

TECHNICAL MANUAL

**AVIATION UNIT AND INTERMEDIATE
MAINTENANCE MANUAL**

**ARMY MODEL
AH-1P (PROD)
AH-1E (ECAS)
AH-1F (MODERNIZED COBRA)
HELICOPTERS**

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**HEADQUARTERS, DEPARTMENT OF THE ARMY
8 MAY 1980**

PIN: 045514-010

CHANGE

No. 14

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 30 April 1996

Aviation Unit and Intermediate
Maintenance Manual

**ARMY MODEL
AH-1P (PROD)
AH-1E (ECAS)
AH-1F (MODERNIZED COBRA)
HELICOPTERS**

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TM 55-1520-236-23-4, 8 May 1980, is changed as follows

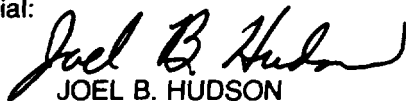
1. Remove and insert pages as indicated below. New or changed text material is indicated by a vertical bar in the margin. An illustration change is indicated by a miniature pointing hand.

Remove pages	Insert pages
i and ii	i and ii
v and vi	v and vi
xix and xx	xix and xx
FO-98	FO-98
FO-109	FO-109

2. Retain this sheet in front of manual for reference purposes.

By Order of the Secretary of the Army:

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DISTRIBUTION:

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C 13

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NO. 13

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 31 October 1995

Aviation Unit and Intermediate
Maintenance Manual

**ARMY MODEL
AH-1P (PROD)
AH-1E (ECAS)
AH-1F (MODERNIZED COBRA)
HELICOPTERS**

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Remove pages	Insert pages
i through vi	i through vi
vi.1/(vi.2 blank)	vi.1 and vi.2
vii and viii	vii and viii
viii.1/(viii.2 blank)	viii.1/(viii.2 blank)
ix and x	ix and x
x.1/(x.2 blank)	x.1/(x.2 blank)
xi and xii	xi and xii
-----	xii.1/(xii.2 blank)
xvii and xviii	xvii and xviii
xviii.1/(xviii.2 blank)	xviii.1 and xviii.2
xix through xxi/(xxii blank)	xix through xxii

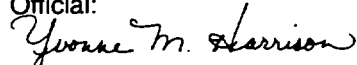
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WASHINGTON, D. C., 31 August 1994

Aviation Unit and Intermediate Maintenance Manual

**ARMY MODEL
AH-1P (PROD)
AH-1E (ECAS)
AH-1F (MODERNIZED COBRA)
HELICOPTERS**

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Remove pages	Insert pages
vi.1/(vi.2 blank)	vi.1/(vi.2 blank)
ix and x	ix and x
x.1 /(x.2 blank)	x.1/(x.2 blank)
xi and xii	xi and xii
xv and xvi	xv and xvi
xvii and xviii	xvii and xviii
xviii.1/(xviii. 2 blank)	xviii.1/(xviii.2 blank)
xix and xx	xix and xx
FO-42	FO-42
FO-53	FO-53
-----	FO-54.1 through FO-54.4
FO-63	FO-63
FO-82	FO-82
FO-83	FO-83
FO-85	FO-85

Remove pages

FO-88

FO-98

FO-104

FO-112

FO-121

FO-130

FO-138

Insert pages

FO-88

FO-98

FO-104

FO-112

FO-121

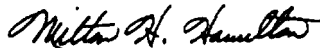
FO-130

FO-138

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DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 30 SEPTEMBER 1992

AVIATION UNIT AND INTERMEDIATE
MAINTENANCE MANUAL

ARMY MODEL
AH-1P (PROD)
AH-1E (ECAS)
AH-1F (MODERNIZED COBRA)
HELICOPTERS

TM 55-1520-236-23-4, 8 May 1980, is changed as follows:

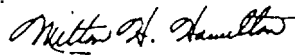
1. Remove and insert pages as indicated below. New or changed text material is indicated by a vertical bar in the margin. An illustration change is indicated by a miniature pointing hand.

Remove pages	Insert pages
xvii and xviii	xvii and xviii
xviii.1/xviii.2	xviii.1/xviii.2
FO-2	FO-2
FO-20	FO-20
FO-29	FO-29
FO-104	FO-104
FO-116	FO-116
FO-129	FO-129

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*General, United States Army
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WASHINGTON, D.C. 21 February 1991

AVIATION UNIT AND INTERMEDIATE
MAINTENANCE MANUAL

ARMY MODEL
AH-1P (PROD)
AH-1E (ECAS)
AH-1F (MODERNIZED COBRA)
HELICOPTERS

TM 55-1520-236-23-4, 8 May 1980, is changed as follows:

1. Remove and insert pages as indicated below. New or changed text material is indicated by a vertical bar in the margin. An illustration change is indicated by a miniature pointing hand.

Remove pages	Insert pages
a and b	a and b
Introduction	Introduction
i through vi	i through vi
- - - - -	vi.1/vi.2
vii and viii	vii and viii
- - - - -	viii.1/viii.2
ix and x	ix and x
- - - - -	x.1/x.2
xi through xvi	xi through xvi
- - - - -	xvi.1/xvi.2
- - - - -	xviii.1/xviii.2
xix through xxii	xix through xxi/xxii
FO-2	FO-2
FO-42	FO-42
FO-53	FO-53
FO-82	FO-82
FO-83	FO-83
FO-85	FO-85
FO-88	FO-88
FO-104	FO-104
FO-138	FO-138
Cover 1/2	Cover 1/2

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TM 55-1520-236-23-4
C 1 0

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Official:

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Brigadier General, United States Army
The Adjutant General

CARL E. VUONO
General, United States Army
Chief of Staff

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HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 24 May 1990

AVIATION UNIT AND INTERMEDIATE
MAINTENANCE MANUAL

ARMY MODEL
AH-1P (PROD)
AH-1E (ECAS)
AH-1F (MODERNIZED COBRA)
HELICOPTERS

TM 55-1520-236-23-4, 8 May 1980, is changed as follows:

1. Remove and insert pages as indicated below. New or changed text material is indicated by a vertical bar in the margin. An illustration change is indicated by a miniature pointing hand.

Remove pages

Insert pages

FO-119

FO-119

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CARL E. VUONO
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Chief of Staff

official:

WILLIAM J. MEEHAN II
Brigadier General, United States Army
The Adjutant General

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To be distributed in accordance with DA Form 12-31, AVUM and AVIM Maintenance requirements for AH-1F and AH-1P/E Helicopter, Attack.

CHANGE }
 No. 8 }

HEADQUARTERS
 DEPARTMENT OF THE ARMY
 WASHINGTON D.C., 29 December 1988

Aviation Unit and Intermediate
 Maintenance Manual

ARMY MODEL
 AH-1P (PROD)
 AH-1E (ECAS)
 AH-1F (MODERNIZED COBRA)
 HELICOPTERS

TM 55-1520-236-23-4, 8 May 1980, is changed as follows:

1. Remove and insert pages as indicated below. New or changed text material is indicated by a vertical bar in the margin. An illustration change is indicated by a miniature pointing hand.

Remove pages

Insert pages

xi and xii

xi and xii

- - -

xii.1/xii.2

xix through xxi/xxii

xix through xxi/xxii

- - -

FO-23.1

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No. 7 }

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 2 December 1988

Aviation Unit and Intermediate
Maintenance Manual

ARMY MODEL
AH-1P (PROD)
AH-1E (ECAS)
AH-1F (MODERNIZED COBRA)
HELICOPTERS

TM 55-1520-236-23-4, 6 May 1980, is changed as follows:

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Remove pages	Insert pages
c and d - - -	c and d FO-2.1/FO-2.2
FO- 10	FO-10
FO- 13	FO-13
FO-16	FO-16
FO-43	FO-43
FO-44	FO-44

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CHANGE: }
NO. 6 }

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DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 18 July 1988

Aviation Unit and Intermediate
Maintenance Manual

ARMY MODEL
AH-1P (PROD)
AH-1E (ECAS)
AH-1F (MODERNIZED COBRA)
HELICOPTERS

TM 55-1520-236-23-4, 8 May 1980, is changed as follows:

1. Remove and insert pages as indicated below. New or changed text material is indicated by a vertical bar in the margin. An illustration change is indicated by a miniature pointing hand.

Remove pages

iii through xxi/xxii
FO-123

Insert pages

iii through xxii
FO-123

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Chief of Staff

Official:

R. L. DILWORTH
Brigadier General, United States Army
The Adjutant General

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CHANGE }
NO. 5 }

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 31 August 1987

Aviation Unit and Intermediate
Maintenance Manual

ARMY MODEL
AH-1P(PROD)
AH-1E(ECAS)
AH-1F(MODERNIZED COBRA)
HELICOPTERS

TM 55-1520-236-23-4, 8 May 1980, is changed as follows:

1. Title has been changed as stated above.
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Remove pages	Insert pages
FO-18	FO-18
FO-20	FO-20
-----	FO-21.1
-----	FO-22.1
FO-28	FO-28
FO-30	FO-30
FO-33	FO-33
-----	FO-50.1
- - - -	FO-51.1
FO-52	FO-52
FO-60	FO-60
FO-68 and FO-69	FO-68 and FO-69
-----	FO-81.1
FO-87	FO-87
FO-90	FO-90
FO-93	FO-93
-----	FO-100.1
-----	FO-101.1
-----	FO-102.1
FO-103	FO-103
FO-109	FO-109
FO-115	FO-115
FO-122	FO-122
FO-124	FO-124
FO-130	FO-130
FO-138	FO-138

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TM 55-1520-236-23-4
C 5

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Chief of Staff

R. L. DILWORTH
Brigadier General, United States Army
The Adjutant General

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CHANGE }
No. 4 }

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 22 April 1985

Aviation Unit and Intermediate
Maintenance Manual

ARMY MODEL
AH-1S(PROD)
AH-1S(ECAS)
AH-1S(MODERNIZED COBRA)
HELICOPTERS

TM 55-1520-236-23-4, 8 May 1980, is changed as follows:

1. Remove and insert pages as indicated below. New or changed text material is indicated by a vertical bar in the margin. An illustration change is indicated by a miniature pointing hand.

Remove pages	Insert pages
FO-44	FO-44
FO-46 thru FO-48	FO-46 thru FO-48
FO-50 and FO-51	FO-50 and FO-51
FO-53 thru FO-55	FO-53 thru FO-55
FO-57 thru FO-64	FO-57 thru FO-64
FO-67 and FO-68	FO-67 and FO-68
FO-70 thru FO-72	FO-70 thru FO-72

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JOHN A. WICKHAM, JR.
General, United States Army
Chief of Staff

Official:

DONALD J. DELANDRO
Brigadier General, United States Army
The Adjutant General

DISTRIBUTION:

To be distributed in accordance with DA Form 12-31, Organizational, DS and GS Maintenance requirements for AH-1S(MOD COBRA) and AH-1S(PROD)(ECAS) aircraft.

U R G E N T

TM 55-1520-236-23-4
C3

CHANGE }
NO. 3 }

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 2 November 1984

Aviation Unit and Intermediate Maintenance Manual

ARMY MODEL
AH-1S(PROD)
AH-1S(ECAS)
AH-1S(MODERNIZED COBRA)
HELICOPTERS

TM 55-1520-236-23-4, 8 May 1980, is changed as follows:

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Remove pages

c/d

Insert pages

c and d

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U R G E N T

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NO. 2 }

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 12 October 1983

Aviation Unit and Intermediate
Maintenance Manual

ARMY MODEL
AH-IS (PROD)
AH-IS (ECAS)
AH-1S (MODERNIZED COBRA)
HELICOPTERS

TM 55-1520-236-23-4, 8 May 1980, is changed as follows:

NOTICE

When the following list of changes on TM 55-1520-236-23-Series manuals are received and incorporated into manuals they will supersede the TM 55-1520-239-23-Series manuals.

TM 55-1520-236-23-1, Changes 1 through 13
TM 55-1520-236-23-2, Changes 1 through 3
TM 55-1520-236-23-3, Changes 1 and 2
TM 55-1520-236-23-4, Changes 1 and 2

1. Remove and insert pages as indicated below.

Remove pages

Insert pages

Fold Outs

FO-87

FO-87

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Chief of Staff

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The Adjutant General

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CHANGE

No. 1

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 10 September 1982

Aviation Unit and Intermediate
Maintenance Manual

ARMY MODEL
AH-1S(PROD)
AH-1S(ECAS)
AH-1S(MODERNIZED COBRA)
HELICOPTERS

TM 55-1520-236-23-4, 8 May 1980, is changed as follows:

1. Remove and insert pages as indicated below.

	Remove pages	Insert pages
Table of Contents	i thru iii/iv	i thru xxi/xxii
Fold Outs	FO-48	FO-48
	FO-66	FO-66
	FO-98	FO-98
	FO-130	FO-130
	FO-134 thru FO-136	FO-134 thru FO-136

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General, United States Army
Chief of Staff

Official:

ROBERT M. JOYCE
Brigadier General, United States Army
The Adjutant General

DISTRIBUTION:

To be distributed in accordance with DA Form 12-31, Organizational Maintenance Requirements for AH-1S(PROD) aircraft.

WARNING

Personnel performing operations, procedures, and practices which are included or implied in this technical manual shall observe the following warnings. Disregard of these warnings and precautionary information can cause serious injury, or death.

Warnings, cautions, and notes are used to emphasize important and critical instructions and shall be used for the following conditions:

WARNING

An operating procedure, practice, etc., which, if not correctly followed, could result in personal injury or loss of life.

CAUTION

An operating procedure, practice, etc., which if not strictly observed, could result in damage to or destruction of equipment.

NOTE

An operating procedure, condition, etc., which it is essential to highlight.

STARTING ENGINE

Starting and Operation
of the helicopter will be performed only by
authorized personnel in accordance with AR 95-1.

HIGH VOLTAGE

The helicopter should be electrically grounded when parked.
Turn off all power switches before making electrical connections or disconnections.
Serious burns and electrical shock can result from contact
with exposed electrical wires or connectors.

RADIATION HAZARD

Self-luminous dials contain radioactive materials.
If such an instrument is broken or becomes unsealed, avoid personal contact.
Use forceps or gloves made of rubber or polyethylene to pick up contaminated material.
Place material and gloves in a plastic bag.
Seal bag and dispose of it as radioactive waste
in accordance with AR 755-15 and TM 3-261 (TB 43-0108).
Repair procedures shall conform to requirements in AR 700-52.

DANGEROUS CHEMICALS

Exposure to high concentrations of fire extinguishing agents can cause severe irritation of eyes and nose,

Corrosive Battery Electrolyte (Potassium Hydroxide). Wear rubber gloves, apron, and face shield when handling leaking batteries. If potassium hydroxide is spilled on clothing, or other material, wash immediately with clean water. If spilled on personnel, immediately start flushing the affected area with clean water. Continue washing until medical assistance arrives.

Use solvents or chemicals in a well ventilated area. Do not inhale vapors or allow to come in contact with skin or eyes. Observe proper fire prevention rules.

LASER LIGHT

The laser beam is dangerous and can cause blindness if it enters the eye either directly or reflected from a shiny surface. Crewmen shall wear approved laser protective visors whenever in controlled area when laser rangefinder or laser target designators are being used. Laser shall be used only in controlled areas by qualified personnel.

NOISE LEVEL

Sound pressure levels in the helicopter during some operating conditions exceed the Surgeon General's hearing conservation criteria as defined in TB MED 251. Hearing, protection devices, such as the aviator helmet or ear plugs, are required to be worn by all personnel in and around the helicopter during its operation.

ASBESTOS FIBERS

Avoid creating dust, Breathing asbestos dust may cause serious bodily harm.

ARMAMENT

When working on, or near an armed helicopter, take all possible precautions to avoid accidental firing of armament. Personnel shall not occupy possible firing pattern in front of or up to 20 feet behind rocket pods.

Munitions shall be handled by authorized personnel only. All weapons shall be dry-fired. Only dummy ammunition with smooth cases like live ammunition shall be used.

JETTISON

All ground safety pins must be removed before flight. Failure to do so will prevent emergency jettison of stores.

Jettison circuit may be activated with BAT" switch OFF and pilot WING STORES JTSN circuit breaker OPEN. For positive deactivation of jettison circuit, open both the PLT JTSN and GNR JTSN circuit breakers located in the pilot's side console. Serious injury can result from accidental ground jettison.

SANDING DUST

Sanding on reinforced laminated glass produces fine dust that may cause skin irritations. Observe necessary protective measures.

TRANSMISSION LEVELING

Do not attempt to level transmission with "Jacks Only." Hoist must be used in conjunction with jacks while lifting transmission.

EXTERNAL STORES

Prior to any helicopter maintenance functions that require external stores be removed JETTISON cartridge shall be removed. Remove jettison cartridges from pylon stores ejection device prior to placing helicopter in a hangar, to prevent injury to personnel and damage to equipment. Exception: Removal is not necessary when helicopter is to be placed in hangar for short-term, providing both PLT JTSN and GNR JTSN circuit breakers in the pilot's side console are OPEN, and warning signs indicate that helicopter has an armed jettison system.

CANOPY REMOVAL SYSTEM

Ground safety pins must be installed in pilot and gunner arming/firing handles of canopy removal system whenever the helicopter is on the ground. Pins should be installed by crew.

CLEANING HYDRAULIC COMPONENTS

The use of any alcohol in cleaning components which contact hydraulic fluids is prohibited. Formation of a polymeric residue can result, which could impair mechanical operation of the component.

HANDLING HYDRAULIC FLUID (MIL-H-83282)

When handling hydraulic fluid (MIL-H-83282), Table 1-3, Item 61, observe the following

- Prolonged contact with liquid or mist can irritate eyes and skin.
- After any prolonged contact with skin, immediately wash contacted area with soap and water. If liquid contacts eyes, flush them immediately with clear water.
- If liquid is swallowed, do not induce vomiting get immediate medical attention.
- Wear rubber gloves when handling liquid. If prolonged contact with mist is likely, wear an appropriate respirator.
- When fluid is decomposed by heating, toxic gases are released.

EPOXY BASED ADHESIVE

Epoxy based adhesive, P/N EA934, contains an asbestos filler which could be inhaled or ingested during grinding, cutting, or sanding operations on cured epoxy material.

TOOLS

Use only chrome plated steel or unplated steel tools for disassembly or reassembly procedures described in this manual. Use of cadmium or zinc plated tools is not permitted.

GROUNDING

All aircraft parked outside will be grounded and bonded, in accordance with FM 1-500, to the aerospace ground equipment while servicing, i.e., fueling or defueling, arming (ammunition or explosives), oxygen, hydraulic fluids or any flammable liquids. Grounding is not necessary for aircraft parked outside unless one of the above is being accomplished.

INSPECTION OF REMOVED COMPONENT'S

When components are being removed from an aircraft, all inspections required by the next phase maintenance inspection must be accomplished prior to either immediate re-use or storage. Upon installation, the component will be inspected in accordance with the current phase either that phase the receiving aircraft is in or if in between phase, the last phase performed). This will ensure that a re-used component will not overfly any PM inspections, and that it will be properly interfaced with the receiving aircraft phase sequence.

TECHNICAL MANUAL

No. 55-1520-236-23-4

**HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 8 May 1980**

**Aviation Unit and Intermediate
Maintenance Manual**

**ARMY MODEL
AH-1P (PROD)
AH-1E (ECAS)
AH-1F (MODERNIZED COBRA)**

HELICOPTERS

NOTE

This manual is printed in five volumes, as follows:

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TM 55-1520-236-23-2, consisting of Table of Contents. Chapters 7 through 17. Appendix A through C.

TM 55-1520-236-23-3, consisting of Table of Contents, Appendix D through G, and Index.

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The Preface, Appendices and Index are applicable to all volumes.

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NO. 55-1520-236-23

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AVIATION UNIT AND INTERMEDIATE MAINTENANCE MANUAL
ARMY MODEL

AH-1P (PROD)
AH-1E (ECAS)
AH-1F (MODERNIZED COBRA)
HELICOPTERS

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

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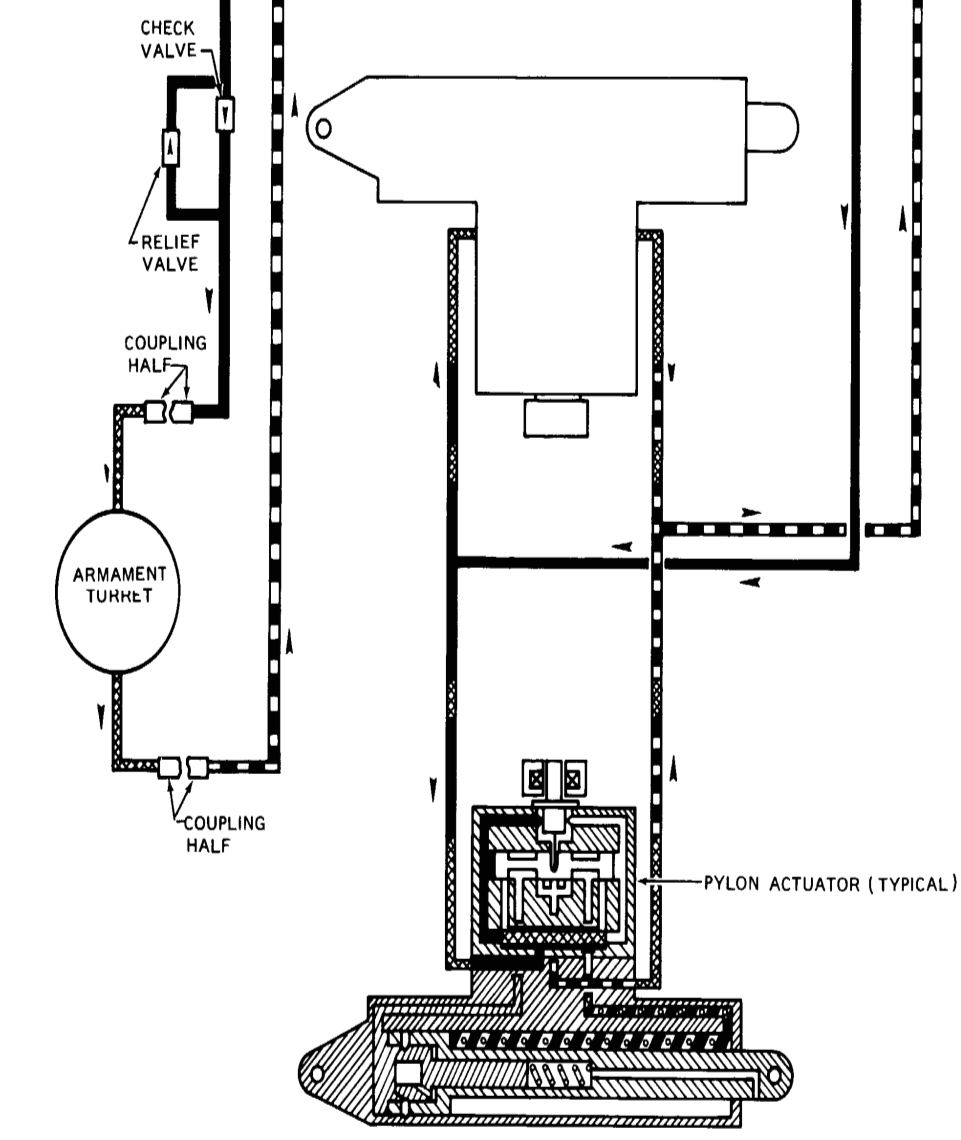
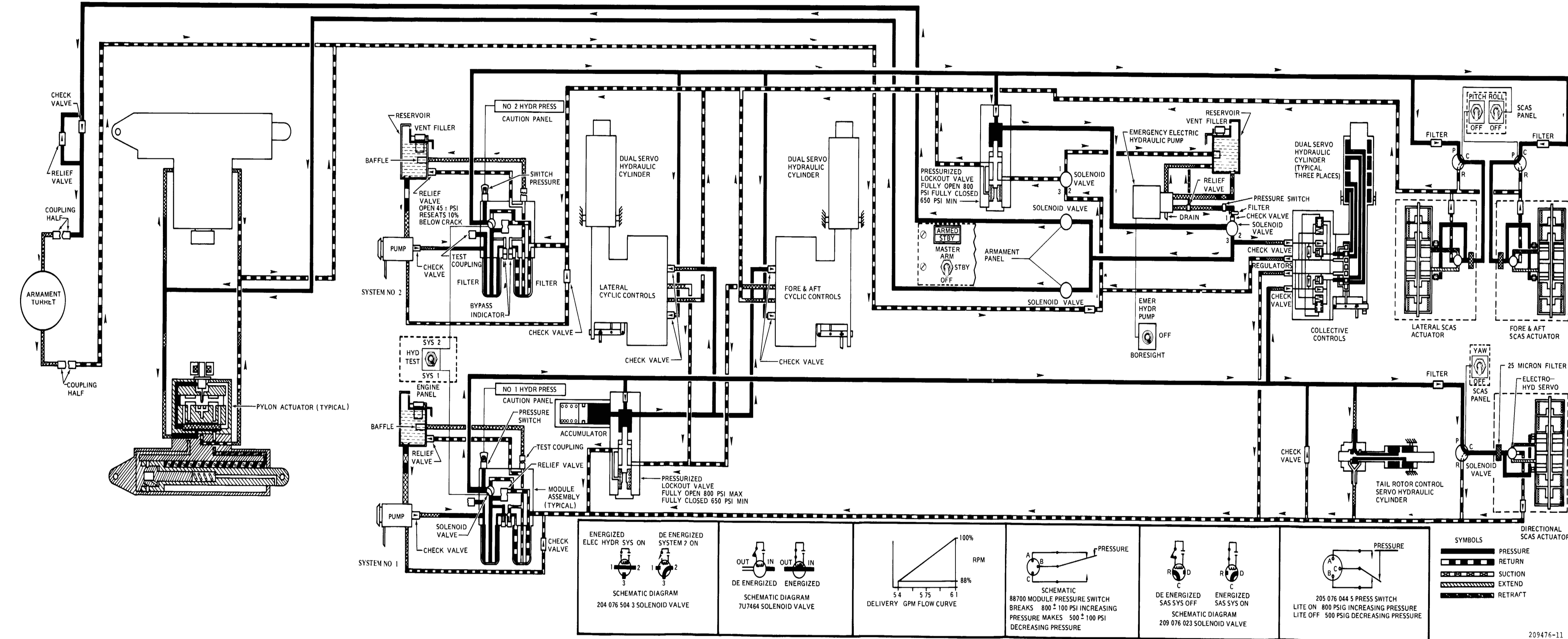
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Major General, United States Army
The Adjutant General

