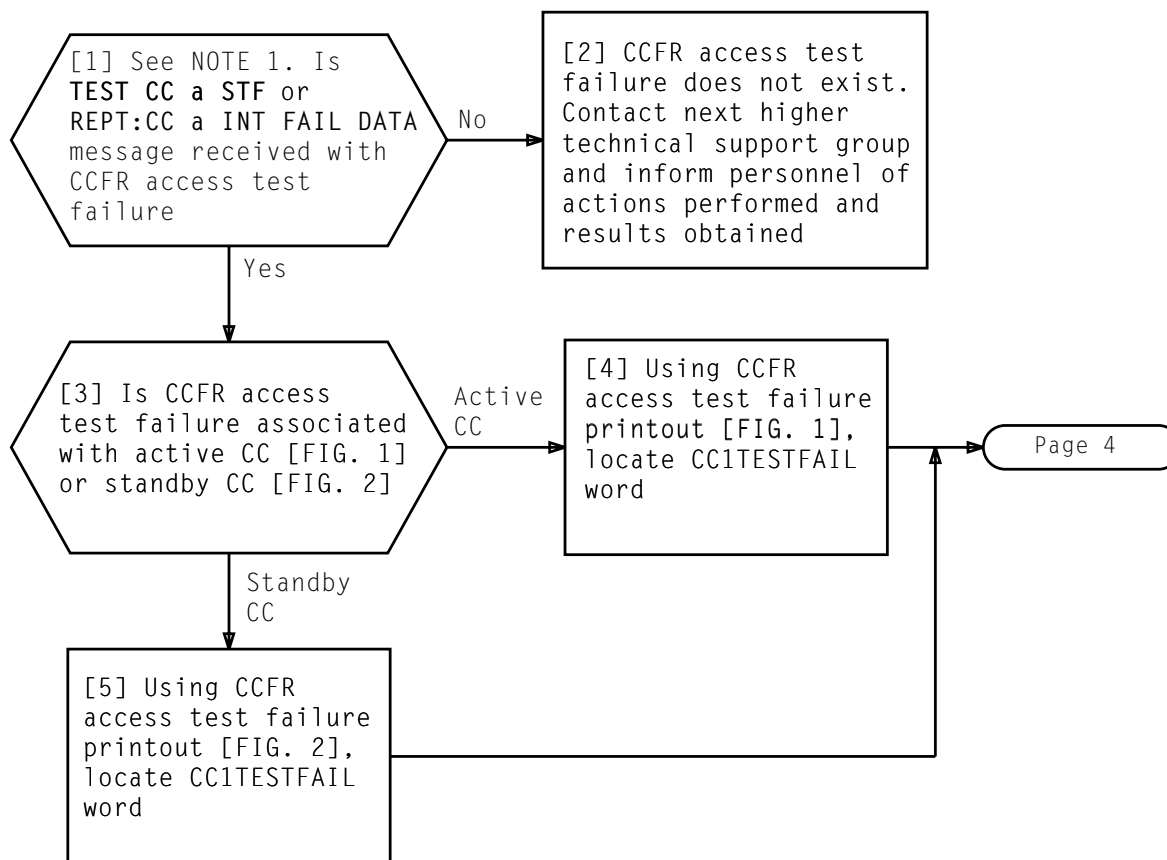


1) PACK-TO-CABLE
 2) 1B CFC (Condensed Frame Connectivity)
 3) Quit
 Select HW Tool to run:

FIG. 3 – Illustration Showing SUN Workstation Prompt

NOTE 3 By performing steps 21 and 22, the HW Tools menu item in the WORKSPACE menu will be available		
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OBTAIN ACCESS TO PACK-TO-CABLE PROGRAM OR 1B CFC (CONDENSED FRAME CONNECTIVITY) FILE