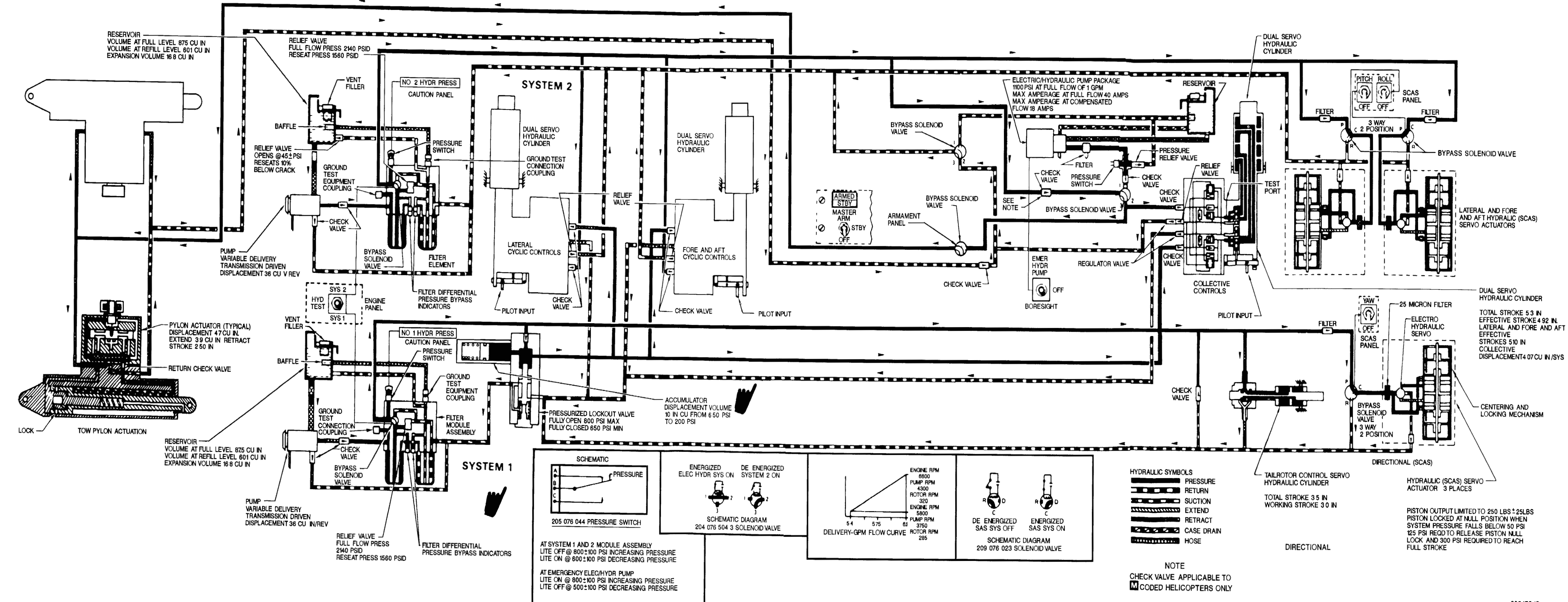
E. C. MEYER
General, United States Army
Chief of Staff

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FO 1 Hydraulic System Schematic



RESERVOIR
VOLUME AT FULL LEVEL 875 CU IN
VOLUME AT REFILL LEVEL 601 CU IN
EXPANSION VOLUME 16.8 CU IN

RELIEF VALVE
FULL FLOW PRESS 2140 PSID
RESEAT PRESS 1560 PSID

NO 2 HYDR PRESS
CAUTION PANEL

SYSTEM 2

ELECTRIC HYDRAULIC PUMP PACKAGE
100 PSI AT FULL FLOW OF 1 GPM
MAX AMPERAGE AT FULL FLOW 40 AMPS
MAX AMPERAGE AT COMPENSATED
FLOW 15 AMPS

RESERVOIR

TOW PYLON ACTUATION
LOCK

PYLON ACTUATOR (TYPICAL)
DISPLACEMENT 47 CU IN
EXTEND 3.9 CU IN RETRACT
STROKE 2.50 IN

RETURN CHECK VALVE

RESERVOIR
VOLUME AT FULL LEVEL 875 CU IN
VOLUME AT REFILL LEVEL 601 CU IN
EXPANSION VOLUME 16.8 CU IN

RELIEF VALVE
FULL FLOW PRESS 2140 PSID
RESEAT PRESS 1560 PSID

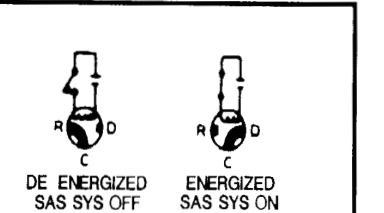
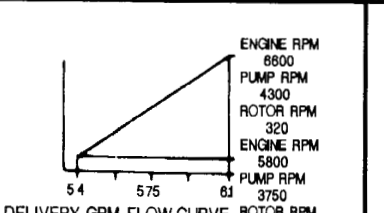
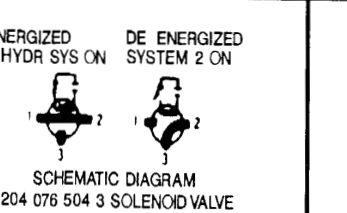
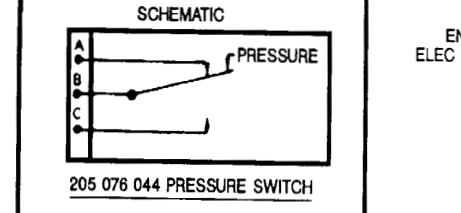
SYSTEM 1

NO 1 HYDR PRESS
CAUTION PANEL

SYSTEM 2

ACCUMULATOR
DISPLACEMENT VOLUME
10 IN CU FROM 650 PSI
TO 200 PSI

PRESSURIZED LOCKOUT VALVE
FULLY OPEN 800 PSI MAX
FULLY CLOSED 850 PSI MIN



HYDRAULIC SYMBOLS

- PRESSURE
- RETURN
- SUCTION
- EXTEND
- RETRACT
- CASE DRAIN
- HOSE

DIRECTIONAL

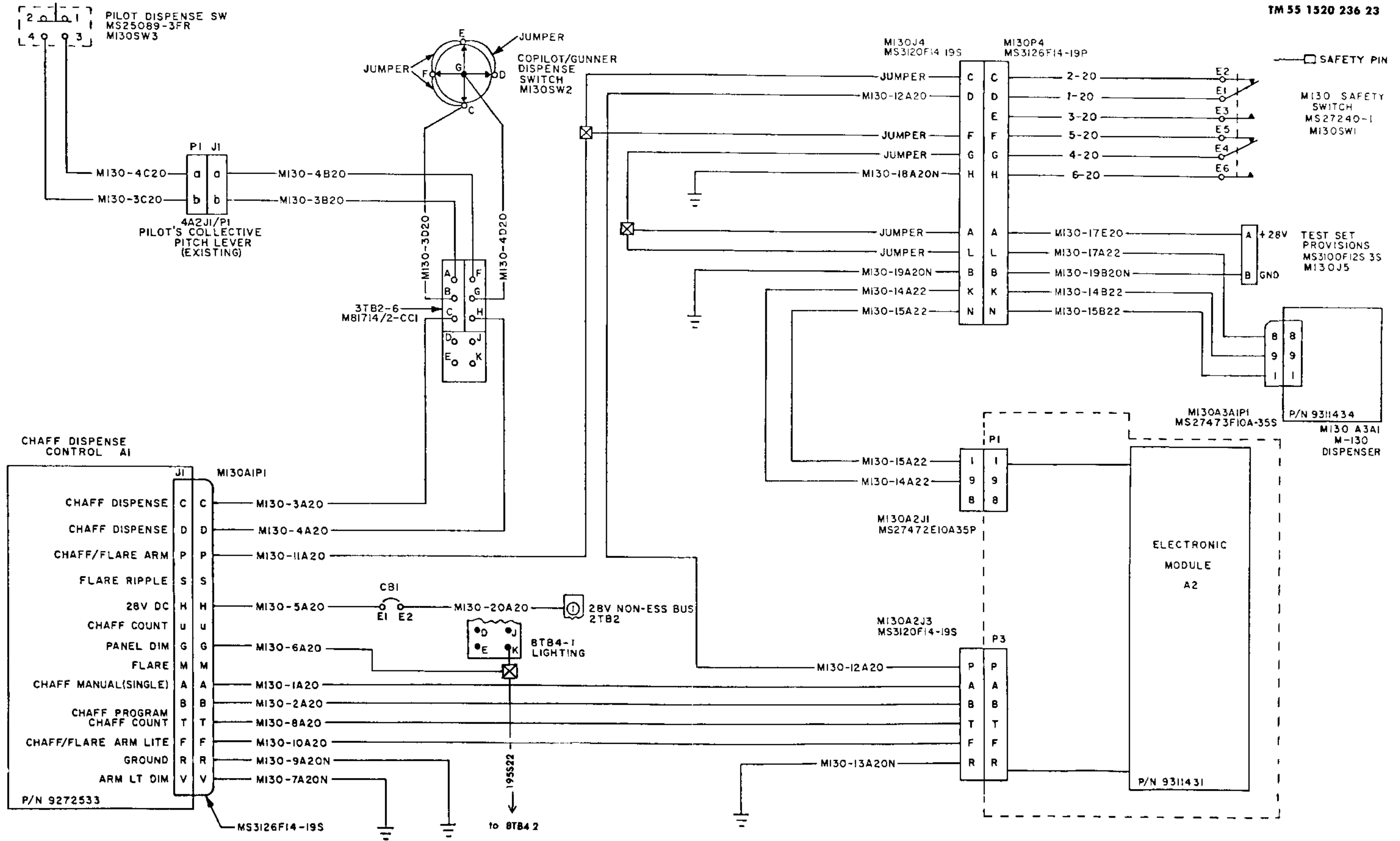
TAILROTOR CONTROL SERVO
HYDRAULIC CYLINDER
TOTAL STROKE 3.5 IN
WORKING STROKE 3.0 IN

DIRECTIONAL (SCAS)

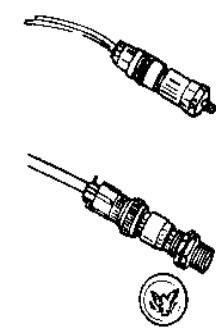
HYDRAULIC (SCAS) SERVO
ACTUATOR 3 PLACES

PISTON OUTPUT LIMITED TO 250 LBS±25LBS
PISTON LOCKED AT NULL POSITION WHEN
SYSTEM PRESSURE FALLS BELOW 50 PSI
125 PSI REQ'D TO RELEASE PISTON NULL
LOCK AND 300 PSI REQUIRED TO REACH
FULL STROKE

NOTE
CHECK VALVE APPLICABLE TO
CODED HELICOPTERS ONLY



FO-2 1 M P E INTERFACE WIRING DIAGRAM (M 130)



MAGNETIC PICKUP

MAGNETIC PICKUP switch is set to Common for all helicopter work so that both Accelerometer inputs are referenced to the same Magnetic Pickup pulse from the main rotor swashplate Independent is used only if two Magnetic Pickups are used as on left and right props of an airplane Then the left Accelerometer is compared to the left Magnetic Pickup and right to right

VERIFY TUNE RPM RANGE AND RPM TUNE

The heart of the Balancer is its tuneable electronic band pass filter The Accelerometer senses not only the one per-rev of the rotor being worked but all other vibrations as well These might be from other rotors n per-rev (where n = number of blades) shafts gears bearings engine etc The Balancer's filter is tuned by means of the RPM Range switch and RPM Tune dial to the one per rev of the rotor being worked The subsequent sections of the Balancer (measuring amplitude and phase) then deal only with the one per rev all other rates having been electrically rejected

Tuning of the electronic band pass filter to the exact rotor RPM is accomplished by simple manipulation of the Verify Tune button and RPM Tune dial TUNING IS IMPORTANT and instructions are found elsewhere in this TM and on the Track and Balance Charts

The filter is stagger tuned which means it has a broad top and sharp skirt characteristic This gives it considerable tolerance for RPM variation of the ship while retaining good rejection of other unwanted vibration signals When the Verify Tune button is pushed the filter is switched to a normal or sharp peak configuration This property

is used as a part of the tuning procedure and for troubleshooting

TROUBLESHOOTING

If there is an unknown vibratory disturbance an Accelerometer is mounted in the area where the disturbance is felt Then the RPM Tune dial is slowly turned until the meter peaks (reads maximum) It is best to peak the meter with the Verify Tune button depressed because the filter is sharper The RPM or vibration rate of the disturbance is then read directly from the RPM Tune dial (and RPM Range switch)

It is obvious that if the meter reads near zero there is no vibration at the indicated rate of the point to which the Accelerometer is attached

Knowing the vibration rate the source of the disturbance can usually be located keeping in mind that it might be shaft rate blade rate or multiples thereof or gear clash rate etc

ACCELEROMETER

Senses vibration from out of track or out of balance rotors and parts

MAGNETIC PICKUP

Triggers Strobex and provides phase reference for Phazor

STROBEX RECEPTACLE

28 V D C POWER

ACCELEROMETER INPUTS

Channels A and B are identical but are used as described only to establish a convention and avoid careless errors These Accelerometer inputs are also used for troubleshooting vibrations in which case the Accelerometer may be placed wherever the vibration is felt Then the RPM Tune dial is adjusted until the meter peaks and the RPM (rate) of the disturbance is read directly from the dial

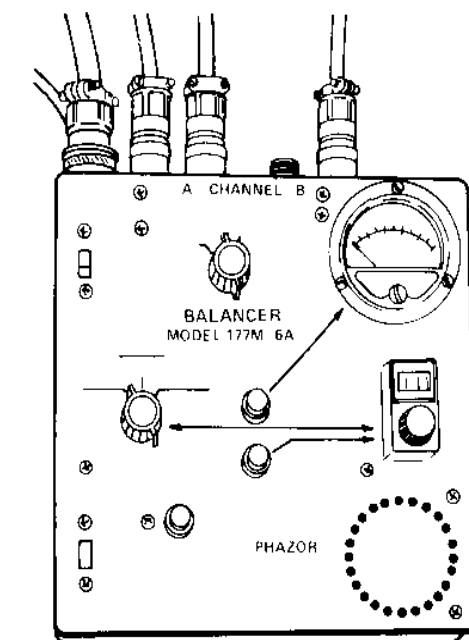
Channel A Accelerometer typically used to measure lateral one per rev for main rotor balance

Channel B Accelerometer typically used to measure vertical one per-rev for main rotor track adjustment Also used for tail rotor balancing

MAGNETIC PICKUP INPUTS

Magnetic Pickup signal from swashplate assembly is used to trigger Strobex when Function switch is set to Track and as a rotor azimuth reference against which the Clock Angle of the Accelerometer signal is measured when Function switch is set to A or B

This Magnetic Pickup receptacle is used when two pickups are in use as for left and right propellers of an airplane



INTERRUPTER LOGIC

Since the rotating swashplate is fitted with two Interrupters one of which is double the Interrupter Logic switch is set to Double The Phazor then responds only to the double pulse which is the one per rev phase reference needed for the Phazor

TEST BUTTON

When the Test button is pushed the Accelerometer signals are disconnected and the Magnetic Pickup signal is fed into itself This causes the 12 00 and 6 00 o'clock lights to light

IMPORTANT

The 12 00 and 6 00 o'clock lights must be seen or Phazor is not ready to use

PHAZOR RING OF LIGHTS

This is a phase meter which measures the Clock Angle between the rotor azimuth angle derived from the Magnetic Pickup and the oscillating Accelerometer signal This Clock Angle plotted on the Chart tells WHERE to change weight or pitch-link to smooth the rotor

NOTE

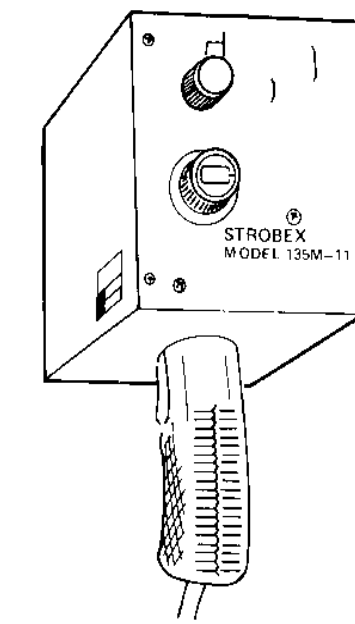
Tail rotors are not fitted with Magnetic Pickups so the Strobex is used instead of the Phazor to measure Clock Angle

METER

Meter reads vibration amplitude in IPS (Inches Per Second) This is the velocity of the measured point as it goes thru the zero crossing of its oscillatory (vibratory) motion Scale #1 reads 0 to 10 IPS

Push for Scale 2 button is pushed if reading is off scale Then the Balancer reads 0 to 10 IPS

Vibration amplitude plotted on the Chart tells HOW MUCH weight or track change is required to smooth the rotor



TRIGGER SWITCH

Turns DC Power on and off

STROBEX CABLE

Plugs into Strobex receptacle of Balancer

STROBEX

The Strobex Tracker model 135M 11 is a small hand held lightweight point source strobolamp designed especially for helicopter blade tracking and balancing both on the ground and in flight It is used to illuminate retro-reflective Targets secured to blade tips for tracking or on tail rotor blade grips for balancing By virtue of the point source narrow extremely bright beam it can be used effectively day or night in all kinds of weather including bright sunlight

The 135M 11 Strobex Tracker is used with a 177M 6A Balancer for tracking and balancing It may also be used as a conventional speed measuring strobe in which case the RPM of shafts rotors and accessories may be read directly

The 135M 11 Strobex has a trigger in the pistol grip handle for DC power switching a five position mode switch and a 10 turn RPM dial to adjust the flash rate

Positions A D and E operate at low intensity and to high flash rates and B and C operate at higher intensity (about 4 times) but to lower maximum flash rates The lower intensity is adequate for viewing the reflective targets on all but the biggest helicopters in any kind of daylight

The five modes of operation are

A — — — When set to A the Strobex operates a slave mode flashing only when commanded by the Balancer and is used for main rotor tracking and tail rotor balancing

The rotating swashplate is fitted with two Interrupters (one of which is double because of the Phazor) When the Balancer is set to track the Strobex will flash twice per revolution illuminating each of the two blade tips when they pass the front of the helicopter (and also when they pass over the tailboom) Thus the two Tip Targets will be seen superimposed at the front of the helicopter (They can also be seen over the tailboom but this is not useful except for ground

tracking) Since one Tip Target has a reflective horizontal bar and the other has a vertical bar the judgment of track is simple The reflective Targets face inboard so they are viewed from the cabin either on the ground or in flight

When an Accelerometer is secured on the tail rotor gearbox and connected to the Channel B input and the Balancer is switched to B the Strobex will flash once per rev in response to the vibration signal induced by the out of balance rotor

When a reflective Target secured to the rotor hub is viewed from a distance with the Strobex the Target will appear stopped at some angle This is the Clock Angle to be entered on the Balance Chart and will tell where to change weight

B — — — Position B is also used for main rotor tracking where higher intensity light is required The unique locking oscillator of position B is typically used for the larger rotors with multiple (4 5 angle) blades In those cases only one single Interrupter is secured to the rotating swashplate and the oscillator causes the Strobex to flash for the other blades By fine adjustment of the Strobex RPM control the blades may be spread for easy resolution

When applied to the two blade rotor systems (BELL) where two Interrupters are installed on the swashplate position B is used for greater light output The oscillator is set to flash at a rate slightly slower than blade rate (in accordance with the formula on the back of the Strobex RPM = blade rate X 0.4)

Then the Interrupter commands the Strobex before the oscillator and it operates as if there were no oscillator In this case the Targets cannot be spread

The oscillator may be set to double the blade rate in which case the Tip Targets will be seen at twice as many positions around the rotor disc For instance the Targets of a two blade rotor are typically seen at 12 00 and 6 00 o'clock (as determined by location of Interrupters) If the oscillator is set to double the blade rate the Targets will also be seen at 3 00 and 9 00 o'clock

C — — — This is a free running oscillator and is used as a tachometer for speed (RPM) measuring All external signals are disconnected and the Strobex flashes only in response to its internal oscillator Flash rate is adjustable from 100 to 1 000 RPM (flashes per minute)

D — — — This is also a free running oscillator and is used for tail rotor tracking as well as speed measuring Since there is no Magnetic Pickup mounted on the tail rotor the flash rate of the free-running oscillator is adjusted to double or four times the rotor rate (for a two blade tail rotor) so the single grip target appears as a stopped image of two or four Then by viewing the rotor disc edge on from the cabin door reflective Tip Targets can be seen superimposed for a judgment of track Flash rate from 1 000 to 10 000 RPM

E — — — This is a locking oscillator like B but operates at higher rates and is used for viewing the track of airplane propellers Requires a Magnetic Pickup input pulse

EQUIPMENT	PART DESIGNATION	NOTES	NO OF UNITS	OPER TIME MIN	ELECTRICAL REQUIREMENTS PER UNIT								
					115 VOLTS 3 PHASE			115 VOLTS 1 PHASE			26 VOLTS 1 PHASE		
					VA	WATTS	VARs	VA	WATTS	VARs	VA	WATTS	VARs
AC BUS SYSTEM TOW OFF													
26 VAC (TOW NOT ENERGIZED)													
FLIGHT INSTRUMENTS COURSE IND	212 070 180 3		1	15 00							9 12	1 46	9 00
RADIO NAV & COMM LF ADF REC VOR LOC GS	AN/ARN 89 AN/ARN 123		1 1	15 00 15 00							4 01 10 40	2 52 8 32	3 12 6 24
AC POWER PF COR CAP	5 MFD 100V		1	15 00							8 60	1 71	8 43
115 VAC (TOW NOT ENERGIZED)													
ARMAMENT HELMENT ST TURRET CUN	XM 28		1 1	15 00 15 00				13 35 17 92	13 35 9 14	0 0 15 41			
FLIGHT CONTROLS STAB AUG SYS	570 947 001		1	15 00				16 59	15 21	6 62			
ENGINE INSTRUMENTS FUEL QTY SYS FUEL QTY IND FUEL QTY XMR	209 060 602		1 1 2	15 00				2 92	2 91	0 26			
FLIGHT INSTRUMENTS COMPASS SYS DIR GYRO XMTR SERVO AMP ATT GYRO RATE SW GYRO HSI IND PLT ATT IND	AN/ASN 43 CN/998()/ASN T 611()/ASN AM 3209/ASN LEAR-SIGLER 9000C TYPE MC I 209 070 660 209 076 661 1		1 1 1 1 1 1 1 1	15 00				16 39 12 32 17 92 4 91 25 00 10 00	15 36 12 00 15 93 1 21 20 00 9 39	5 73 -2 79 8 21 -4 76 15 00 3 44			
AC POWER MAIN INVRLY	214 075 150 1		1	15 00				5 10	5 07	0 51			
AC BUS SYSTEM TOW ON													
26 VAC (WITH TOW ENERGIZED)													
FLIGHT INSTRUMENTS COURSE IND	212 070 180 3		1	15 00							9 12	1 46	9 00
RADIO NAV & COMM LF ADF REC VOR LOC GS	AN/ARN 89 AN/ARN 123		1 1	15 00 15 00							4 01 10 40	2 52 8 32	3 12 6 24
AC POWER PF COR CAP	5 MFD 100 V		1	15 00							8 60	1 71	8 43
115 VAC (WITH TOW ENERGIZED)													
ARMAMENT TOW REF S1 TOW MIS SY HELMENT ST TUR CONT 3PH	XM 65 XM 65 XM 28		1 1 1 1	15 00 15 00 15 00 15 00	27 92 110 64	24 63 104 23	13 14 37 11			13 35	13 35	0 0	
FLIGHT CONTROLS STAB AUG SYS	570 947 001		1	15 00	17 81	9 21	15 24	16 59	15 21	6 62			