ANALYZE CENTRAL CONTROL FAULT RECOGNITION (CCFR) ACCESS TEST FAILURE AND COMPILE LIST OF POSSIBLE SUSPECT CIRCUIT PACKS

NOTE 1 If CCFR access test failure is reported via a diagnostic, the TEST CC a STF message will be received. If CCFR access test failure is reported via an interrupt, the REPT:CC a INT FAIL DATA message will be received		
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M 08 TEST:CC a DFR FAIL					
AC1FR(H)	AC1FR(L)	AC1GR(H)	AC1GR(L)	AC1JR(H)	AC1JR(L)
AC1KR(H)	AC1KR(L)	AC1LR(H)	AC1LR(L)	AC1XR(H)	AC1XR(L)
AC1YR(H)	AC1YR(L)	AC1ZR(H)	AC1ZR(L)	AC1BR(H)	AC1BR(L)
AC1ER	AC1CSC	AC1CCS(H)	AC1CCS(L)	AC1ILA	CC1TESTFAIL
CC1ACW	CC1BCW	CC1STATUS			

FIG. 1 - Layout of Sample DFR Test Failure Printout For Active Central Control (CC)

**ANALYZE CENTRAL CONTROL FAULT RECOGNITION (CCFR)
ACCESS TEST FAILURE AND COMPILE LIST OF POSSIBLE
SUSPECT CIRCUIT PACKS**

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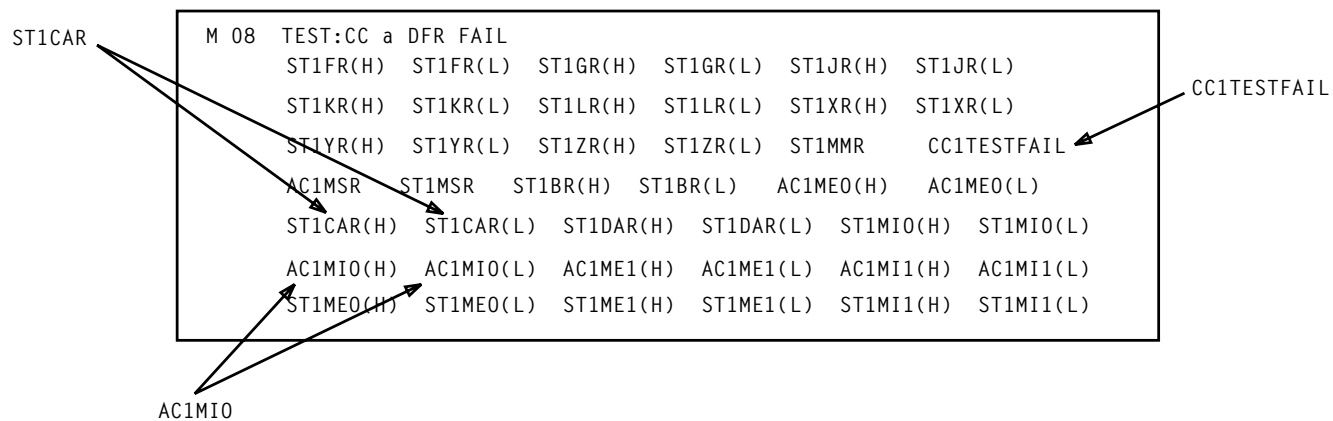


FIG. 2 - Layout of Sample DFR Test Failure Printout For Standby Central Control (CC)

**ANALYZE CENTRAL CONTROL FAULT RECOGNITION (CCFR)
ACCESS TEST FAILURE AND COMPILE LIST OF POSSIBLE
SUSPECT CIRCUIT PACKS**

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[6] Convert CC1TESTFAIL octal word
to binary [FIG. 3]

[7] Identify binary bits set
to one

[8] Identify and note failing access
test associated with bits set
to one [TABLE A]

[9] See NOTE 2. Identify and note last
access test that passed before first
failing test [TABLE A]

[10] Identify and note all circuit packs
associated with CC1TESTFAIL bits
set to one (failed access test)
[TABLE B]

AND

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ANALYZE CENTRAL CONTROL FAULT RECOGNITION (CCFR) ACCESS TEST FAILURE AND COMPILE LIST OF POSSIBLE SUSPECT CIRCUIT PACKS