EQUIPMENT	PART DESIGNATION	NOTES	NO OF UNITS	OPER TIME MIN	ELECTRICAL REQUIREMENTS PER UNIT								
					115 VOLTS 3 PHASE			115 VOLTS 1 PHASE			26 VOLTS 1 PHASE		
					VA	WATTS	VARs	VA	WATTS	VARs	VA	WATTS	VARs
ENGINE INSTRUMENTS													
FUEL QTY SYS	209 060 662		1	15 00				2 92	2 91	0 26			
FUEL QTY IND			1										
FUEL QTY XMR			2										
FLIGHT INSTRUMENTS													
COMP ASSY SYS	AN/ASN 43		1										
DIR GYRO	CN/998()/ASN		1	15 00				16 39	15 36	5 73			
XMTR	T 611()/ASN		1										
SERVO AMP	AM 3209/ASN		1	15 00				12 32	12 00	-2 79			
ATT GYRO	LEAR-SIGLER 9000C		1	15 00	17 94	15 93	8 25						
RATE SW GYRO	TYPE MC-1		1	15 00	4 89	1 20	4 74						
HSI IND	209 070 660		1	15 00				25 00	20 00	15 00			
ATT IND3PH	209 075 661 1		1	15 00				3 52	3 33	1 15			
AC POWER													
MAIN INV RLY	214 075 150 1		1	15 00				5 10	5 07	0 51			

209099-25-2

EQUIPMENT	PART DESIGNATION	NOTES	NO OF UNITS	OPFR TIME MIN	VOLTAGE		FREQ		PWR SDR INF	PWR FACT	PHASE A TO B		CONNECTED LOADS PHASE B TO C		PHASE C TO A	
					MIN	MAX	MIN	MAX			WATTS	VAR	WATTS	VAR	WATTS	VAR
AC BUS SYS TOW OFF																
26 VAC (TOW NOT ENERGIZED)																
FLIGHT INSTRUMENTS																
COURSE IND	212 070 180 3		1	15 00	24 5	27 5	380	420	SPEC	0 160				1 46	9 00	
RADIO NAV & COMM																
LF ADF REC	AN/ARN 89		1	15 00	24 5	27 5	380	420	MEA	0 629						
VOR LOC GS	AN ARN 123		1	15 00	24 5	27 5	380	420	SPEC	0 800				2 52	3 12	
AC POWER														8 32	6 24	
PF COR CAP	5 MFD 100V		1	15 00	24 5	27 5	360	440	MEA	0 199						
TOTAL 26 VAC (TOW NOT ENERGIZED)														1 71	8 43	
115 VAC (TOW NOT ENERGIZED)														14 01	9 93	
ARMAMENT														17 17 VA AT		
HELMET ST			1	15 00	107 5	119 5	380	420	MEA	1 000	13 35	0 0				
TURRET CON	XM 28		1	15 00	108 0	118 0	360	440	MEA	0 510	9 14	15 41				
FLIGHT CONTROLS																
STAB AUG SYS	570 047 001		1	15 00	108 0	118 0	380	420	MEA	0 917	15 21	6 62				
ENGINE INSTRUMENTS																
FUEL QTY SYS																
FUEL QTY IND	209 060 602		1	15 00	107 5	119 5	360	440	MEA	0 996	2 91	0 26				
FUEL QTY XMR			1													
			2													
FLIGHT INSTRUMENTS																
COMPASS SYS																
DIP GYRO	AN/ASN 43		1													
XMR	CN/9981)/ASN		1	15 00	108 0	118 0	380	420	MEA	0 937				15 36	5 73	
SERVO AMP	T 611() ASN		1													
ATT GYRO	AM 3209 ASN		1	15 00	108 0	118 0	380	420	MEA	0 974						
RATE SW GYRO	LEAR SIGLER 9000C		1	15 00	108 0	118 0	380	420	MEA	0 889	15 93	8 21		12 00	2 79	
HSI IND	TYPE MC-1		1	15 00	108 0	118 0	380	420	MEA	-0 247	1 21	-4 76				
PLT ATT IND	209 070 660		1	15 00	108 0	118 0	380	420	MEA	0 800						
	209 075 661 1		1	15 00	108 0	118 0	380	420	SPEC	0 939	9 39	3 44		20 00	15 00	
AC POWER																
MAIN INV RLY	214 075 150 1		1	15 00	108 0	118 0	360	440	MEA	-0 995	5 07	-0 51				
TOTAL 115 VAC (TOW NOT ENERGIZED)														72 22	28 67	
														77 70 VA AT		
														0 929 PF LAG		
TOTAL PER PHASE 26 VAC & 115 VAC AC BUS SYS TOW OFF														47 36	17 93	
														50 64 VA AT		
														0 935 PF LAG		
TOTAL 3 PHASE AC BUS SYS TOW OFF														72 22	28 67	
														61 37	27 86	
														77 70 VA AT		
														0 911 PF LAG		
														133 59	56 54	
														145 06 VA AT	0 921 PF LAGGING	

EQUIPMENT	PART DESIGNATION	NOTES	NO OF UNITS	OPFR TIME MIN	VOLTAGE		FREQ		PWR SCR INF	PWR FACT	PHASE A TO B		CONNECTED LOADS PHASE B TO C		PHASE C TO A	
					MIN	MAX	MIN	MAX			WATTS	VAR	WATTS	VAR	WATTS	VAR
AC BUS SYS TOW ON																
26 VAC (WITH TOW ENERGIZED)																
FLIGHT INSTRUMENTS			1	15 00	24 5	27 5	380	420	SPEC	0 160			1 46	9 00		
COURSE IND 212 070 180 3																
RADIO NAV & COMM																
LF/ADF REC	AN/ARN 89		1	15 00	24 5	27 5	380	420	MEA	0 629			2 52	3 12		
VOR/LOC/GS	AN/ARN 123		1	15 00	24 5	27 5	380	420	SPEC	0 800			8 32	6 24		
AC POWER																
PF COR CAP	5 MFD 100V		1	15 00	24 5	27 5	360	440	MEA	0 199						
TOTAL 26 VAC (WITH TOW ENERGIZED)													1 71	8 43		
													14 01	9 93		
													17 17	VA AT		
													0 816	PF LAG		
115 VAC (WITH TOW ENERGIZED)																
ARMAMENT																
TOW REF SI	XM 65		1	15 00	108 5	117 5	380	420	MEA	-0 882	11 53	9 22				
TOW MIS SY	XM 65		1	15 00	108 5	117 5	380	420	MEA	0 942	24 29	37 01	-25 09	2 38	11 07	18 98
HELEMENT ST			1	15 00	107 5	119 5	380	420	MEA	1 000			32 20	24 13	47 74	24 03
TUR CONT 3PH	XM 28		1	15 00	108 0	118 0	360	440	MEA	0 517	3 07	5 08	13 35	0 0		
FLIGHT CONTROLS													3 07	5 08	3 07	5 08
STAB AUG SYS	570 947 001		1	15 00	108 0	118 0	380	420	MEA	0 917	15 21	6 62				
ENGINE INSTRUMENTS																
FUEL QTY SYS	209 060 602		1	15 00	107 5	119 5	360	440	MEA	0 996	2 91	0 26				
FUEL QTY IND			1													
FUEL QTY XMR			2													
FLIGHT INSTRUMENTS																
COMPASS SYS	AN/ASN 43		1													
DIR GYRO	CN/698()/ASN		1	15 00	108 0	118 0	380	420	MEA	0 937			15 36	5 73		
XMTR	T 611()/ASN		1													
SERVO AMP	AM 3209/ASN		1	15 00	108 0	118 0	380	420	MEA	-0 974			12 00	-2 79		
ATT GYRO	LEAR-SIGLER 9000C		1	15 00	108 0	118 0	380	420	MEA	0 888			5 31	2 75		
RATE SW GYRO	TYPE MC 1		1	15 00	108 0	118 0	380	420	MEA	0 246	5 31	2 75	5 31	2 75	5 31	2 75
HSI IND	209 070 680		1	15 00	108 0	118 0	380	420	MEA	0 800	0 40	1 58	0 40	-1 58	0 40	1 58
ATT IND 3PH	209 075 661 1		1	15 00	108 0	118 0	380	420	SPEC	0 945	20 00	15 00	3 33	1 15		
AC POWER																
MAIN INV RLY	214 078 150 1		1	15 00	108 0	118 0	360	440	MEA	0 995	5 07	0 51				
TOTAL 115 VAC (WITH TOW ENERGIZED)													87 80	56 41	59 93	36 84
													104 36	VA AT	70 35	VA AT
													0 841	PF LAG	0 852	PF LAG
TOTAL PER PHASE 26 VAC & 115 VAC AC BUS SYS TOW ON													87 80	56 41	73 94	46 77
													104 36	VA AT	87 49	VA AT
													0 841	PF LAG	0 845	PF LAG
TOTAL 3 PHASE AC BUS SYS TOW ON													207 18	104 38	231 99	VA AT 0 893 PF LAGGING

EQUIPMENT	PART DESIGNATION	NOTES	NO OF UNITS	AMPS PER UNIT	OPER TIME MIN	MIN VOLT	MAX VOLT	PWR SOR INF	CONN LOAD	OPERATING CONDITIONS							
										START AND WARM-UP			TAKE OFF				
										5 SEC	2 MIN	15 MIN	5 SEC	2 MIN	15 MIN		
ESSENTIAL DC BUS																	
ARMAMENT																	
NOSE ARMAMENT	M28A1E1		1														
GUN DRIVE MTR		6	1														
GUN CONTROL PR			1	60.0	0.0	24.00	28.50	SPEC	60.00								
MACHINE GUN	XM 18 (7.62MM)	7	2	23.00	2.00	24.00	28.50	SPEC	23.00								
MACH GUN FIRE			2														
MACH GUN BAT CHG			2	1.00	0.25	21.00	29.00	MEA	2.00								
ARM PWR RELAY	MS24183D1		2	9.90	0.50	21.00	29.00	MEA	19.80								
TOW MISSILE SYS	XM 65		1	0.40	15.00	24.00	28.50	MEA	0.40								
TOW MISSILE	XM 65	7	1														
3P/1P INV RLY	110 111 1		1	8.10	15.00	21.00	29.00	MEA	8.10								
ROCKET LAUNCH	BHC (C INTERVAL 0)	7	1	0.18	15.00	18.00	29.00	SPEC	0.18								
SQUIB WGN ST JT	ARD863 1	1	2	2.50	0.0	24.00	28.50	SPEC	5.00								
			8	1.60	0.0	21.00	29.00	MEA	12.80								
FLIGHT CONTROLS																	
STAB AUG SYS	570 947 001	1	1	0.92	15.00	24.00	28.50	SPEC	0.92	0.92	0.92	0.92					
HYD VALVE SOL	HYD RESEARCH 88700		2	1.10	0.0	21.00	29.00	MEA	2.20								
MAG BKE FR TRM	ABN ACC R460M15 3		3	0.35	15.00	21.00	29.00	SPEC	1.05	1.05	1.05	1.05	0.92	0.92	0.92		
EMER HYD PUMP	209 076 025		1	40.00	0.0	21.00	29.00	SPEC	40.00								
EMER HYD SOL	204 076 504 3		2	0.50	0.0	21.00	29.00	SPEC	1.00								
EMER HYD RLY	110 127 D1		1	0.12	0.0	21.00	29.00	SPEC	0.12								
INSTRUMENTS																	
XMSN OILT/PIND	209 075 658		1	0.11	15.00	21.00	29.00	SPEC	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
ENGINE INSTRUMENTS																	
TURBINE TEMP IND	209 075 651		2	0.11	15.00	21.00	29.00	SPEC	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22
GAS PRODUOR IND	209 075 652		2	0.11	15.00	21.00	29.00	SPEC	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22
TORQ PRESS IND	209 075 653		1	0.11	15.00	21.00	29.00	SPEC	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
TORQ PRESS IND	209 075 654		1	0.11	15.00	21.00	29.00	SPEC	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
DUAL TACH IND	209 075 655		2	0.11	15.00	21.00	29.00	SPEC	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22
ENG OIL T/P IND	209 075 656		1	0.11	15.00	21.00	29.00	SPEC	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
FLIGHT INSTRUMENTS																	
TURN & SLIP IND	MI 7805AMS28024 3		1	0.10	15.00	24.00	28.50	SPEC	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
GNR ATT IND	209 075 666 1		1	0.37	15.00	21.00	29.00	SPEC	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37
HEATING																	
DEICING VALVE	VAPAIR 25830029	3	1	0.90	15.00	24.00	28.50	SPEC	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
ENGINE IGNITION																	
IGNITOR SYSTEM	PART OF ENGINE	4	1	2.15	0.0	24.00	28.50	SPEC	2.15								
IGNITOR PACK	PART OF ENGINE	4	1														
ENG PRIM SOL	PART OF ENGINE	4	1														
ENGINE CONTROLS																	
STARTER RELAY	MS24183D1	4	1	0.37	0.0	24.00	28.50	MEA	0.37								
LIGHTING																	
INST & EDGE LTS	MS25237 327 LAMP		126	0.04	15.00	24.00	28.50	MEA	5.04	5.04	5.04	5.04	5.04	5.04	5.04	5.04	5.04
COCKPIT LIGHT	GRIMES 15 007 43		3	0.17	1.00	24.00	28.50	SPEC	0.51	0.51	0.25	0.07	0.51	0.25	0.07	0.51	0.25
PLT INST LTS	212 075 962 1		3	2.00	15.00	24.00	28.50	SPEC	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
CPLT INST LTS	212 075 962 1		1	2.00	15.00	24.00	28.50	SPEC	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
POWER																	
N-ESS BUS PR RLY	MS24183D1		1	0.40	15.00	24.00	28.50	MEA	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
BATTERY CHGNG	BB 649/A	5	1														
BUS CONT RLY	MS24149D1		1	0.17	15.00	24.00	28.50	SPEC	0.17	67.45	49.84	22.07	21.99	20.10	10.11	0.17	0.17
BATTERY RELAY	MS24183D1		1	0.40	15.00	18.00	29.00	MEA	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40

EQUIPMENT	PART DESIGNATION	NOTES	NO OF UNITS	AMPS PER UNIT	OPER TIME MIN	MIN VOLT	MAX VOLT	PWR SOR INF	CONN LOAD	OPERATING CONDITIONS							
										START AND WARM-UP			TAKE OFF				
										5 SEC	2 MIN	15 MIN	5 SEC	2 MIN	15 MIN		
ESSENTIAL DC BUS																	
FUEL CONTROL																	
FUEL BOOST PUMP	205-060 606		1	3.20	15.00	24.00	28.50	MEA	3.20		3.20	3.20	3.20		3.20	3.20	3.20
FUEL SOFF VALVE	204 062 520		1	2.00	0.02	18.00	29.00	MEA	2.00		0.48	0.02	0.00				
FUEL CONT VALVE	GW LIST CECO		1	1.30	15.00	24.00	28.50	SPEC	1.30		1.30	1.30	1.30		1.30	1.30	1.30
GOV RPM ACT	204 060 762		1	0.90	1.00	24.00	28.50	SPEC	0.90		0.90	0.45	0.06				
IDLE STOP SOL	GW LISK L 2540		1	4.60	0.03	24.00	28.50	SPEC	4.60								
FUEL LOW RLY	GE 352791G200F 9	1	1	0.0	0.0	24.00	28.50	SPEC	0.0								
OIL BY PASS SOL	AV2381106B		1	2.00	0.05	24.00	28.50	SPEC	2.00		1.20	0.05	0.01				
OIL BY PASS RLY	ALLIED MHB 60	1	1	0.11	0.0	24.00	28.50	SPEC	0.11								
RADIO NAV AND COMM																	
UHF AM RADIO	AN/ARC 116		1														
UHF AM RECEIVE	AN/ARC 116		1	0.80	15.00	24.00	28.50	MEA	0.80		0.80	0.80	0.80		0.80	0.80	0.80
UHF AM XMITER	AN/ARC 116	2	1	3.00	1.00	24.00	28.50	MEA	3.00		3.00	1.50	0.42		3.00	1.50	0.42
INTERCOM SYS	C6533/ARC		2	0.07	15.00	24.00	28.50	MEA	0.14		0.14	0.14	0.14		0.14	0.14	0.14
VOR LOC 'GS/M8	AN/ARN 123		1	0.39	15.00	24.00	28.50	SPEC	0.39		0.39	0.39	0.39		0.39	0.39	0.39
RADAR																	
IFF TRANSPONDER	AN/APX 72		1	3.80	15.00	21.00	29.00	MEA	3.80		3.80	3.80	3.80		3.80	3.80	3.80
TEST SET	TS 1843/AFX	8	1	0.70	15.00	21.00	29.00	MEA	0.70		0.70	0.70	0.70		0.70	0.70	0.70
COMPUTER KIT	TA/TSEC MARK XII	8	1	1.10	15.00	24.00	28.50	SPEC	1.10		1.10	1.10	1.10		1.10	1.10	1.10
RADAR ALTIMETER	AN/APN 209		1	2.00	15.00	24.00	28.50	SPEC	2.00		2.00	2.00	2.00		2.00	2.00	2.00
RADAR WARNING	AN/APR 38		1	1.10	15.00	24.00	28.50	SPEC	1.10		1.10	1.10	1.10		1.10	1.10	1.10
PROX WARNING	YG 1054		1	1.50	15.00	24.00	28.50	SPEC	1.50		1.50	1.50	1.50		1.50	1.50	1.50
INVERTER																	
MAIN INVERTER	209 075 572		1		15.00	24.00	28.50	SPEC			8.84	8.84	8.84		8.84	8.84	8.84
ADDTL TOW MAIN	209 075 572		1		15.00	24.00	28.50	SPEC									
MAIN INV PWR RLY	MS24140D2		1	0.36	15.00	24.00	28.50	SPEC	0.36		0.36	0.36	0.36		0.36	0.36	0.36
AC PWR CONT RLY	110 128 1		1	0.11	15.00	24.00	28.50	SPEC	0.11		0.11	0.11	0.11		0.11	0.11	0.11
INV SELECT RLY	110 111 1		1	0.20	15.00	24.00	28.50	SPEC	0.20		0.20	0.20	0.20		0.20	0.20	0.20
WARNING AND EMERGENCY																	
CAUT LT PANEL	204 075 705		1	0.20	15.00	24.00	28.50	SPEC	0.20		0.20	0.20	0.20		0.20	0.20	0.20
RPM LIMIT WARN	205 074 001		1	0.30	15.00	24.00	28.50	SPEC	0.30		0.30	0.30	0.30		0.30	0.30	0.30
FIRE DETECTION	209 075 395		1	0.07	15.00	24.00	28.50	MEA	0.07		0.07	0.07	0.07		0.07	0.07	0.07
RPM WARN LIMIT	209 075 326		1	0.98	15.00	24.00	28.50	MEA	0.98		0.98	0.98	0.98		0.98	0.98	0.98
MAST CAUT SYS	209 075 325		1	0.20	15.00	21.00	29.00	MEA	0.20		0.20	0.20	0.20		0.20	0.20	0.20
TOTAL ESSENTIAL DC BUS											119.28	97.86	68.37		71.24	67.59	56.34

EQUIPMENT	PART DESIGNATION	NOTES	NO OF UNITS	AMPS PER UNIT	OPER TIME MIN	MIN VOLT	MAX VOLT	PWR SOR INF	CONN LOAD	OPERATING CONDITIONS								
										START AND WARM-UP			TAKE OFF					
										5 SEC	2 MIN	15 MIN	5 SEC	2 MIN	15 MIN			
NON-ESSENTIAL DC BUS																		
FLIGHT INSTRUMENTS																		
PITOT HEATER	AN5813 1		1	3.75	15.00	24.00	28.50	SPEC	3.75		3.75	3.75	3.75		3.75	3.75	3.75	
HEATING																		
ECU	209 070 403		1	0.30	15.00	24.00	28.50	SPEC	0.30		0.30	0.30	0.30		0.30	0.30	0.30	
BLEED AIR SOL	397580 1 1		1	0.80	15.00	24.00	28.50	SPEC	0.80		0.80	0.80	0.80		0.80	0.80	0.80	
RAIN REMOV SOL	JANITROL 43070		1	0.64	15.00	24.00	28.50	SPEC	0.64		0.64	0.64	0.64		0.64	0.64	0.64	
HTR CONT RELAY	MS24149DI	1	1	0.20	0.0	24.00	28.50	SPEC	0.20						0.64	0.64	0.64	
TOW BLOWER	209 073 115		1	28.00	15.00	24.00	28.50	SPEC	28.00		28.00	28.00	28.00		28.00	28.00	28.00	
TOW BLOWER RLY	MS24181D1		1	0.40	15.00	24.00	28.50	SPEC	0.40		0.40	0.40	0.40		28.00	28.00	28.00	
LIGHTING															0.40	0.40	0.40	
SIDE POSITI LTS	AN3033 12 13		2	0.80	15.00	24.00	28.50	SPEC	1.60		1.60	1.60	1.60		1.60	1.60	1.60	
SEARCH LIGHT	FSN6620 283 9767		1	16.70	5.00	24.00	28.50	SPEC	16.70		1.60	1.60	1.60		1.60	1.60	1.60	
ANTICOLLISION LT	MIL L 98085		1	2.15	15.00	24.00	28.50	SPEC	2.15		2.15	2.15	2.15		2.15	2.15	2.15	
TAIL POSITION LT	GR30 0003 15 1683		2	0.90	15.00	24.00	28.50	SPEC	1.80		1.80	1.80	1.80		1.80	1.80	1.80	
POS LTS FLASHER	MS24577 2		1	0.40	15.00	21.00	29.00	MEA	0.40		0.40	0.40	0.40		0.40	0.40	0.40	
FUEL CONTROL																		
FUEL BOOST PUMP	205 060 606		1	3.20	15.00	24.00	28.50	MEA	3.20		3.20	3.20	3.20		3.20	3.20	3.20	
RADIO NAV & COMM																		
VHF FM RADIO	AN/ARC 114		1															
VHF FM RECEIVER	AN/ARC 114		1	0.70	15.00	24.00	28.50	MEA	0.70		0.70	0.70	0.70		0.70	0.70	0.70	
VHF FM XMITER	AN/ARC 114	2	1	3.00	1.00	24.00	28.50	MEA	3.00		3.00	1.50	0.42		3.00	1.50	0.42	
SCRAMBLER	KY 28		1	2.00	15.00	24.00	28.50	SPEC	2.00		2.00	2.00	2.00		2.00	2.00	2.00	
ADF RECEIVER	AN/ARN 89		1	1.40	15.00	24.00	28.50	MEA	1.40		1.40	1.40	1.40		1.40	1.40	1.40	
VHF AM RADIO	AN/ARC 115		1															
VHF AM RECEIVE	AN/ARC 115		1	0.62	15.00	24.00	28.50	MEA	0.62		0.62	0.62	0.62		0.62	0.62	0.62	
VHF AM XMITER	AN/ARC 115	2	1	1.79	1.00	24.00	28.50	MEA	1.79		1.79	0.89	0.25		1.79	0.89	0.25	
INVERTER																		
STBY INVERTER	TYPE PU 543(1/A	1	1		0.0	24.00	28.50	SPEC			0.0	0.0	0.0		0.0	0.0	0.0	
STBY INV PWR RLY	MS24140D1	1	1	0.31	0.0	24.00	28.50	SPEC	0.31		0.0	0.0	0.0		0.0	0.0	0.0	
CHAFF DISPENSER	M 130	1	1	1.32	0.0	24.00	28.50	SPEC	1.32		0.0	0.0	0.0		0.0	0.0	0.0	
TOTAL NON ESSENTIAL DC BUS											52.55	50.15	48.43		52.55	50.15	48.43	
TOTAL ESSENTIAL + NON ESSENTIAL DC BUS											171.83	148.01	116.80		123.79	117.75	104.77	

EQUIPMENT	PART DESIGNATION	NOTES	NO OF UNITS	AMPS PER UNIT	OPFR TIME MIN	MIN VOLT	MAX VOLT	PWR SOR INF	CON'N LOAD	OPERATING CONDITIONS							
										CRUISE			COMBAT				
										5 SEC	2 MIN	15 MIN	5 SEC	2 MIN	15 MIN		
ESSENTIAL DC BUS																	
ARMAMENT																	
NOSE ARMAMENT	M28A1E1		1														
GUN DRIVE MTR		6	1	60.0	0.0	24.00	28.50	SPEC	60.00								
GUN CONTROL PR			1	23.00	7.00	24.00	28.50	SPEC	23.00				23.00	23.00	3.07		
MACHINE GUN	XM 18 (7.62MM)	7	2														
MACH GUN FIRE			2	1.00	0.25	21.00	29.00	MEA	2.00				2.00	0.25	0.03		
MACH GUN BAT CHG			2	9.90	0.50	21.00	29.00	MEA	19.80				19.80	4.95	0.66		
ARM PWR RELAY	MS24183D1		1	0.40	15.00	24.00	28.50	MEA	0.40				0.40	0.40	0.40		
TOW MISSILE SYS	XM 65		1														
TOW MISSILE	XM 65	7	1	8.10	15.00	21.00	29.00	MEA	8.10				8.10	8.10	8.10		
3P 1P INV RLY	110 111 1		1	0.18	15.00	18.00	29.00	SPEC	0.18				0.18	0.18	0.18		
ROCKET LAUNCH	BHC (C INTERVAL 0)	7	2	2.50	0.0	24.00	28.50	SPEC	5.00								
SQUIB WGN ST JT	ARD863 1	1	8	1.60	0.0	21.00	29.00	MEA	12.80								
FLIGHT CONTROLS																	
STAR AUG SYS	570 947 001		1	0.92	15.00	24.00	28.50	SPEC	0.92	0.92	0.92	0.92	0.92	0.92	0.92		
HYD VALVE SOL	HYD RESEARCH 88700	1	2	1.10	0.0	21.00	29.00	MEA	2.20								
MAG BKE FR TRM	ABN ACC R460M15 3		3	0.35	15.00	21.00	29.00	MEA	1.05	1.05	1.05	1.05	1.05	1.05	1.05		
EMER HYD PUMP	209 076 025		1	40.00	0.0	21.00	29.00	SPEC	40.00								
EMER HYD SOL	204 076 504 3		2	0.50	0.0	21.00	29.00	SPEC	1.00								
EMER HYD RLY	110 127 D1		1	0.12	0.0	21.00	29.00	SPEC	0.12								
INSTRUMENTS																	
XMSN OILT. PIND	209 075 658		1	0.11	15.00	21.00	29.00	SPEC	0.11	0.11	0.11	0.11	0.11	0.11	0.11		
ENGINE INSTRUMENTS																	
TURBINE TEMP IND	209 075 651		2	0.11	15.00	21.00	29.00	SPEC	0.22	0.22	0.22	0.22	0.22	0.22	0.22		
GAS PRODUCR IND	209 075 652		2	0.11	15.00	21.00	29.00	SPEC	0.22	0.22	0.22	0.22	0.22	0.22	0.22		
TORQ PRESS IND	209 075 653		1	0.11	15.00	21.00	29.00	SPEC	0.11	0.11	0.11	0.11	0.11	0.11	0.11		
TORQ PRESS IND	209 075 654		1	0.11	15.00	21.00	29.00	SPEC	0.11	0.11	0.11	0.11	0.11	0.11	0.11		
DUAL TACH IND	209 075 655		2	0.11	15.00	21.00	29.00	SPEC	0.22	0.22	0.22	0.22	0.22	0.22	0.22		
ENG OIL T P IND	209 075 656		1	0.11	15.00	21.00	29.00	SPEC	0.11	0.11	0.11	0.11	0.11	0.11	0.11		
FLIGHT INSTRUMENTS																	
TURN & SLIP IND	MI 7805AMS28024 3		1	0.10	15.00	24.00	28.50	SPEC	0.10	0.10	0.10	0.10	0.10	0.10	0.10		
GNR ATT IND	209 075 666 1		1	0.37	15.00	21.00	29.00	SPEC	0.37	0.37	0.37	0.37	0.37	0.37	0.37		
HEATING																	
DEICING VALVE	VAPAIR 25830029	3	1	0.90	15.00	24.00	28.50	SPEC	0.90	0.90	0.90	0.90	0.90	0.90	0.90		
ENGINE IGNITION																	
IGNITOR SYSTEM	PART OF ENGINE	4	1	2.15	0.0	24.00	28.50	SPEC	2.15								
IGNITOR PACK	PART OF ENGINE	4	1														
ENG PRIM SOL	PART OF ENGINE	4	1														
ENGINE CONTROLS																	
STARTER RELAY	MS24183D1	4	1	0.37	0.0	24.00	28.50	MEA	0.37								
LIGHTING																	
INST & EDGE LTS	MS25237 327 LAMP		126	0.04	15.00	24.00	28.50	MEA	5.04	5.04	5.04	5.04	5.04	5.04	5.04		
COCKPIT LIGHT	GRIMES 15 007 43	2	3	0.17	1.00	24.00	28.50	SPEC	0.51	0.51	0.25	0.07					
PLI INST LTS	212 075 962 1		3	2.00	15.00	24.00	28.50	SPEC	6.00	6.00	6.00	6.00	6.00	6.00	6.00		
CPLT INST LTS	212 075 962 1		1	2.00	15.00	24.00	28.50	SPEC	2.00	2.00	2.00	2.00	2.00	2.00	2.00		
POWER																	
N ESS BUS PR RLY	MS24183D1		1	0.40	15.00	24.00	28.50	MEA	0.40	0.40	0.40	0.40	0.40	0.40	0.40		
BATTERY CHGING	BB 649/A	5	1		15.00	24.00	28.50	SPEC		10.07	9.17	4.78	4.77	4.44	3.09		
BUS CONT RLY	MS24149D1		1	0.17	15.00	24.00	28.50	SPEC	0.17	0.17	0.17	0.17	0.17	0.17	0.17		
BATTERY RELAY	MS24183D1		1	0.40	15.00	18.00	29.00	MEA	0.40	0.40	0.40	0.40	0.40	0.40	0.40		

EQUIPMENT	PART DESIGNATION	NOTES	NO OF UNITS	AMPS PER UNIT	OPER TIME MIN	MIN VOLT	MAX VOLT	PWR SOR INF	CONN LOAD	OPERATING CONDITIONS								
										CRUISE			CRUISE - COMBAT					
										5 SEC	2 MIN	15 MIN	5 SEC	2 MIN	15 MIN			
ESSENTIAL DC BUS																		
FUEL CONTROL																		
FUEL BOOST PUMP	205 060 606		1	3.20	15 00	24 00	28 50	MEA	3.20		3.20	3.20	3.20		3.20	3.20	3.20	
FUEL SOFF VALVE	204 062 520		1	2.00	0 02	18 00	29 00	MEA	2.00									
FUEL CONT VALVE	GW LIST CECO		1	1.30	15 00	24 00	28 50	SPEC	1.30		1.30	1.30	1.30		1.30	1.30	1.30	
GOV RPM ACT	204 060 762		1	0.90	1 00	24 00	28 50	SPEC	0.90		0.90	0.45	0.06		0.90	0.45	0.06	
IDLE STOP SOL	GW LISK L 2540		1	4.60	0 03	24 00	28 50	SPEC	4.60									
FUEL LOW RLY	GE 352791G200F 9	1	1	0 0	0 0	24 00	28 50	SPEC	0 0									
OIL BY PASS SOL	AV2381106B		1	2.00	0 05	24 00	28 50	SPEC	2.00									
OIL BY PASS RLY	ALLIED MHB 60	1	1	0 11	0 0	24 00	28 50	SPEC	0 11									
RADIO NAV AND COMM																		
UHF AM RADIO	AN ARC 116		1															
UHF AM RECEIVE	AN ARC 116		1	0.80	15 00	24 00	28 50	MEA	0.80		0.80	0.80	0.80		0.80	0.80	0.80	
UHF AM XMITER	AN ARC 116	2	1	3.00	1 00	24 00	28 50	MEA	3.00		3.00	1.50	0.42		3.00	1.50	0.42	
INTERCOM SYS	C6533/ARC		2	0.07	15 00	24 00	28 50	MEA	0.14		0.14	0.14	0.14		0.14	0.14	0.14	
VOR LOC GS MB	AN/ARN 123		1	0.39	15 00	24 00	28 50	SPEC	0.39		0.39	0.39	0.39		0.39	0.39	0.39	
RADAR																		
IFF TRANSPONDER	AN APX 72		1	3.80	15 00	21 00	29 00	MEA	3.80		3.80	3.80	3.80		3.80	3.80	3.80	
TEST SET	TS 1843/APX	8	1	0.70	15 00	21 00	29 00	MEA	0.70		0.70	0.70	0.70		0.70	0.70	0.70	
COMPUTER KIT	TA/TSEC MARK XII		1	1.10	15 00	24 00	28 50	SPEC	1.10		1.10	1.10	1.10		1.10	1.10	1.10	
RADAR ALTIMETER	AN/APN 209		1	2.00	15 00	24 00	28 50	SPEC	2.00		2.00	2.00	2.00		2.00	2.00	2.00	
RADAR WARNING	AN/APR 39		1	1.10	15 00	24 00	28 50	SPEC	1.10		1.10	1.10	1.10		1.10	1.10	1.10	
PROX WARNING	YG 1054		1	1.50	15 00	24 00	28 50	SPEC	1.50		1.50	1.50	1.50		1.50	1.50	1.50	
INVERTER																		
MAIN INVERTER	209 075 572		1		15 00	24 00	28 50	SPEC			8.84	8.84	8.84					
ADDTL TOW MAIN	209 075 572		1		15 00	24 00	28 50	SPEC							12.88	12.88	12.88	
MAIN INV PWR RLY	MS24140D2		1	0.36	15 00	24 00	28 50	SPEC	0.36		0.36	0.36	0.36		0.36	0.36	0.36	
AC PWR CONT RLY	110 128 1		1	0.11	15 00	24 00	28 50	SPEC	0.11		0.11	0.11	0.11		0.11	0.11	0.11	
INV SELECT RLY	110 111 1		1	0.20	15 00	24 00	28 50	SPEC	0.20		0.20	0.20	0.20		0.20	0.20	0.20	
WARNING AND EMERGENCY																		
CAUT LT PANEL	204 075 705		1	0.20	15 00	24 00	28 50	SPEC	0.20		0.20	0.20	0.20		0.20	0.20	0.20	
RPM LIMIT WARN	205 074 001		1	0.30	15 00	24 00	28 50	SPEC	0.30		0.30	0.30	0.30		0.30	0.30	0.30	
FIRE DETECTION	209 075 395		1	0.07	15 00	24 00	28 50	MEA	0.07		0.07	0.07	0.07		0.07	0.07	0.07	
RPM WARN LIMIT	209 075 326		1	0.98	15 00	24 00	28 50	MEA	0.98		0.98	0.98	0.98		0.98	0.98	0.98	
MAST CAUT SYS	209 075 325		1	0.70	15 00	21 00	29 00	MEA	0.70		0.70	0.70	0.70		0.70	0.70	0.70	
TOTAL ESSENTIAL DC BUS											60.22	57.11	51.08		111.93	93.05	65.70	

EQUIPMENT	PART DESIGNATION	NOTES	NO OF UNITS	AMPS PER UNIT	OPER TIME MIN	MIN VOLT	MAX VOLT	PWR SOR INF	CONN LOAD	OPERATING CONDITIONS							
										CRUISE			COMBAT				
										5 SEC	2 MIN	15 MIN	5 SEC	2 MIN	15 MIN		
NON-ESSENTIAL DC BUS																	
FLIGHT INSTRUMENTS																	
PITOT HEATER	AN5813 1		1	3.75	15.00	24.00	28.50	SPEC	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75
HEATING																	
ECU	209 070 403		1	0.30	15.00	24.00	28.50	SPEC	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
BLEED AIR SOL	397580 1 1		1	0.80	15.00	24.00	28.50	SPEC	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
RAIN REMOV SOL	JANITROL 43070		1	0.64	15.00	24.00	28.50	SPEC	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64
HTR CONT RELAY	MS24149DI	1	1	0.20	0.0	24.00	28.50	SPEC	0.20								
TOW BLOWER	209 073 115		1	28.00	15.00	24.00	28.50	SPEC	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00
TOW BLOWER RLY	MS24181D1		1	0.40	15.00	24.00	28.50	SPEC	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
LIGHTING																	
SIDE POSITI LTS	AN3033 12 -13		2	0.80	15.00	24.00	28.50	SPEC	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60
SEARCH LIGHT	FSN6620 283 9767		1	16.70	5.00	24.00	28.50	SPEC	16.70	16.70	16.70	5.57					
ANTICOLLISION LT	MIL L 98085		1	2.15	15.00	24.00	28.50	SPEC	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15
TAIL POSITION LT	GR30 0003 15 1683		2	0.90	15.00	24.00	28.50	SPEC	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80
POS LTS FLASHER	MS24577 2		1	0.40	15.00	21.00	29.00	MEA	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
FUEL CONTROL																	
FUEL BOOST PUMP	205 060 606		1	3.20	15.00	24.00	28.50	MEA	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
RADIO NAV & COMM																	
VHF-FM RADIO	AN/ARC 114		1														
VHF-FM RECEIVER	AN/ARC 114		1	0.70	15.00	24.00	28.50	MEA	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
VHF FM XMITER	AN/ARC 114		1	3.00	1.00	24.00	28.50	MEA	3.00	3.00	1.50	0.42	3.00	1.50	0.42	3.00	1.50
SCRAMBLER	KY 28		1	2.00	15.00	24.00	28.50	SPEC	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
ADF RECEIVER	AN/ARN 89		1	1.40	15.00	24.00	28.50	MEA	1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.40
VHF-AM RADIO	AN/ARC 115		1														
VHF AM RECEIVE	AN/ARC 115		1	0.62	15.00	24.00	28.50	MEA	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62
VHF-AM XMITER	AN/ARC 115		2	1.79	1.00	24.00	28.50	MEA	1.79	1.79	0.89	0.25	1.79	0.89	0.25	1.79	0.89
INVERTER																	
STBY INVERTER	TYPE PU 543(1/A		1		0.0	24.00	28.50	SPEC		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
STBY INV PWR RLY	MS24140D1		1	0.31	0.0	24.00	28.50	SPEC	0.31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHAFF DISPENSER	M-130		1	1.32	0.0	24.00	28.50	SPEC	1.32	0.0	0.0	0.0	1.32	0.50	0.01		
TOTAL NON-ESSENTIAL DC BUS										69.25	66.85	54.00	53.87	50.65	48.44		
TOTAL ESSENTIAL + NON-ESSENTIAL DC BUS										129.47	123.97	105.07	165.80	143.71	114.23		

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EQUIPMENT	PART DESIGNATION	NOTES	NO OF UNITS	AMPS PER UNIT	OPER TIME MIN	MIN VOLT	MAX VOLT	PWR SDR INF	CONN LOAD	OPERATING CONDITIONS							
										ESSENTIAL DC BUS							
										5 SEC	LAND 2 MIN	15 MIN	5 SEC	EMERGENCY 2 MIN	15 MIN		
ESSENTIAL DC BUS																	
ARMAMENT																	
NOSE ARMAMENT	M28A1E1	6	1														
GUN DRIVE MTR			1	60.0	0.0	24.00	28.50	SPEC	60.00								
GUN CONTROL PR			1	23.00	2.00	24.00	28.50	SPEC	23.00								
MACHINE GUN	XM 18 (7.62MM)	7	2														
MACH GUN FIRE			2	1.00	0.25	21.00	29.00	MEA	2.00								
MACH GUN BAT CHG			2	9.90	0.50	21.00	29.00	MEA	19.80								
ARM PWR RELAY	MS24183D1		1	0.40	15.00	24.00	28.50	MEA	0.40								
TOW MISSILE SYS	XM 65	7	1														
TOW MISSILE	XM 65		1	8.10	15.00	21.00	29.00	MEA	8.10								
3P-1P INV RLY	110 111 1		1	0.18	15.00	18.00	29.00	SPEC	0.18								
ROCKET LAUNCH	BHC (C INTERVAL 0)	7	2	2.50	0.0	24.00	28.50	SPEC	5.00								
SQUIB WGN ST JT	ARD863 1	1	8	1.60	0.0	21.00	29.00	MEA	12.80								
FLIGHT CONTROLS																	
STAB AUG SYS	570 947 001	1	1	0.92	15.00	24.00	28.50	SPEC	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
HYD VALVE SOL	HYD RESEARCH 88700		2	1.10	0.0	21.00	29.00	MEA	2.20								
MAG BKE FR-TRM	ABN ACC R460M15 3		3	0.35	15.00	21.00	29.00	MEA	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
EMER HYD PUMP	209 076 025		1	40.00	0.0	21.00	29.00	SPEC	40.00								
EMER HYD SOL	204 076 504 3		2	0.50	0.0	21.00	29.00	SPEC	1.00								
EMER HYD RLY	110 127 01		1	0.12	0.0	21.00	29.00	SPEC	0.12								
INSTRUMENTS																	
XMSN OILT/PIND	209 075 658		1	0.11	15.00	21.00	29.00	SPEC	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
ENGINE INSTRUMENTS																	
TURBINE TEMP IND	209 075 651		2	0.11	15.00	21.00	29.00	SPEC	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22
GAS PRODUCR IND	209 075 652		2	0.11	15.00	21.00	29.00	SPEC	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22
TORQ PRESS IND	209 075 653		1	0.11	15.00	21.00	29.00	SPEC	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
TORQ PRESS IND	209 075 654		1	0.11	15.00	21.00	29.00	SPEC	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
DUAL TACH IND	209 075 655		2	0.11	15.00	21.00	29.00	SPEC	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22
ENG OIL T/P IND	209 075 656		1	0.11	15.00	21.00	29.00	SPEC	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
FLIGHT INSTRUMENTS																	
TURN & SLIP IND	MI 7805AMS28024 3		1	0.10	15.00	24.00	28.50	SPEC	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
GNR ATT IND	209 075 666 1		1	0.37	15.00	21.00	29.00	SPEC	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37
HEATING																	
DEICING VALVE	VAPAIR 25830029	3	1	0.90	15.00	24.00	28.50	SPEC	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
ENGINE IGNITION																	
IGNITOR SYSTEM	PART OF ENGINE	4	1	2.15	0.0	24.00	28.50	SPEC	2.15								
IGNITOR PACK	PART OF ENGINE	4	1														
ENG PRIM SOL	PART OF ENGINE	4	1														
ENGINE CONTROLS																	
STARTER RELAY	MS24183D1	4	1	0.37	0.0	24.00	28.50	MEA	0.37								
LIGHTING																	
INST & EDGE LTS	MS25237 327 LAMP		126	0.04	15.00	24.00	28.50	MEA	5.04	5.04	5.04	5.04	5.04	5.04	5.04	5.04	5.04
COCKPIT LIGHT	GRIMES 15 007 43	2	3	0.17	1.00	24.00	28.50	SPEC	0.51	0.51	0.25	0.07	0.51	0.25	0.07	0.51	0.25
PLT INST LTS	212 075 962 1		3	2.00	15.00	24.00	28.50	SPEC	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
CPLT INST LTS	212 075 962 1		1	2.00	15.00	24.00	28.50	SPEC	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
POWER																	
N-ESS BUS PR RLY	MS24183D1		1	0.40	15.00	24.00	28.50	MEA	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
BATTERY CHGING	BB 649/A	5	1		15.00	24.00	28.50	SPEC	3.09	3.09	3.01	2.84	3.09	3.01	2.84	3.09	3.01
BUS CONT RLY	MS24149D1		1	0.17	15.00	24.00	28.50	SPEC	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
BATTERY RELAY	MS24183D1		1	0.40	15.00	18.00	29.00	MEA	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40

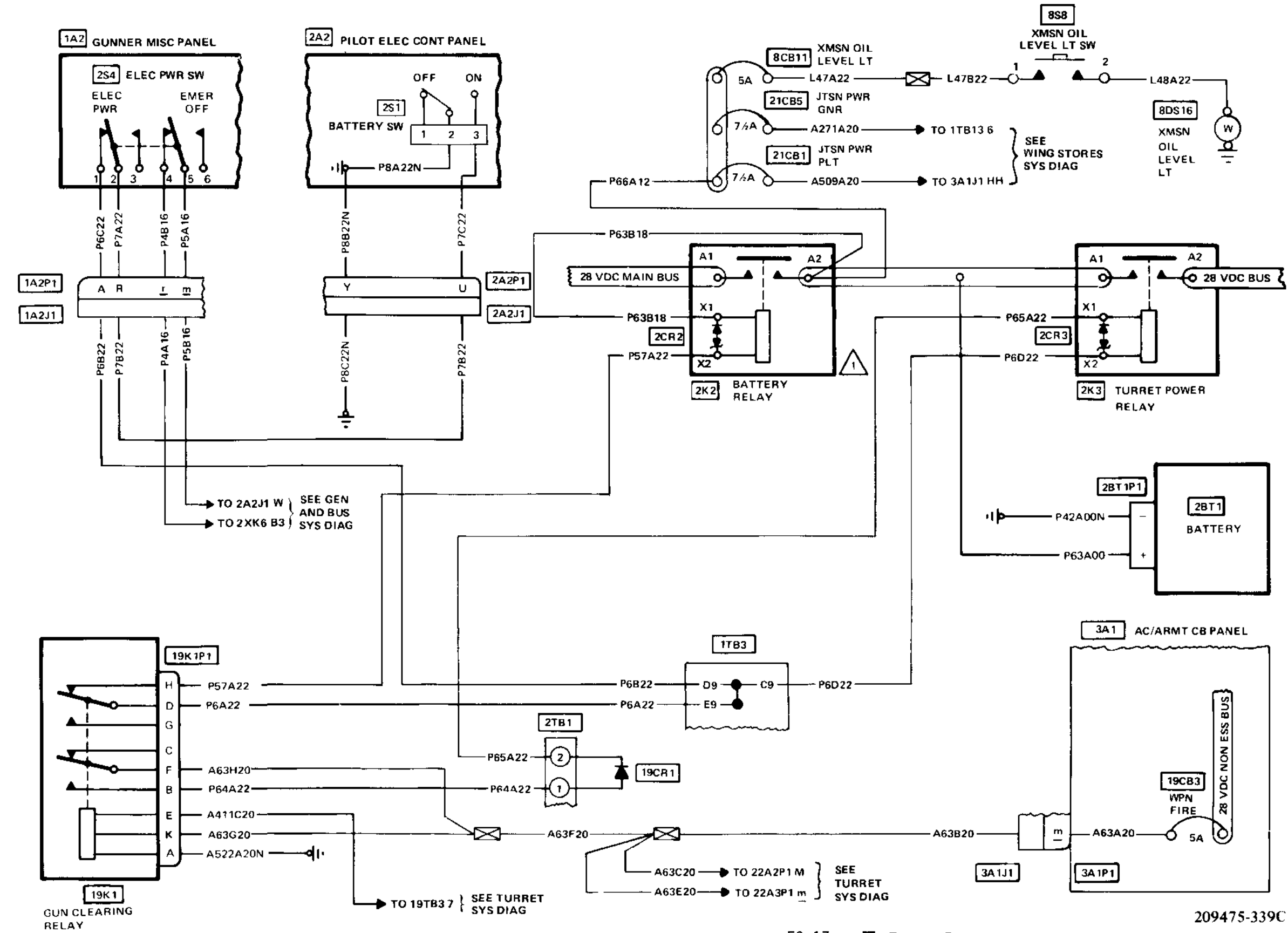
EQUIPMENT	PART DESIGNATION	NOTES	NO OF UNITS	AMPS PER UNIT	OPER TIME MIN	MIN VOLT	MAX VOLT	PWR SOR INF	CONN LOAD	OPERATING CONDITIONS							
										LAND			EMERGENCY				
										5 SEC	2 MIN	15 MIN	5 SEC	2 MIN	15 MIN		
ESSENTIAL DC BUS																	
FUEL CONTROL																	
FUEL BOOST PUMP	205 060 606		1	3.20	15.00	24.00	28.50	MEA	3.20		3.20	3.20	3.20		3.20	3.20	3.20
FUEL SOFF VALVE	204 062 520		1	2.00	0.02	18.00	29.00	MEA	2.00								
FUEL CONT VALVE	GW LIST CECO		1	1.30	15.00	24.00	28.50	SPEC	1.30		1.30	1.30	1.30		1.30	1.30	1.30
GOV RPM ACT	204 060 762		1	0.90	1.00	24.00	28.50	SPEC	0.90								
IDLE STOP SOL	GW LISK L 2540		1	4.60	0.03	24.00	28.50	SPEC	4.60		1.65	0.07	0.01		1.65	0.07	0.01
FUEL LOW RLY	GE 352791G200F 9	1	1	0.0	0.0	24.00	28.50	SPEC	0.0								
OIL BY PASS SOL	AV2381106B		1	2.00	0.05	24.00	28.50	SPEC	2.00								
OIL BY-PASS RLY	ALLIED MHB 60	1	1	0.11	0.0	24.00	28.50	SPEC	0.11								
RADIO NAV AND COMM																	
UHF AM RADIO	AN ARC 116		1														
UHF AM RECEIVE	AN/ARC 116		1	0.80	15.00	24.00	28.50	MEA	0.80		0.80	0.80	0.80		0.80	0.80	0.80
UHF AM XMITER	AN/ARC 116	2	1	3.00	1.00	24.00	28.50	MEA	3.00		3.00	1.50	0.42		3.00	1.50	0.42
INTERCOM SYS	C6533 ARC		2	0.07	15.00	24.00	28.50	MEA	0.14		0.14	0.14	0.14		0.14	0.14	0.14
VOR LOC GS MB	AN ARN 123		1	0.39	15.00	24.00	28.50	SPEC	0.39		0.39	0.39	0.39		0.39	0.39	0.39
RADAR																	
IFF TRANSPONDER	AN APX 72		1	3.80	15.00	21.00	29.00	MEA	3.80		3.80	3.80	3.80		3.80	3.80	3.80
TEST SET	TS 1843 APX	8	1	0.70	15.00	21.00	29.00	MEA	0.70		0.70	0.70	0.70		0.70	0.70	0.70
COMPUTER KIT	TA TSEC MARK XII	8	1	1.10	15.00	24.00	28.50	SPEC	1.10		1.10	1.10	1.10		1.10	1.10	1.10
RADAR ALTIMETER	AN APN 209		1	2.00	15.00	24.00	28.50	SPEC	2.00		2.00	2.00	2.00		2.00	2.00	2.00
RADAR WARNING	AN/APR 39		1	1.10	15.00	24.00	28.50	SPEC	1.10		1.10	1.10	1.10		1.10	1.10	1.10
PROX WARNING	YG 1054		1	1.50	15.00	24.00	28.50	SPEC	1.50		1.50	1.50	1.50		1.50	1.50	1.50
INVERTER																	
MAIN INVERTER	209 075 572		1		15.00	24.00	28.50	SPEC			8.84	8.84	8.84		8.84	8.84	8.84
ADDTL TOW MAIN	209 075 572		1		15.00	24.00	28.50	SPEC									
MAIN INV PWR RLY	MS24140D2		1	0.36	15.00	24.00	28.50	SPEC	0.36		0.36	0.36	0.36		0.36	0.36	0.36
AC PWR CONT RLY	110 128 1		1	0.11	15.00	24.00	28.50	SPEC	0.11		0.11	0.11	0.11		0.11	0.11	0.11
INV SELECT RLY	110 111 1		1	0.20	15.00	24.00	28.50	SPEC	0.20		0.20	0.20	0.20		0.20	0.20	0.20
WARNING AND EMERGENCY																	
CAUT LT PANEL	204 075 705		1	0.20	15.00	24.00	28.50	SPEC	0.20		0.20	0.20	0.20		0.20	0.20	0.20
RPM LIMIT WARN	205 074 001		1	0.30	15.00	24.00	28.50	SPEC	0.30		0.30	0.30	0.30		0.30	0.30	0.30
FIRE DETECTION	209 075 395		1	0.07	15.00	24.00	28.50	MEA	0.07		0.07	0.07	0.07		0.07	0.07	0.07
RPM WARN LIMIT	209 075 326		1	0.98	15.00	24.00	28.50	MEA	0.98		0.98	0.98	0.98		0.98	0.98	0.98
MAST CAUT SYS	209 075 325		1	0.20	15.00	21.00	29.00	MEA	0.20		0.20	0.20	0.20		0.20	0.20	0.20
TOTAL ESSENTIAL DC BUS											53.99	50.57	49.08		50.50	47.16	45.84