NOTE 2
Access tests listed
in TABLE A are
listed in their
order of execution

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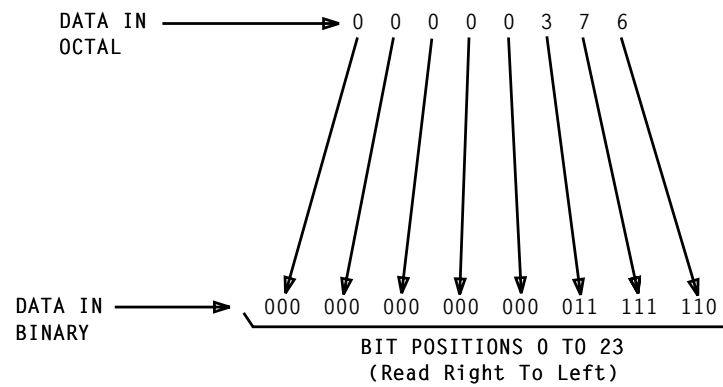


FIG. 3 - Example of Data Octal to Binary Conversion

**ANALYZE CENTRAL CONTROL FAULT RECOGNITION (CCFR)
ACCESS TEST FAILURE AND COMPILE LIST OF POSSIBLE
SUSPECT CIRCUIT PACKS**

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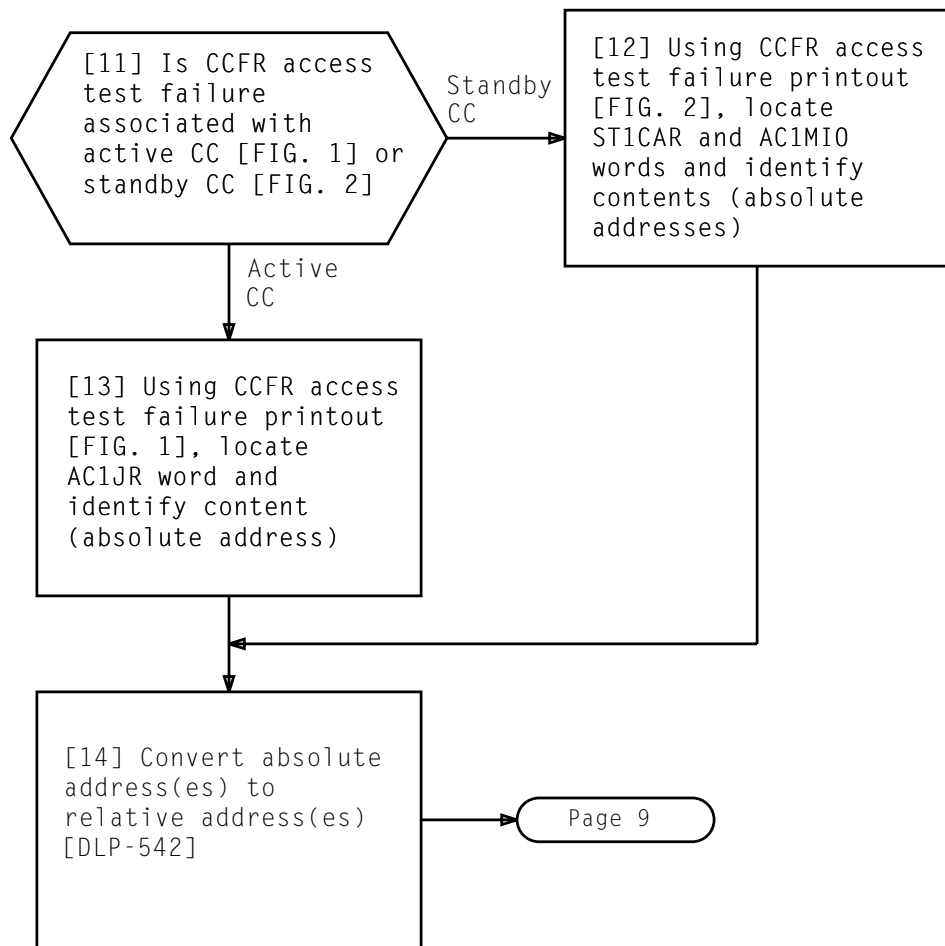
TABLE A CENTRAL CONTROL (CC) ACCESS TESTS ASSOCIATED WITH CC1TESTFAIL BITS IN ORDER OF EXECUTION	
CC1TESTFAIL BIT POSITION	CENTRAL CONTROL ACCESS TEST DESCRIPTION
19	Logic Tests: Test arithmetic and logic operations
0	Buffer register tests: B register including BRW and PS accessess
1	Register Tests: Operational and peripheral register access
2	Index Adder Tests: Functions associated with index circuitry
3	Add-One-Logic tests: Add one option on the index adder
4	Parity Tests: CC parity generators, checkers and control parity
5	Protected area: Upper and lower protected area registers
6	Stack Tests: Stack register and count
7	Boot ROM Hash Test: Check in PS with BS0 - BS5 test
8	Matcher Tests: System matcher circuitry
9	Decoder Tests: Test system's ability to properly decode various instruction options
10	Buffer Bus Access Tests: Test system's ability to read/write
11	Interrupt Tests: Interrupt/interject sequencers and buffer bus registers if possible
12	Instruction Fetch and Execution Tests: Tests pipeline
13	Peripheral Bus Test: Tests peripheral unit bus circuitry
14	Interface Bus Tests: Tests interface bus controller circuitry
15-17	Unused
18	Subsystem Access Tests
20	Active Matcher Tests
21-23	Unused
*	Pulse Source Failure Test: Retrys failing GCP if valid addresses
* No Bits Set In CC1TESTFAIL Word (All Bits Zero)	