EQUIPMENT	PART DESIGNATION	NOTES	NO OF UNITS	AMPS PER UNIT	OPER TIME MIN	MIN VOLT	MAX VOLT	PWR SOR INF	CONN LOAD	OPERATING CONDITIONS								
										5 SEC	LAND 2 MIN	15 MIN	5 SEC	2 MIN	15 MIN			
NON ESSENTIAL DC BUS																		
FLIGHT INSTRUMENTS																		
PITOT HEATER	AN6813 1		1	3.75	15.00	24.00	28.50	SPEC	3.75		3.75	3.75	3.75					
HEATING																		
ECU	209 070 403		1	0.30	15.00	24.00	28.50	SPEC	0.30		0.30	0.30	0.30					
BLEED AIR SOL	397580 1 1		1	0.80	15.00	24.00	28.50	SPEC	0.80		0.80	0.80	0.80					
RAIN REMOV SOL	JANITROL 43070		1	0.64	15.00	24.00	28.50	SPEC	0.64		0.64	0.64	0.64					
HTR CONT RELAY	MS24149D1		1	0.20	0.0	24.00	28.50	SPEC	0.20									
TOW BLOWER	209 073 115		1	28.00	15.00	24.00	28.50	SPEC	28.00		28.00	28.00	28.00					
TOW BLOWER RLY	MS24181D1		1	0.40	15.00	24.00	28.50	SPEC	0.40		0.40	0.40	0.40					
LIGHTING																		
SIDE POSITI LTS	AN3033 12 13		2	0.80	15.00	24.00	28.50	SPEC	1.60		1.60	1.60	1.60					
SEARCH LIGHT	FSN6620 283 976 7		1	16.70	5.00	24.00	28.50	SPEC	16.70		16.70	16.70	5.57					
ANTICOLLISION LT	MIL L 98085		1	2.15	15.00	24.00	28.50	SPEC	2.15		2.15	2.15	2.15					
TAIL POSITION LT	GR30 0003 15 1683		2	0.90	15.00	24.00	28.50	SPEC	1.80		1.80	1.80	1.80					
POS LTS FLASHER	MS24577 2		1	0.40	15.00	21.00	29.00	MEA	0.40		0.40	0.40	0.40					
FUEL CONTROL																		
FUEL BOOST PUMP	205 060 606		1	3.20	15.00	24.00	28.50	MEA	3.20		3.20	3.20	3.20					
RADIO NAV & COMM																		
VHF FM RADIO	AN ARC 114		1															
VHF FM RECEIVER	AN ARC 114		1	0.70	15.00	24.00	28.50	MEA	0.70		0.70	0.70	0.70					
VHF FM XMITER	AN ARC 114		1	3.00	1.00	24.00	28.50	MEA	3.00		3.00	1.50	0.42					
SCRAMBLER	KY 28		1	2.00	15.00	24.00	28.50	SPEC	2.00		2.00	2.00	2.00					
ADF RECEIVER	AN ARN 89		1	1.40	15.00	24.00	28.50	MEA	1.40		1.40	1.40	1.40					
VHF AM RADIO	AN ARC 115		1															
VHF AM RECEIVE	AN ARC 115		1	0.62	15.00	24.00	28.50	MEA	0.62		0.62	0.62	0.62					
VHF AM XMITER	AN ARC 115		1	1.79	1.00	24.00	28.50	MFA	1.79		1.79	0.89	0.25					
INVERTER																		
STBY INVERTER	TYPE PU 543() A		1		0.0	24.00	28.50	SPEC			0.0	0.0	0.0					
STBY INV PWR RLY	MS24140D1		1	0.31	0.0	24.00	28.50	SPEC	0.31		0.0	0.0	0.0					
CHAFF DISPENSER	M 130		1	1.32	0.0	24.00	28.50	SPEC	1.32		0.0	0.0	0.0					
TOTAL NON ESSENTIAL DC BUS											69.25	66.85	54.00					
TOTAL ESSENTIAL + NON ESSENTIAL DC BUS											123.24	117.43	103.08			50.50	47.16	45.84

NOTES

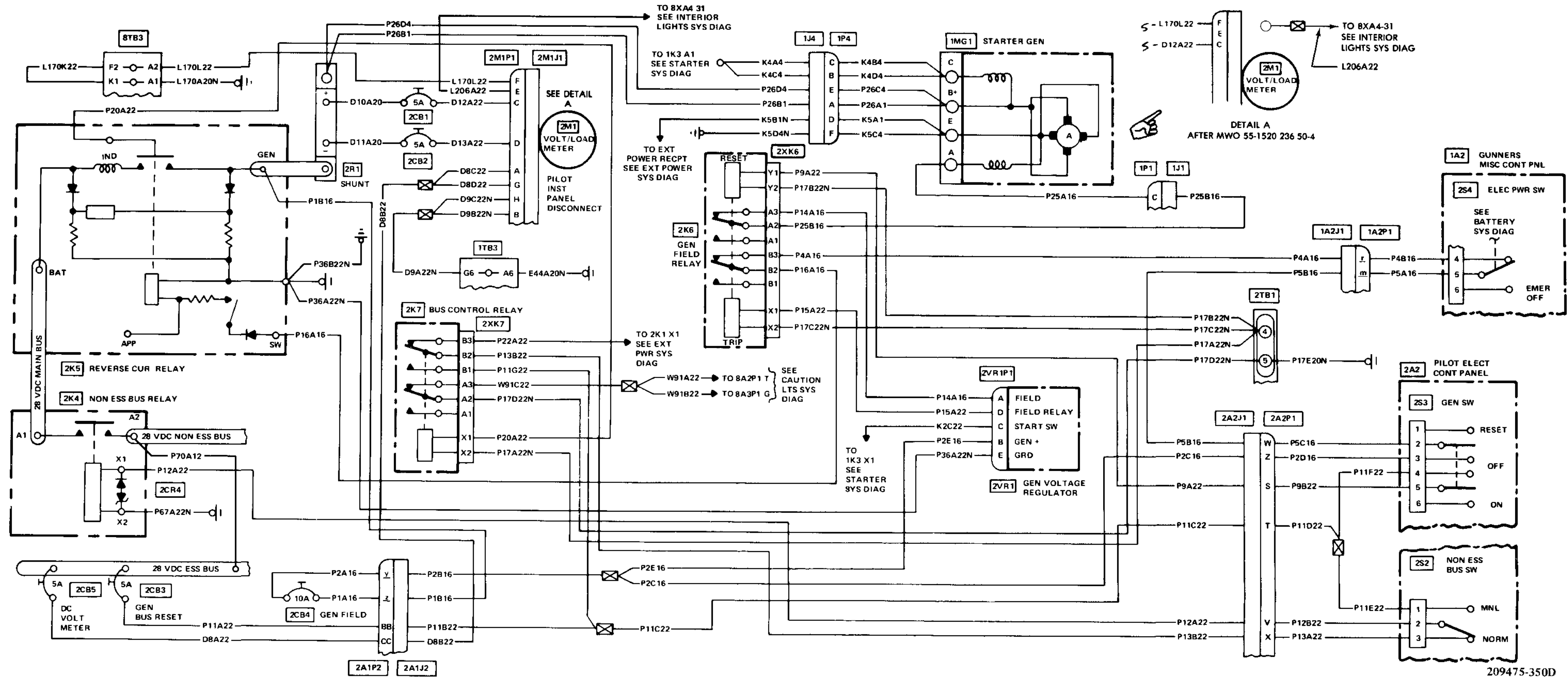
- 1 THIS EQUIPMENT IS NORMALLY DE ENERGIZED
- 2 ONE MINUTE OPERATION OUT OF EACH TEN MINUTES
- 3 ENERGIZED EXCEPT DURING DE ICING
- 4 BATTERY LOAD DURING STARTING
- 5 BATTERY CHARGING VALUES CALCULATED
- 6 BATTERY IS REMOVED FROM MAIN DC BUS DURING FIRING TO SUPPLY GUN DRIVE POWER
- 7 SEVERAL WING STORES CONFIGURATIONS ARE POSSIBLE THIS ANALYSIS IS BASED ON THE CONFIGURATION RESULTING IN THE HIGHEST DC LOAD THAT IS 2XM 18 MINI GUNS ON INBOARD STATIONS AND FOUR TOW MISSILES AT EACH OUTBOARD STATION
- 8 PROVISIONS ONLY

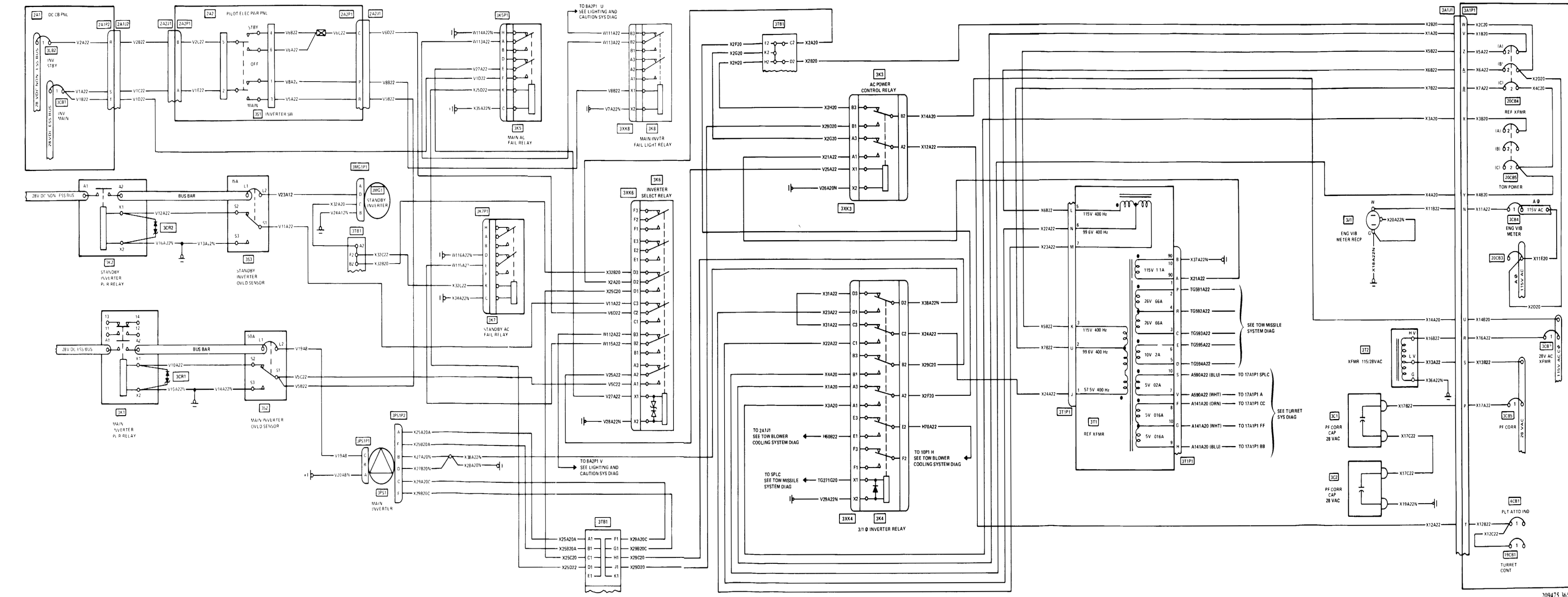
209099-21-9

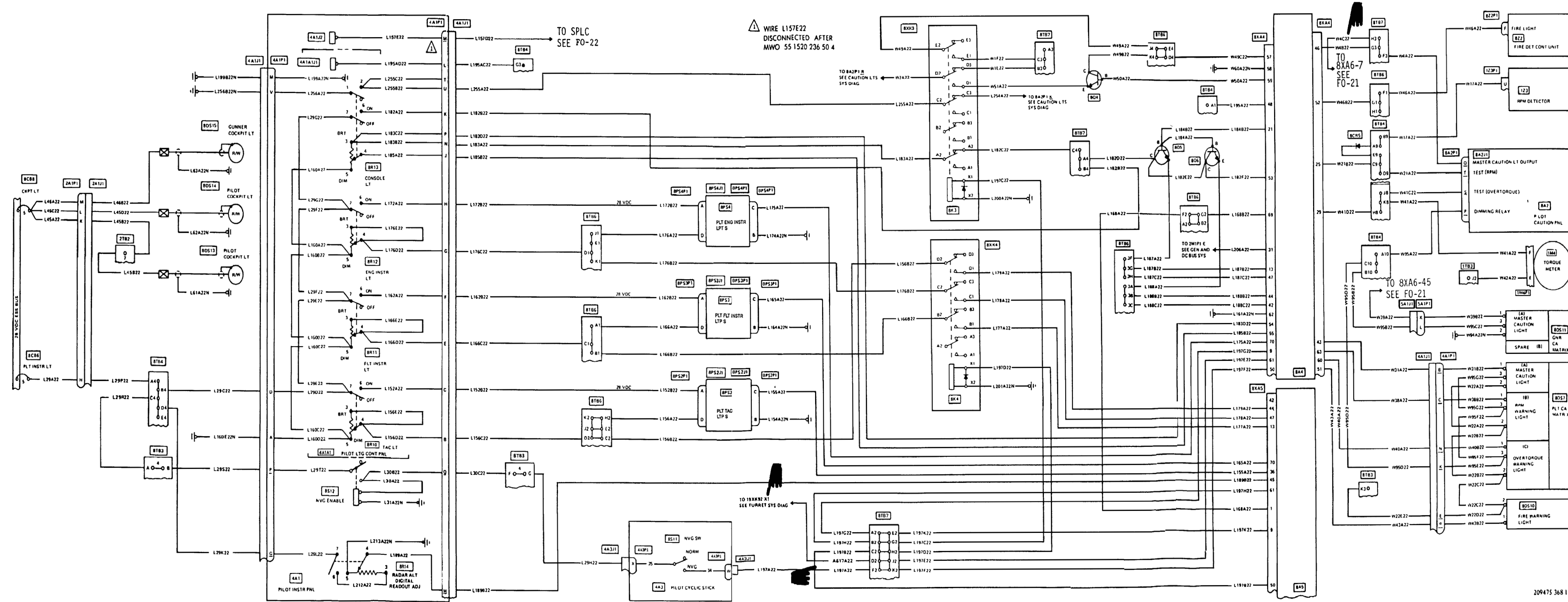


FO-17 P Battery System

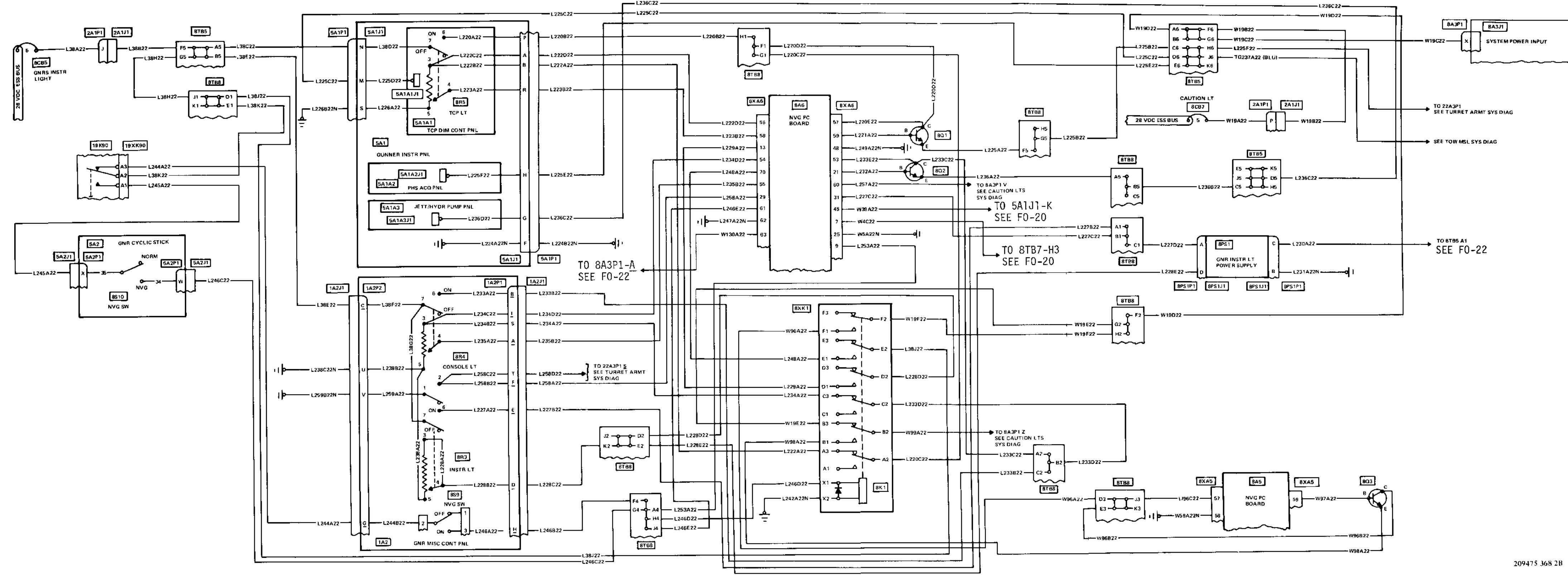
209475-339C



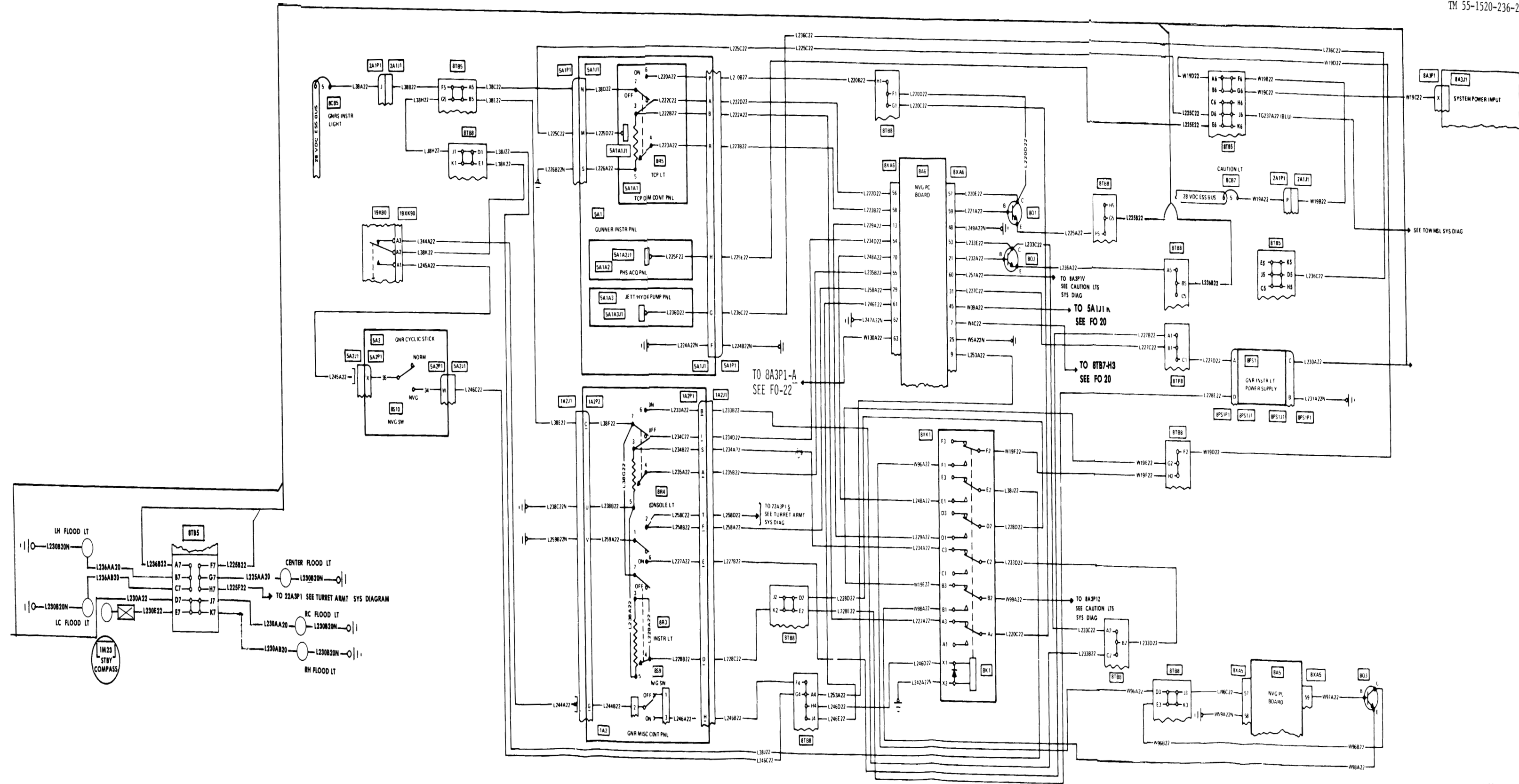




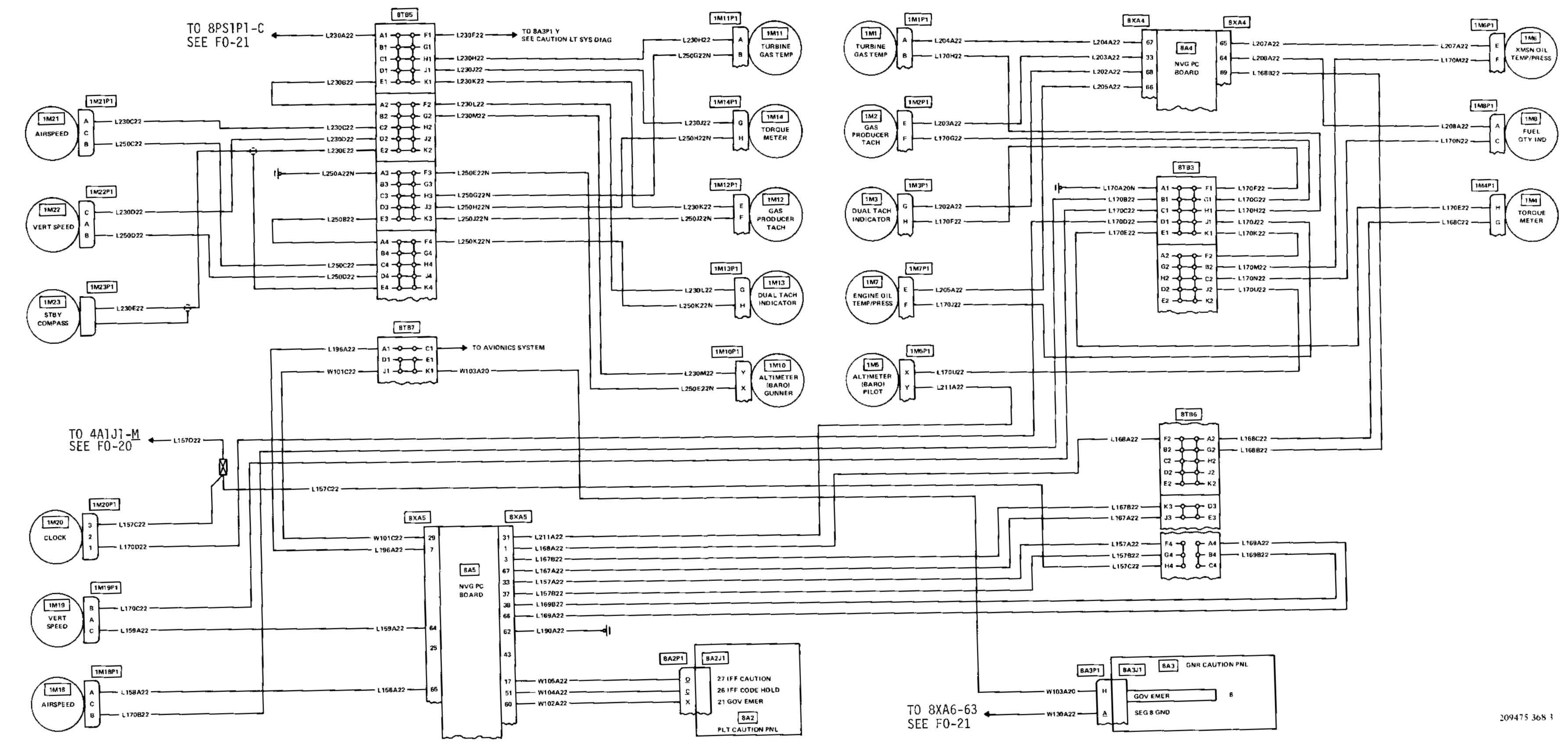
FO-20 Interior Lights System



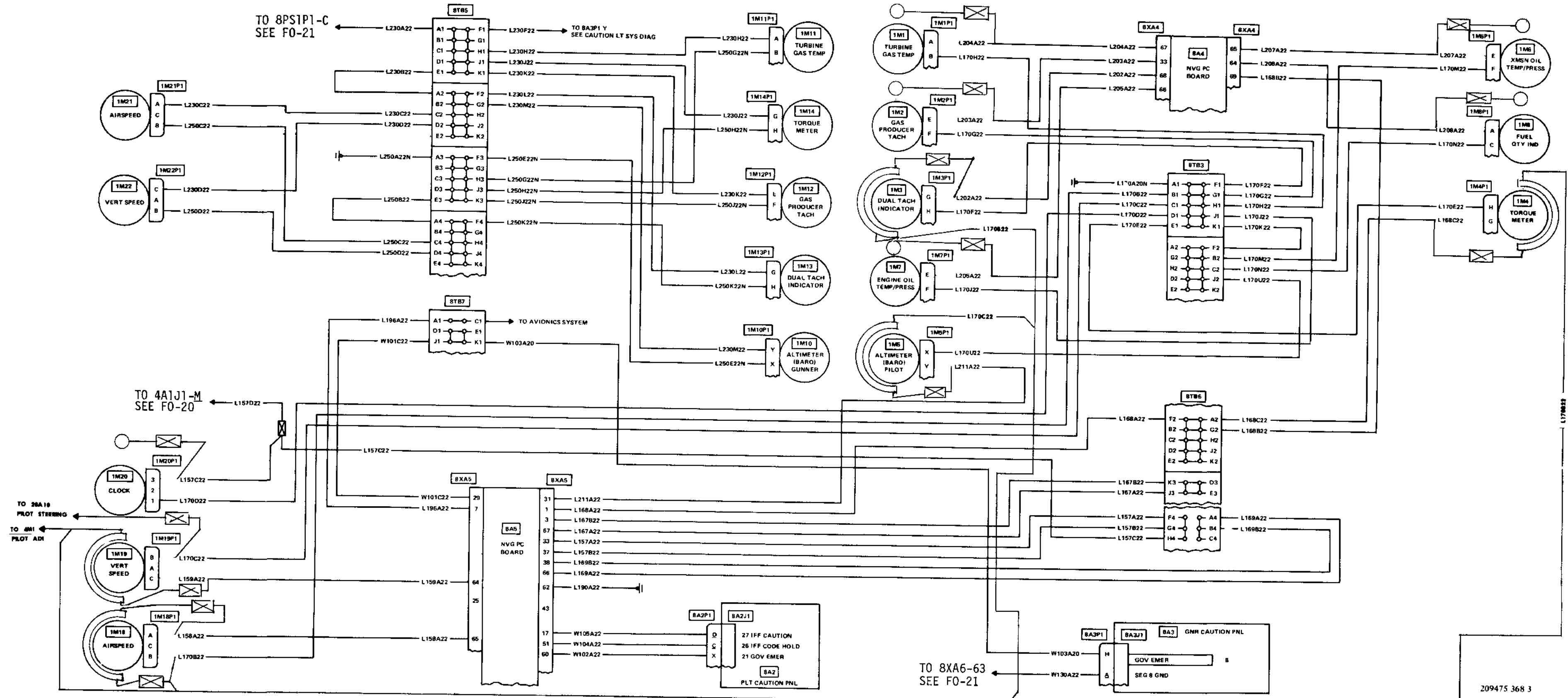
FO-21 Interior Lights System



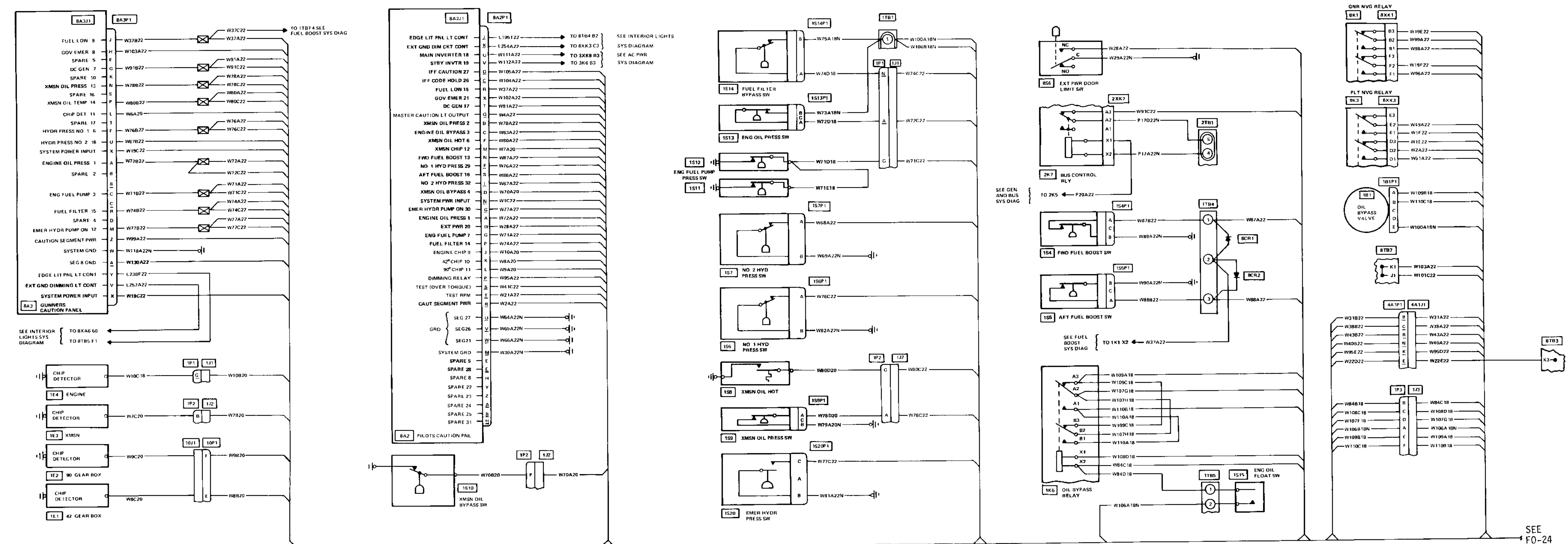
FO-21.1 Interior Lights System (After NMO 55-1520-236-50-4)

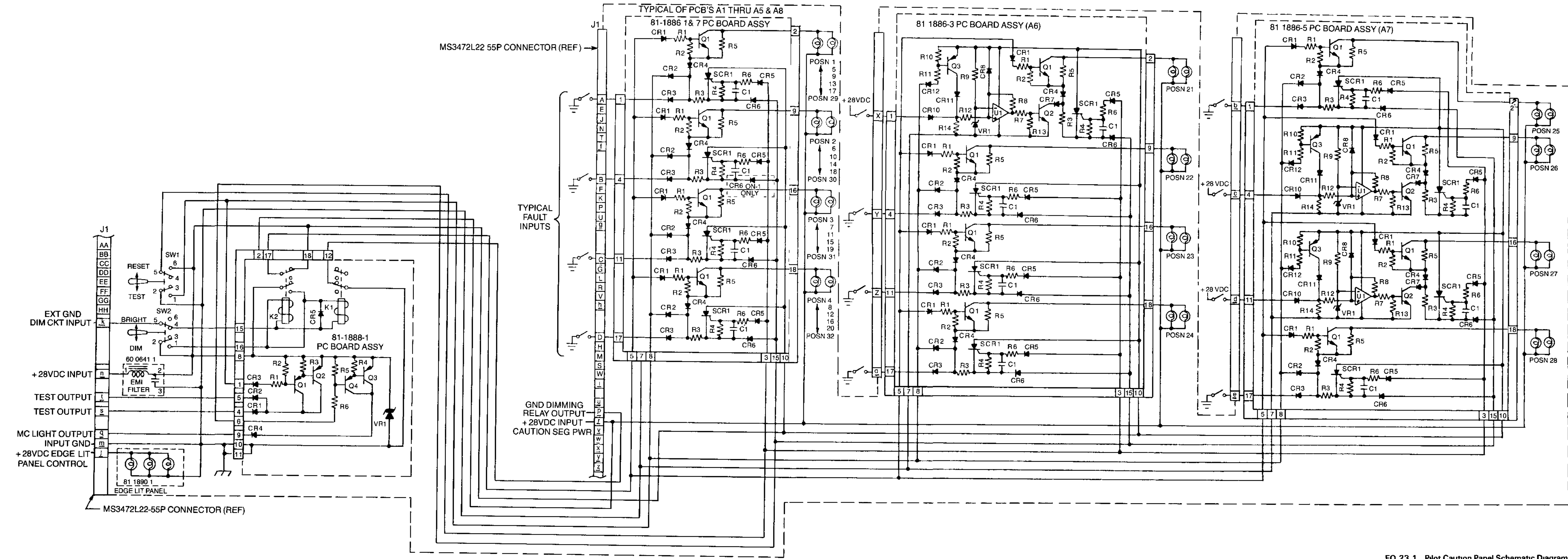


FO-22 Interior Lights System

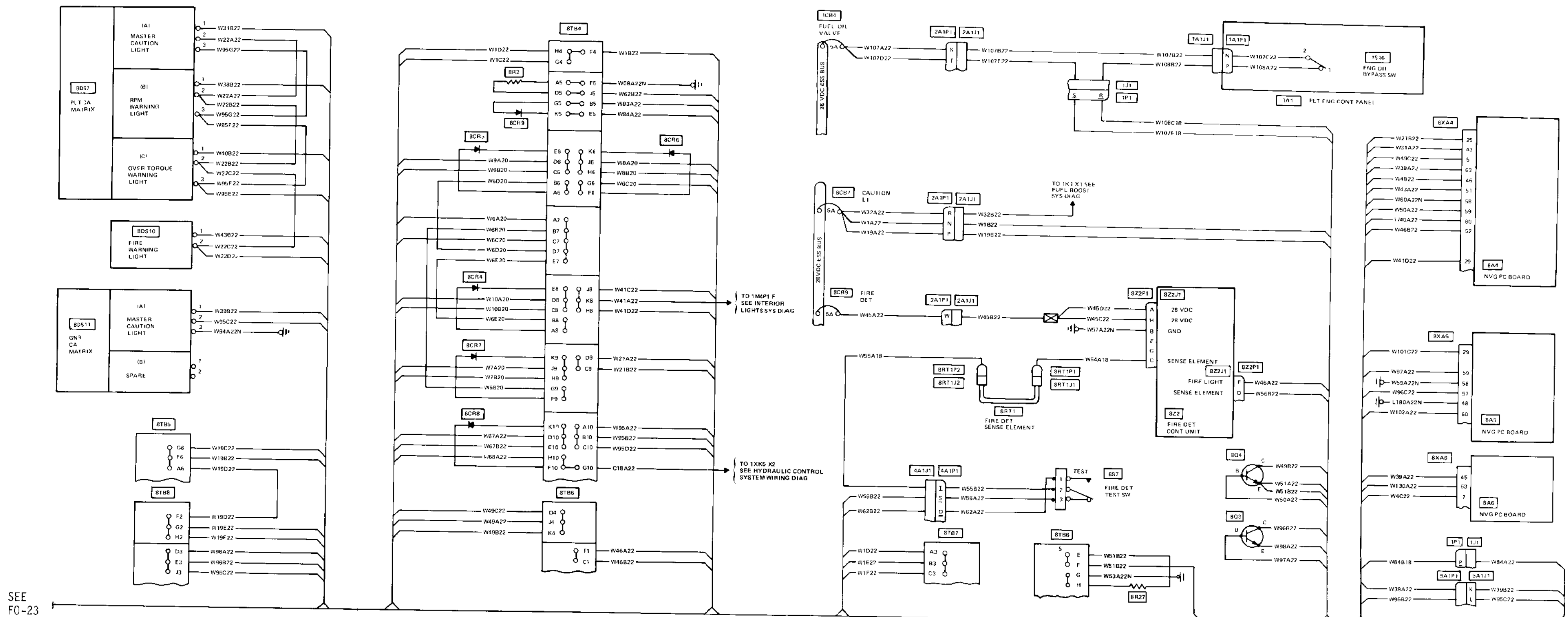


209475 368 3

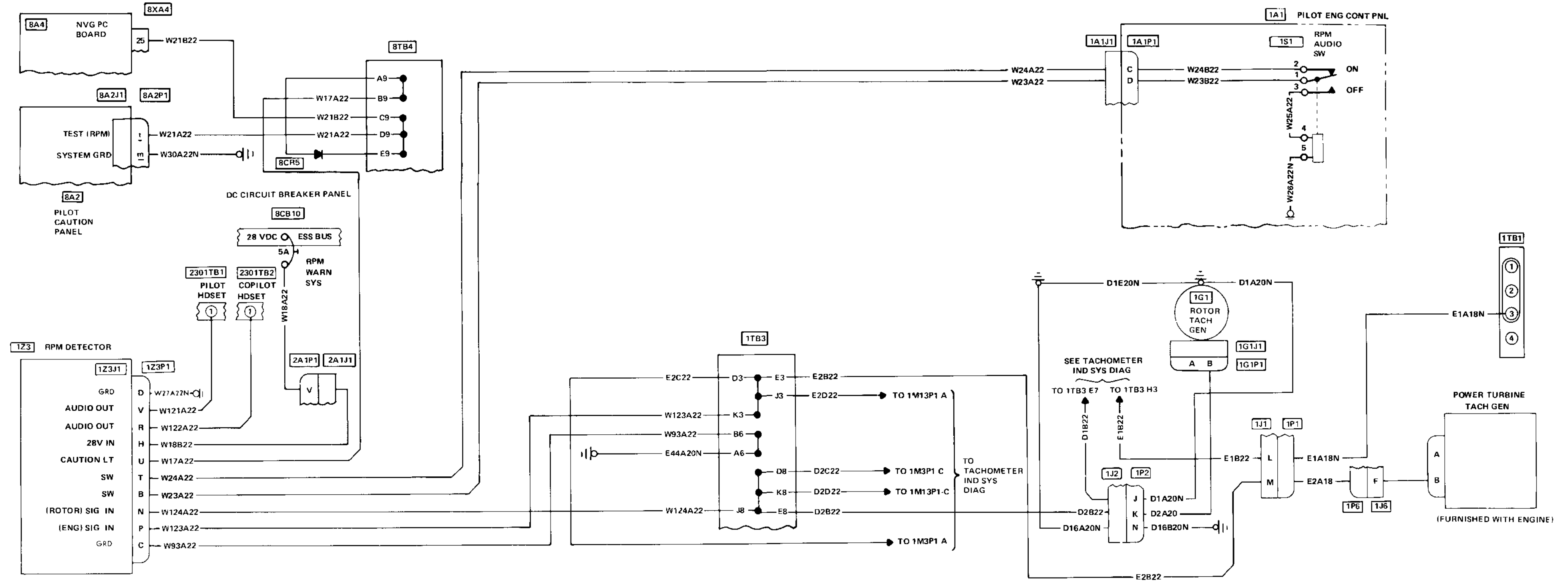


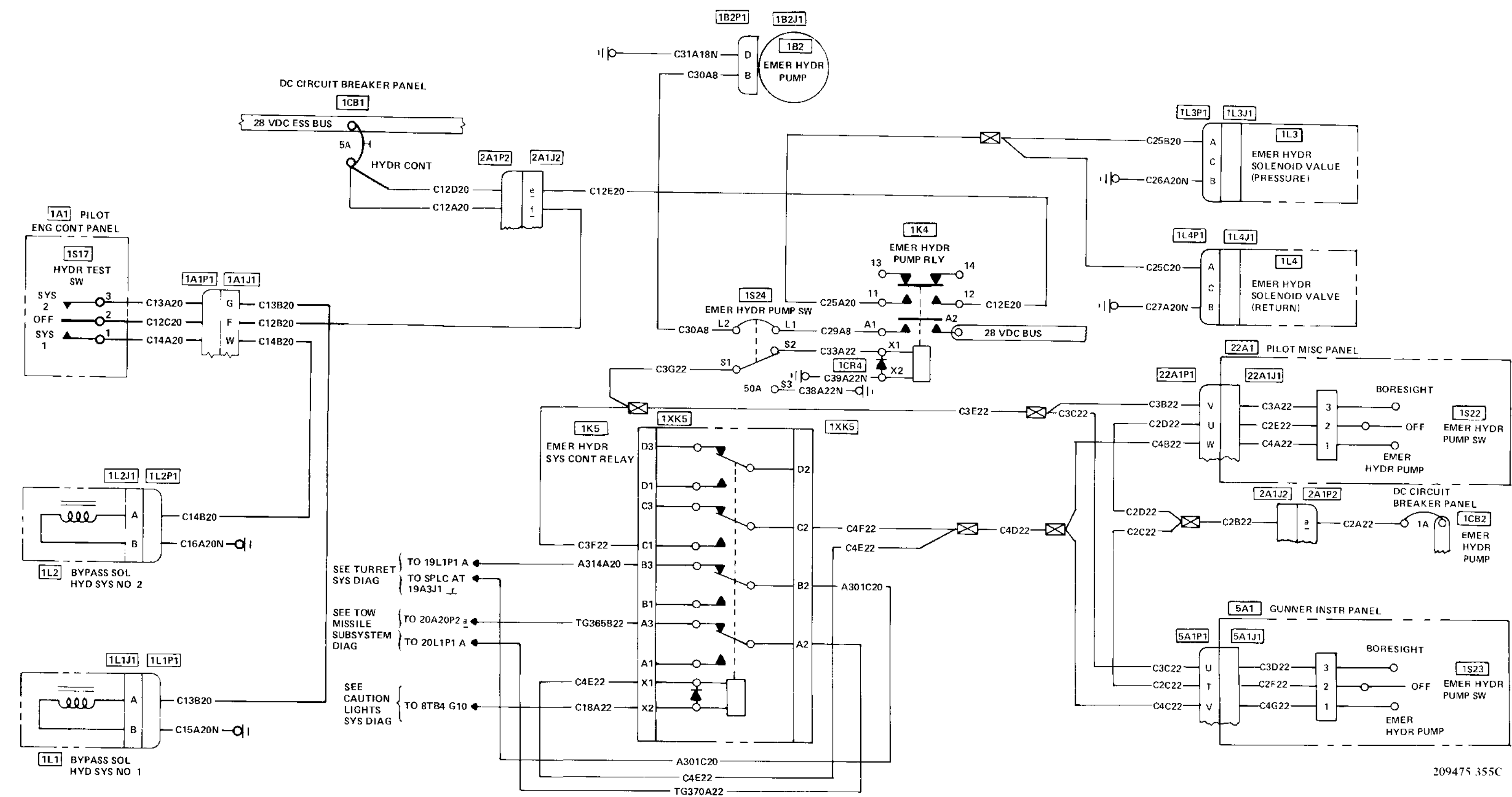


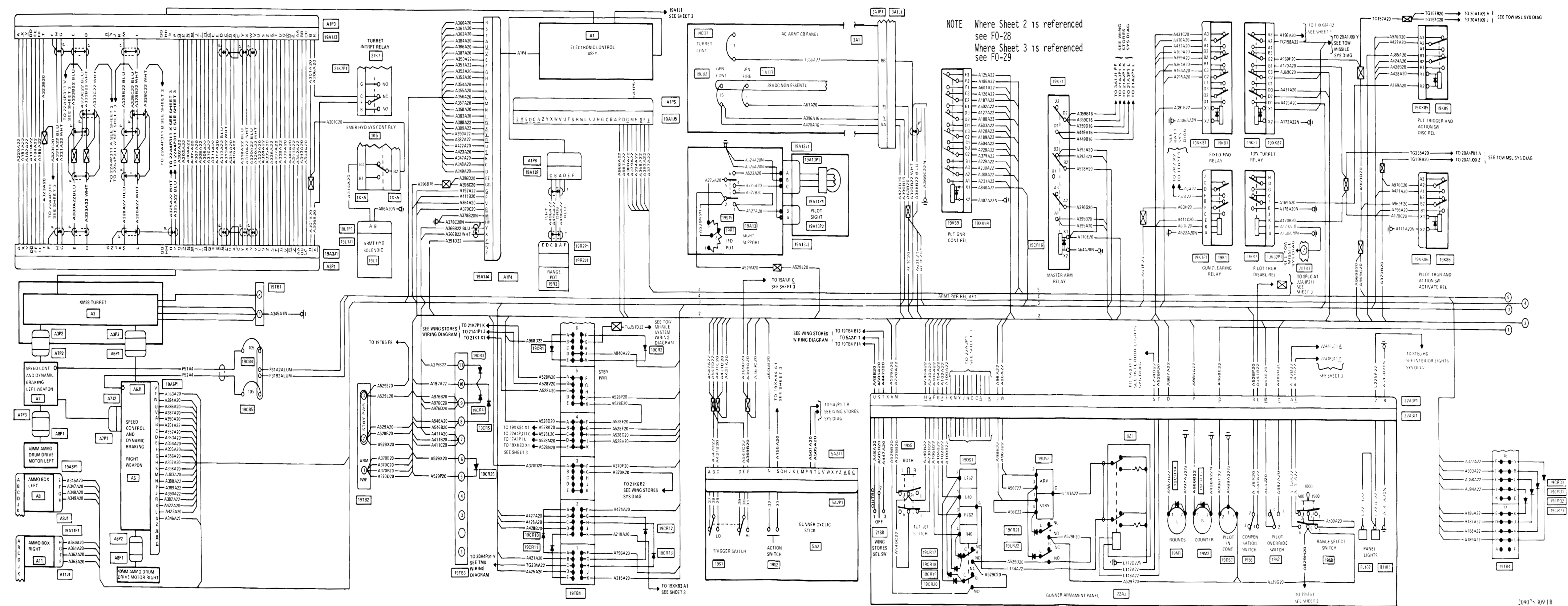
FO 23 1 Pilot Caution Panel Schematic Diagram