**ANALYZE CENTRAL CONTROL FAULT RECOGNITION (CCFR)
ACCESS TEST FAILURE AND COMPILE LIST OF POSSIBLE
SUSPECT CIRCUIT PACKS**

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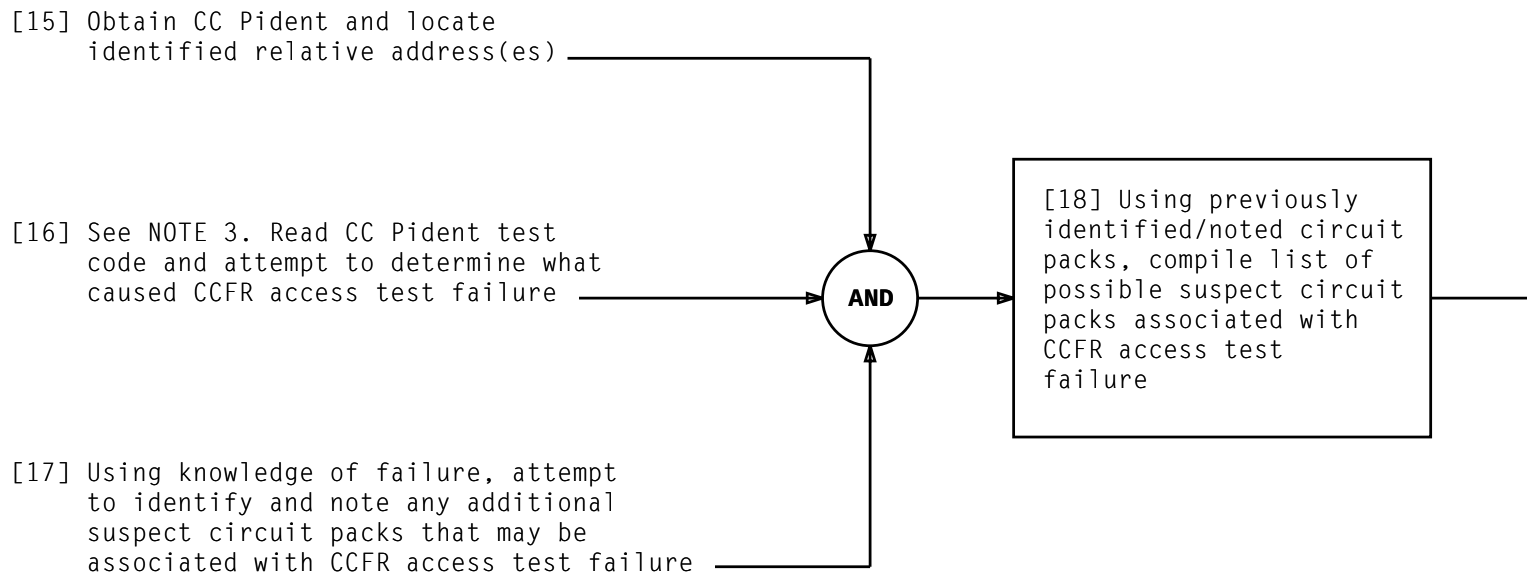
TABLE B CIRCUIT PACKS ASSOCIATED WITH CC1TESTFAIL BITS SET TO ONE																					
CC1TESTFAIL SET BIT POSITION	ASSOCIATED KLV CIRCUIT PACKS																				
	3	4	05/ 105	6	7	8	9	10	11	12	13	14	17/ 117	19	20	21	22/ 122	24	28	UN339	UN340
0				X													X				
1				X	X													X			
2			X										X								
3					X																
4 †	X	X	X	X									X				X				
5													X								
6					X												X				
7	X	X																			
8							X														
9														X				X			
10			X	X	X	X	X				X	X	X	X	X	X		X			
11						X							X								
12			X										X	X							
13																		X		X	
14	X	X									X				X		X				
15-17																					
18																					
19				X																	
20																					
21-23																					
*												X									X
† Also Suspect KLW1 And KLW2 Circuit Packs In CS (MCode 0) Or PS (MCode 3) * Pulse Source Failure Access Test (All Bits In CC1TESTFAIL Word Set To Zero)																					