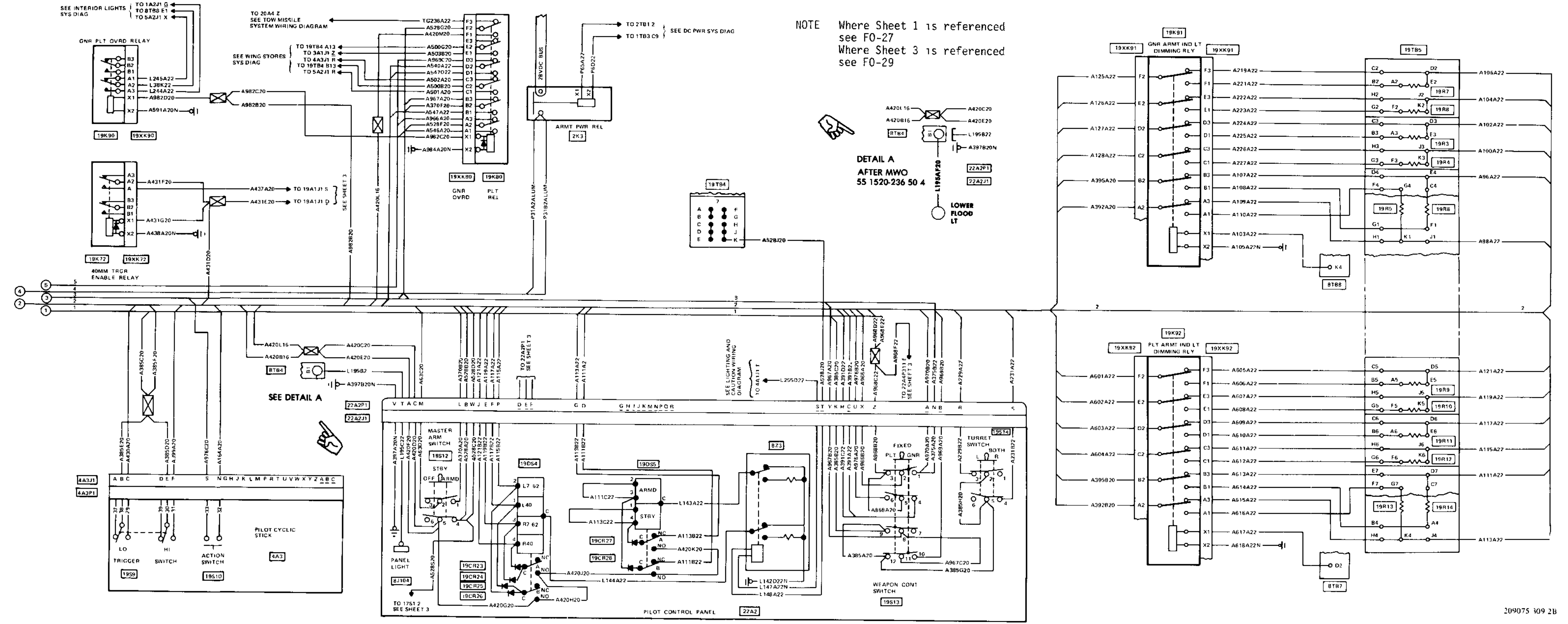


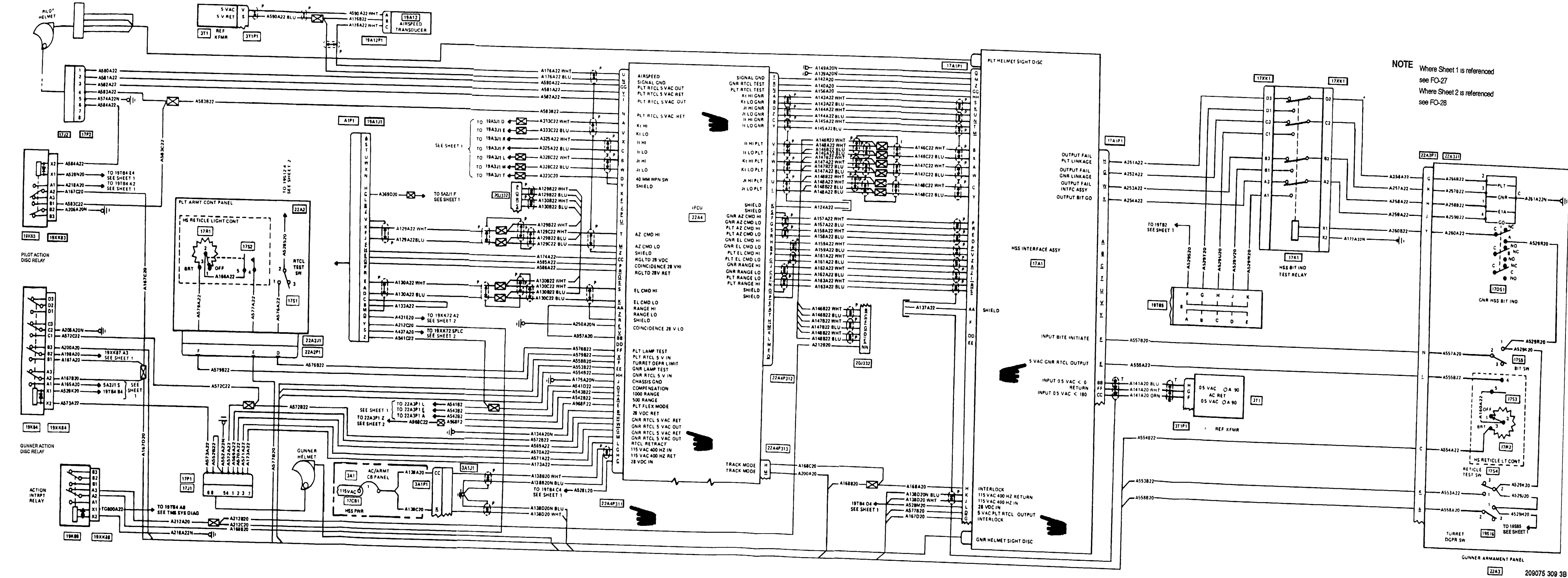
F0-24 Caution Lights System



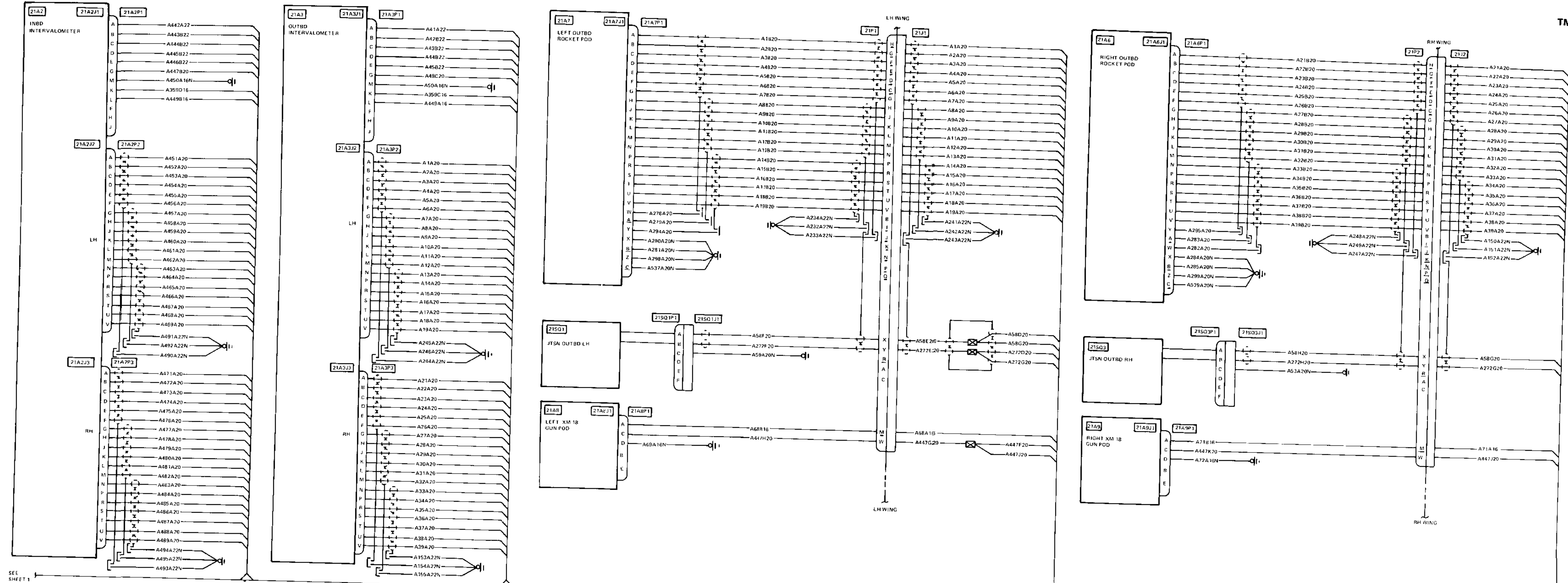


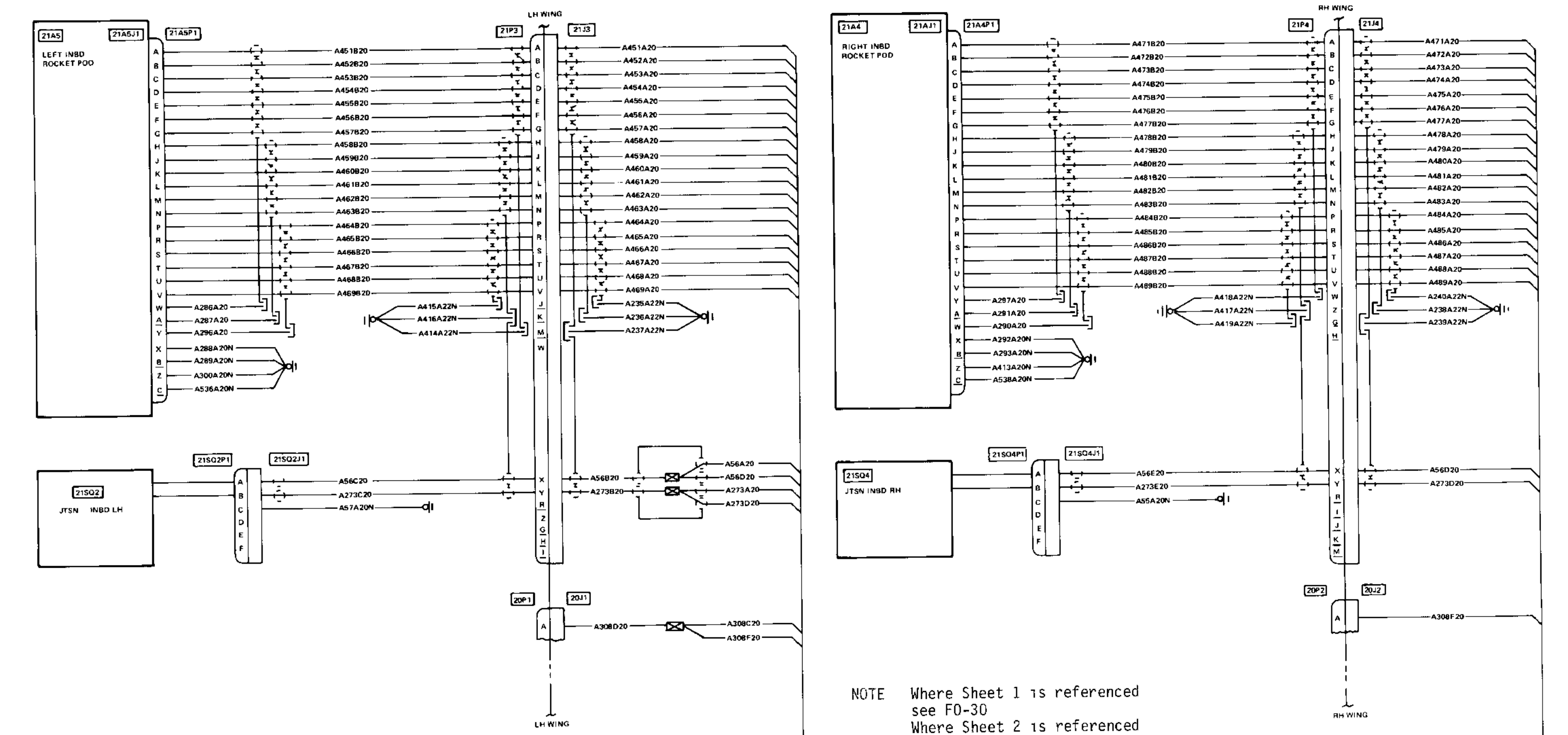






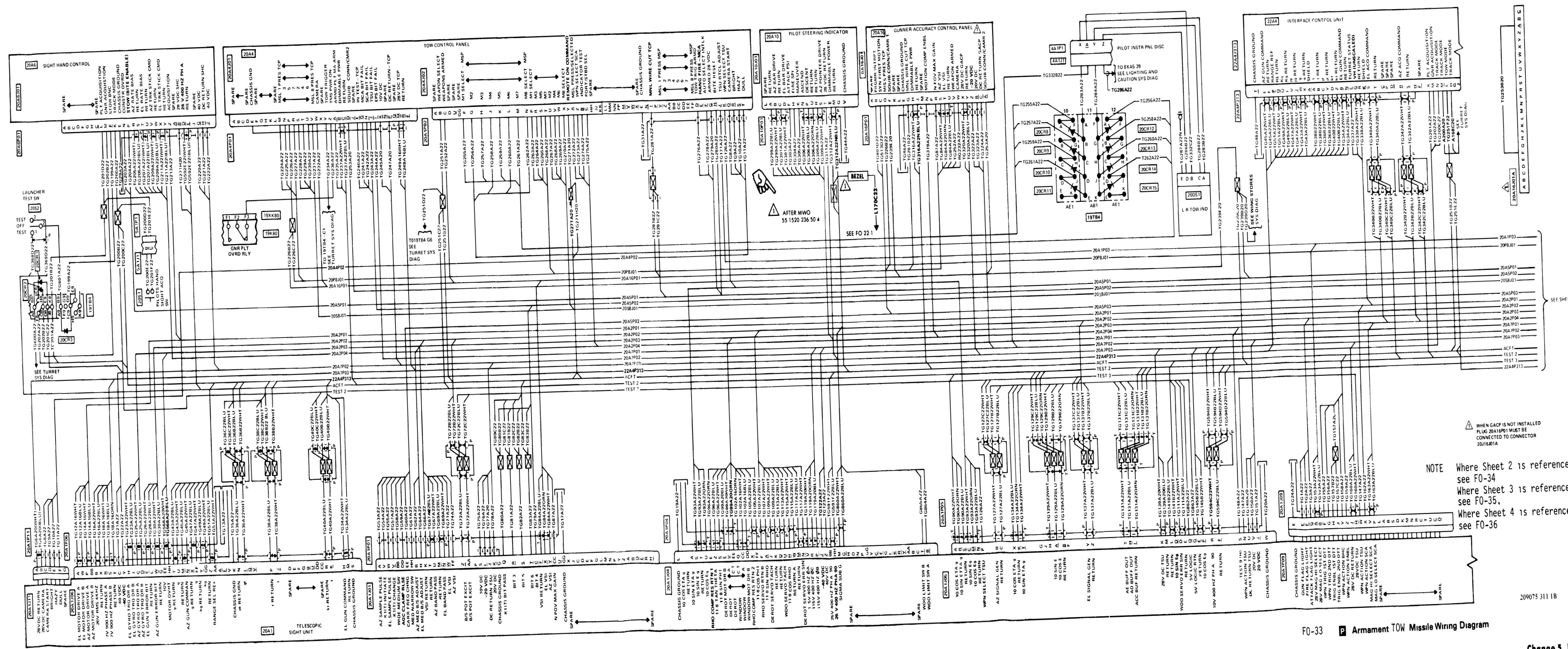
NOTE
 Where Sheet 1 is referenced
 see FO-27
 Where Sheet 2 is referenced
 see FO-28





NOTE Where Sheet 1 is referenced see F0-30
Where Sheet 2 is referenced see F0-31

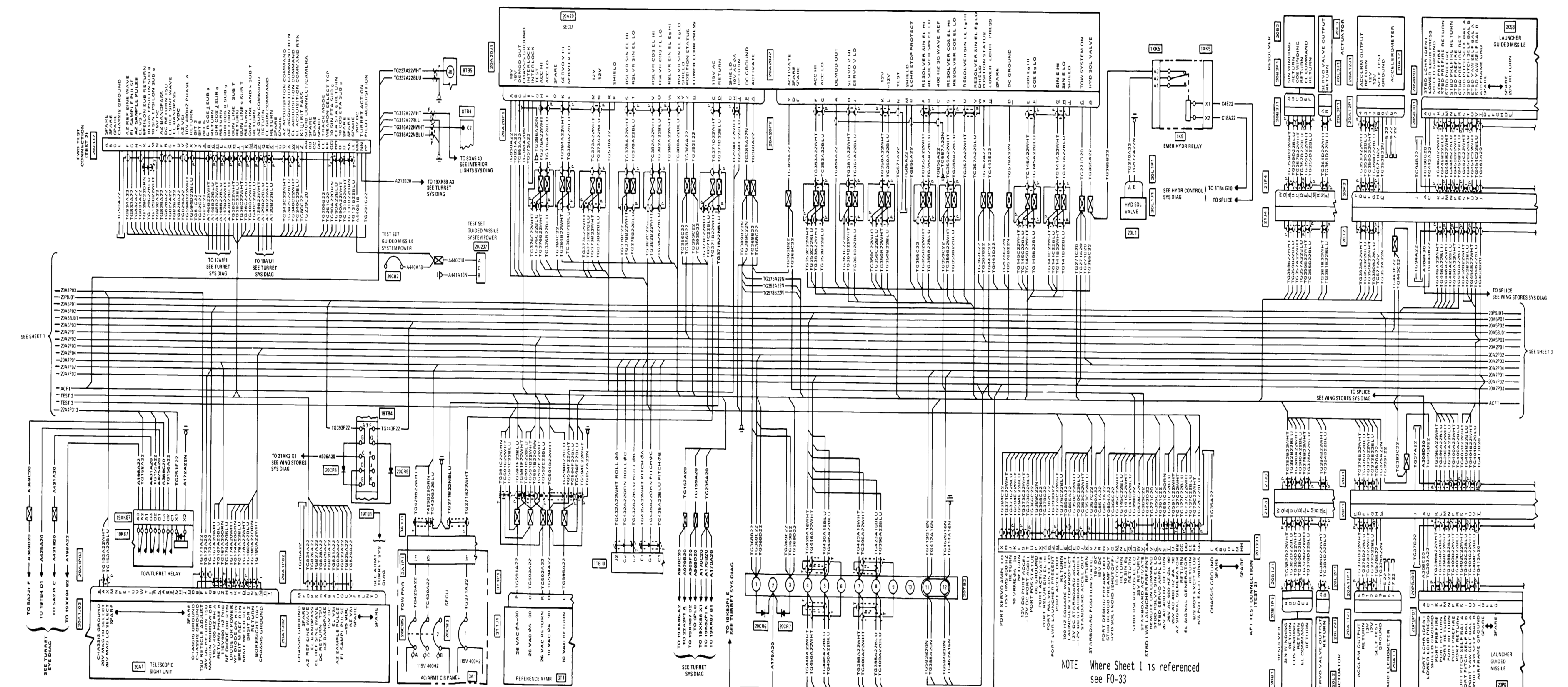
SEE SHEET 2



NOTE: WHEN GAOP IS NOT INSTALLED, PLUG 20A101 MUST BE CONNECTED TO CONNECTOR 201601A.

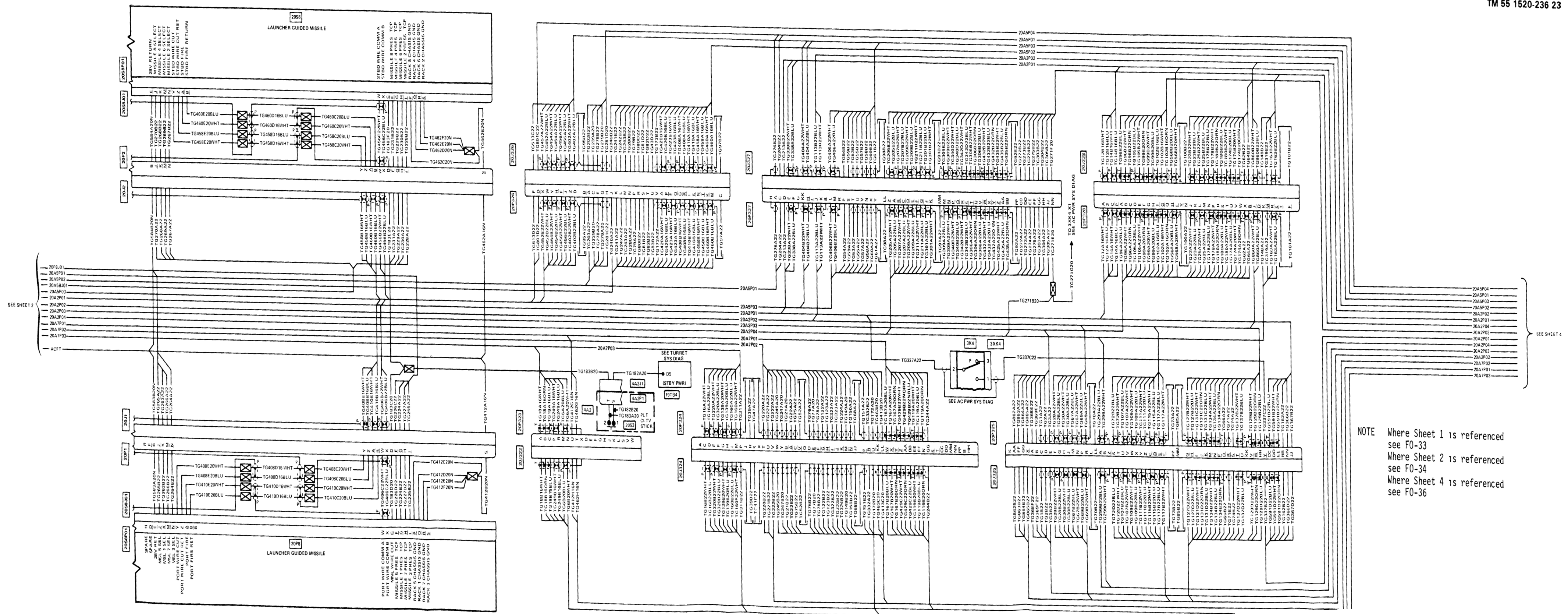
Where Sheet 2 is referenced see FO-34
 Where Sheet 3 is referenced see FO-35.
 Where Sheet 4 is referenced see FO-36