**ANALYZE CENTRAL CONTROL FAULT RECOGNITION (CCFR)
ACCESS TEST FAILURE AND COMPILE LIST OF POSSIBLE
SUSPECT CIRCUIT PACKS**



ANALYZE CENTRAL CONTROL FAULT RECOGNITION (CCFR) ACCESS TEST FAILURE AND COMPILE LIST OF POSSIBLE SUSPECT CIRCUIT PACKS

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**ANALYZE CENTRAL CONTROL FAULT RECOGNITION (CCFR)
ACCESS TEST FAILURE AND COMPILE LIST OF POSSIBLE
SUSPECT CIRCUIT PACKS**

NOTE 3		
If more than one address was identified, read test code associated with all addresses		
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ITEM	ISSUE	ITEM	ISSUE	ITEM	ISSUE	ITEM	ISSUE	ITEM	ISSUE	ITEM	ISSUE
• TPG-000	5	TAP-124	5	DLP-512	5	• CKL-891	5				
• LPG-000	5	TAP-125	5	DLP-513	5	TNG-893	5				
• IXL-001	5	• TAP-126	5	DLP-514	5						
NTP-002	5	TAP-127	5	DLP-515	5						
NTP-003	5	TAP-128	5	DLP-516	5						
NTP-004	5	TAP-129	5	DLP-517	5						
NTP-005	5	TAP-130	5	DLP-518	5						
NTP-006	5	TAP-131	5	DLP-519	5						
NTP-007	5	TAP-132	5	• DLP-520	5						
NTP-008	5	TAP-133	5	DLP-521	5						
NTP-009	5	TAP-134	5	DLP-522	5						
TAD-100	5	TAP-135	5	DLP-523	5						
TAD-101	5	• TAP-136	5	DLP-524	5						
TAD-102	5	• TAP-137	5	DLP-525	5						
TAD-103	5	• TAP-138	5	DLP-526	5						
TAD-104	5	• TAP-139	5	DLP-527	5						
TAD-105	5	TAP-140	5	DLP-528	5						
TAD-106	5	• TAP-141	5	DLP-529	5						
• TAD-107	5	• TAP-142	5	DLP-530	5						
TAD-108	5	• TAP-143	5	DLP-531	5						
TAD-109	5	TAP-144	5	DLP-532	5						
TAD-110	5	TAP-145	5	• DLP-533	5						
TAP-111	5	TAP-146	5	DLP-534	5						
TAP-112	5	• DLP-500	5	DLP-535	5						
TAP-113	5	• DLP-501	5	DLP-536	5						
• TAP-114	5	• DLP-502	5	DLP-537	5						
TAP-115	5	DLP-503	5	• DLP-538	5						
TAP-116	5	DLP-504	5	DLP-539	5						
TAP-117	5	• DLP-505	5	DLP-540	5						
TAP-118	5	DLP-506	5	DLP-541	5						
TAP-119	5	DLP-507	5	DLP-542	5						
TAP-120	5	DLP-508	5	DLP-543	5						
TAP-121	5	DLP-509	5	• DLP-544	5						
TAP-122	5	DLP-510	5	• DLP-545	5						
TAP-123	5	DLP-511	5	DLP-546	5						
☒ REVISED OR ADDED ITEM ☐ CANCELED ITEM									Issue 5	SEP 2000	
CHECKLIST									234-351-004	CKL	
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