FO-33 Armament TOW Missile Wiring Diagram

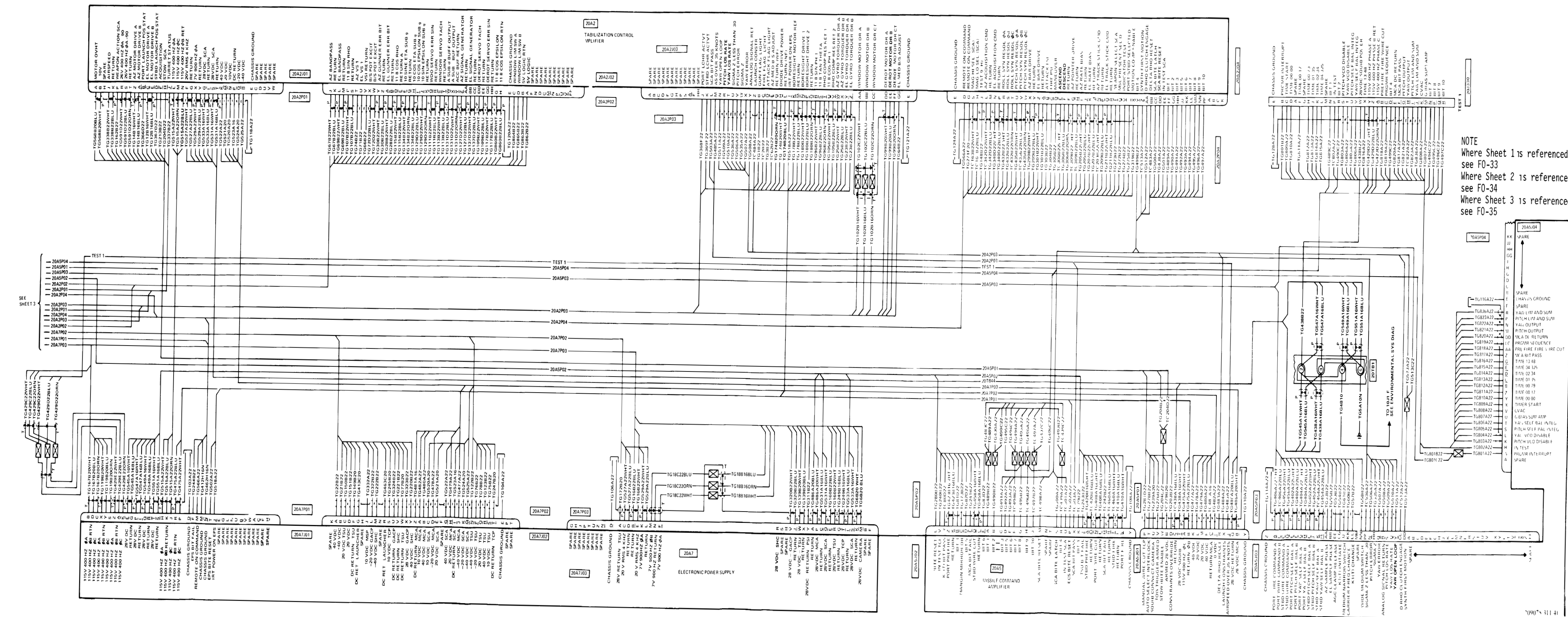


NOTE Where Sheet 1 is referenced see FO-33
 Where Sheet 3 is referenced see FO-35
 Where Sheet 4 is referenced see FO-36

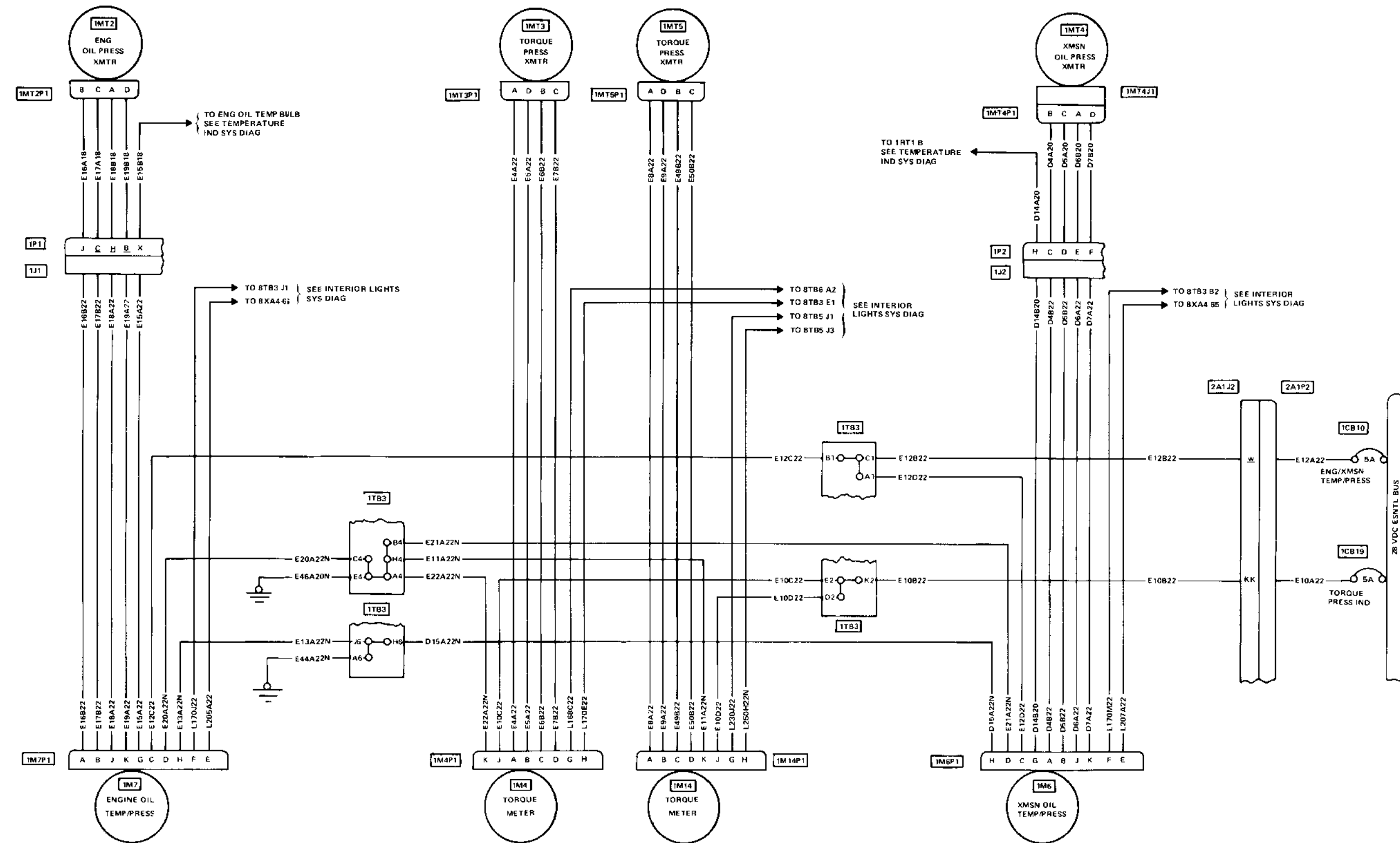
FO-34 Armament TOW Missile Wiring Diagram

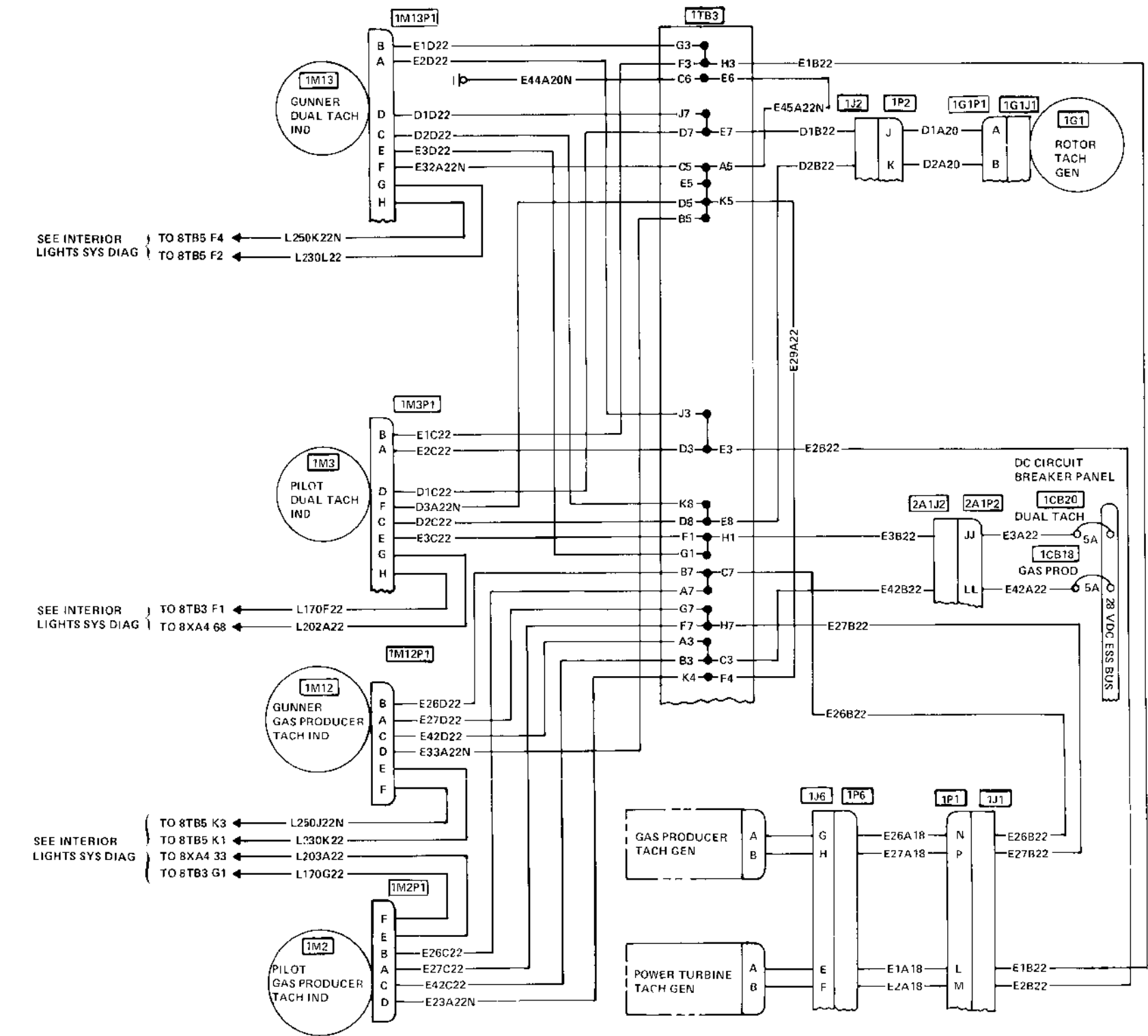


NOTE Where Sheet 1 is referenced see F0-33
 Where Sheet 2 is referenced see F0-34
 Where Sheet 4 is referenced see F0-36

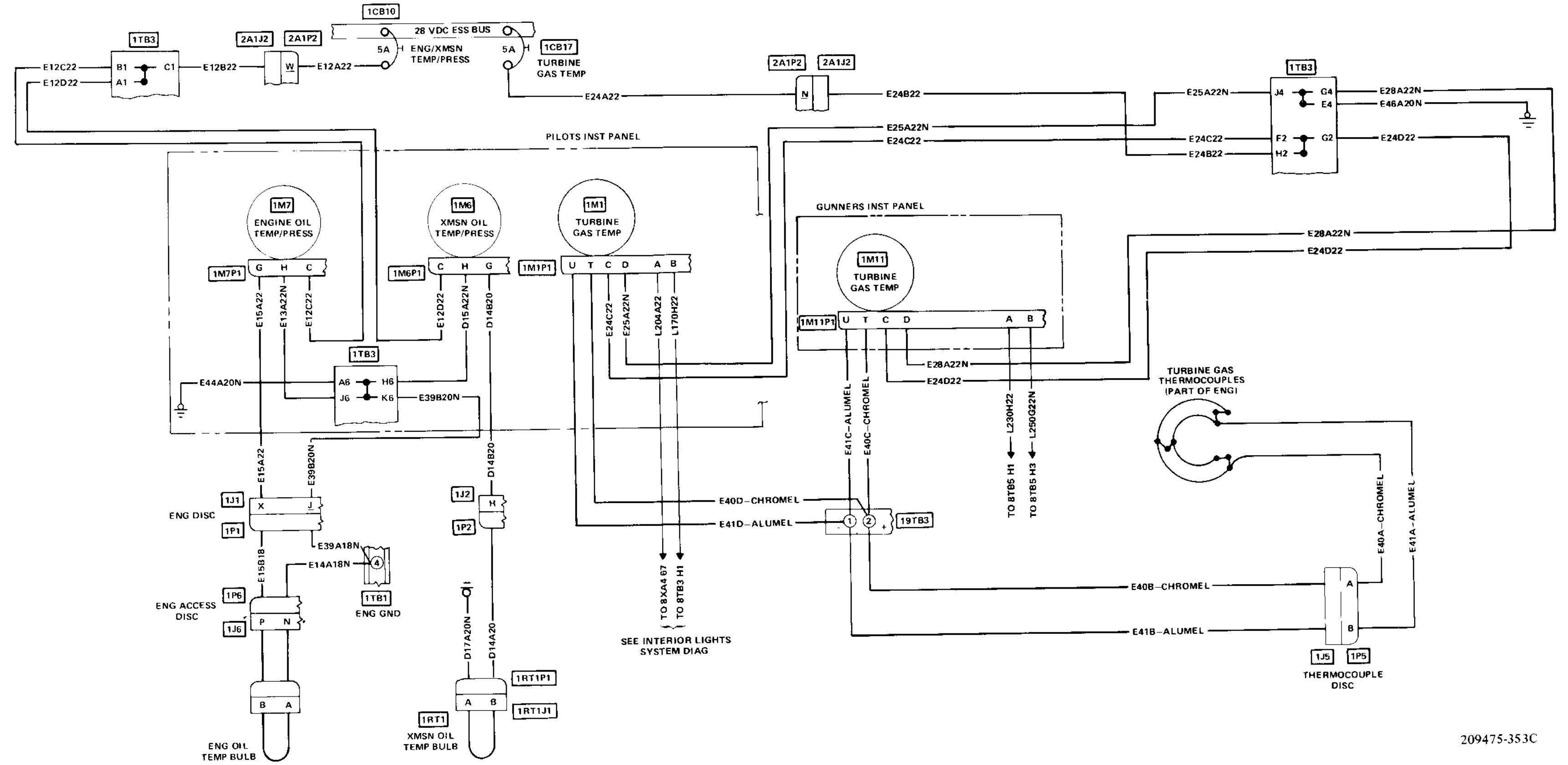


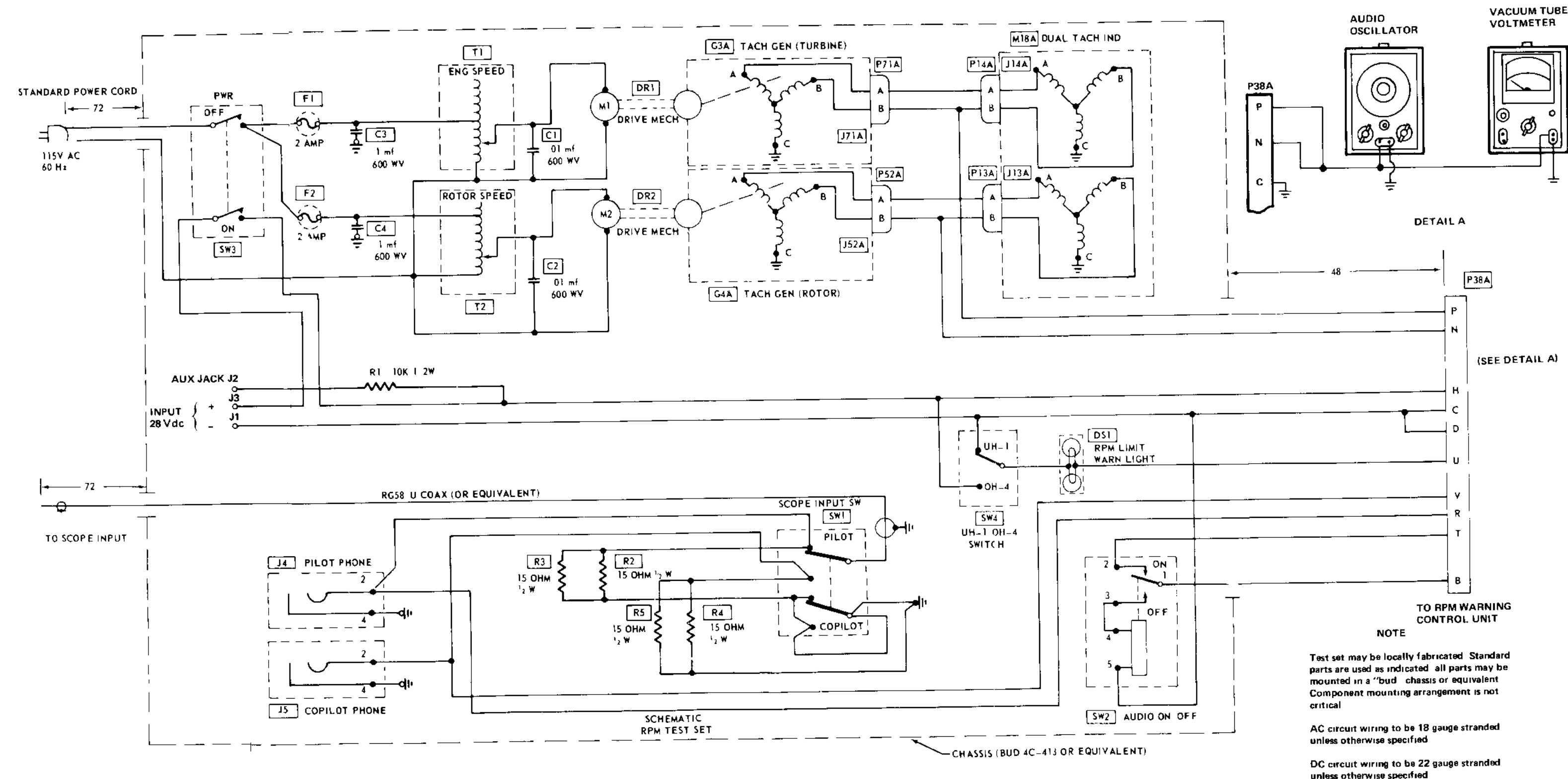
NOTE
 Where Sheet 1 is referenced
 see FO-33
 Where Sheet 2 is referenced
 see FO-34
 Where Sheet 3 is referenced
 see FO-35





209475 335C





NOTE
 Test set may be locally fabricated. Standard parts are used as indicated. All parts may be mounted in a "bud" chassis or equivalent. Component mounting arrangement is not critical.
 AC circuit wiring to be 18 gauge stranded unless otherwise specified.
 DC circuit wiring to be 22 gauge stranded unless otherwise specified.

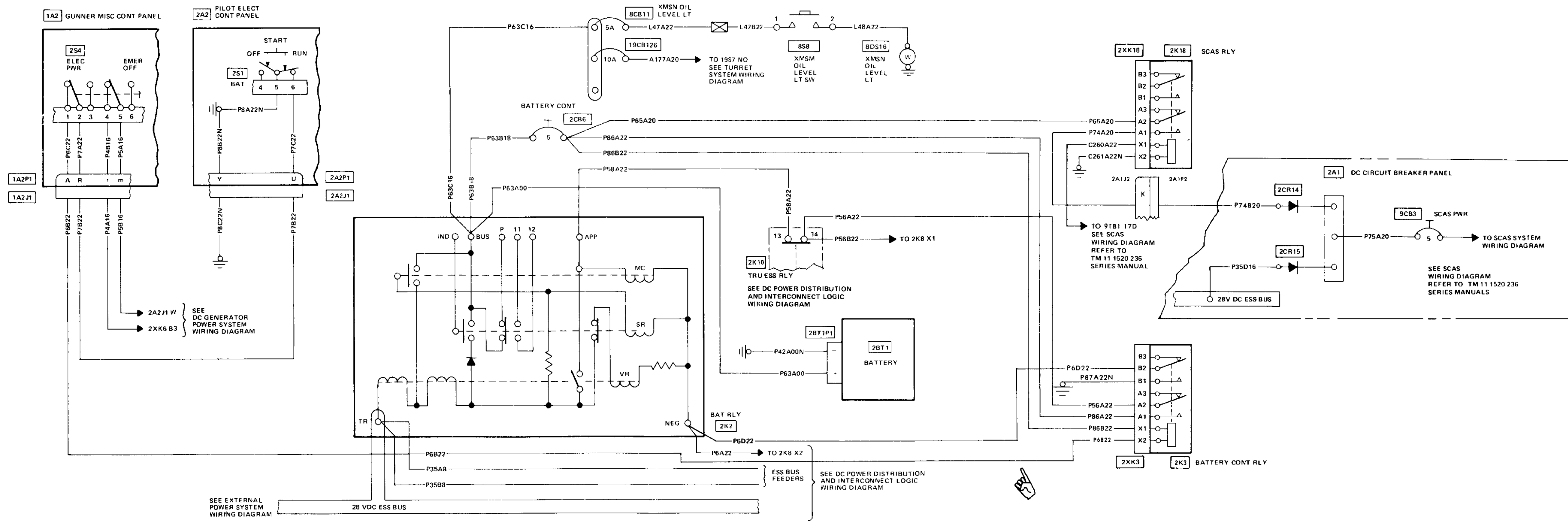
FREQ HZ	VRMS	ENG RPM	ROTOR RPM
66.5	19.5	6200	305
69.0	20.0	6400	315
73.5	22.0	6800	334
76.0	22.5	7000	-

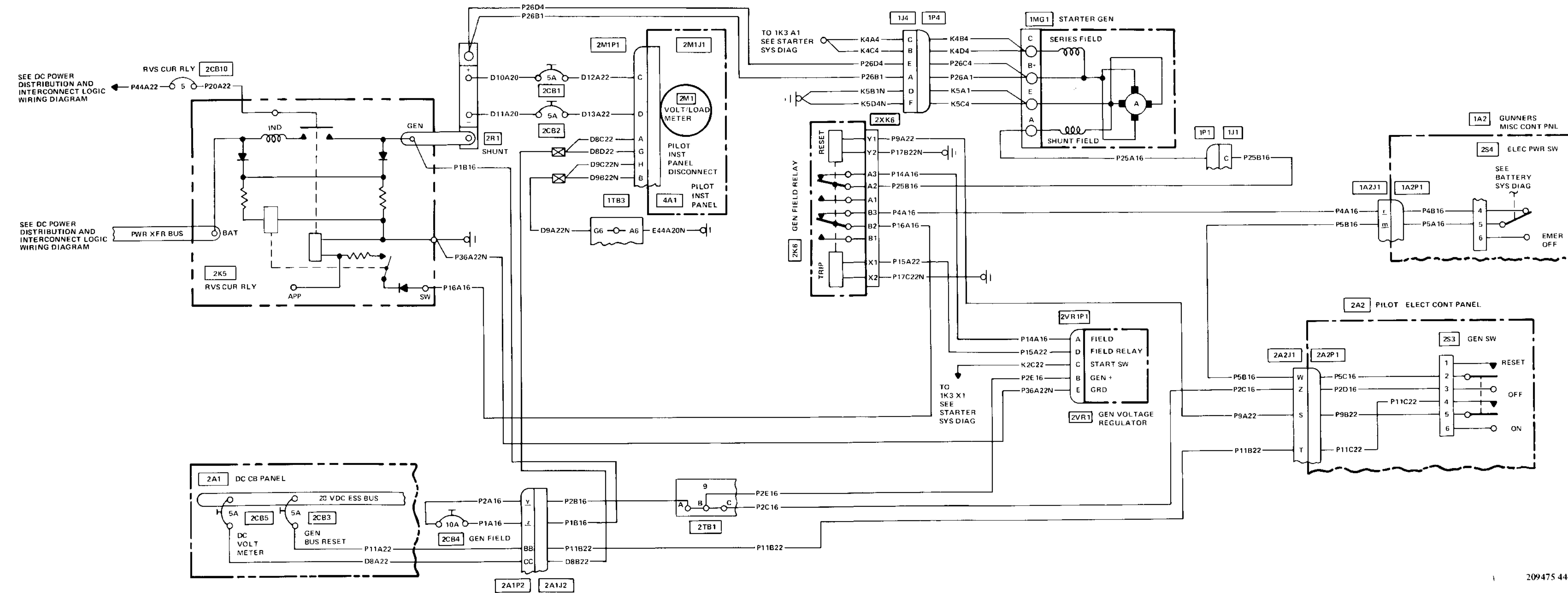
ID CODE	NOMENCLATURE	PART NO
C1 C2	Line Filter 01 mf 600 WV	(Non Polarized)
C3 C4	Line Filter 1 mf 600 WV	(Non Polarized)
DR1 DR2	Rubber Flex Tube	Rubber Hose
DS1	Korrry Light (033 0861 001)	1/4" I D (Bell 205 074 026 1)
F1 F2	Fuse Holder	HKF
G3A	Tach Generator (MIL G26611)	Type GEU 7/A
G4A	Tach Generator (MIL G26611)	Type GEU 7/A
J1 J2 J3	Banana Jack	Standard
J4 J5	Phone Jack	092 A/U
M1 M2	Tach Gen Drive Motor - Dayton Mod 2M037 - Ball Bearing 1/4 Shaft 1/10 HP 8000 RPM 115Vac 60 Hz	
M18A	Dual Tach Indicator - GE 8DJ67FBC Sub 1	(Bell 204 070 055 1)
P13A	Plug Dual Tach Indicator	MS3106R14S 7S
P14A	Plug Dual Tach Indicator	MS3106R14S 7S
P38A	Plug Eng RPM Warning Control	MS3126F14 19S
P52A	Plug Tach Generator	MS3108R12S 3S
P71A	Plug Tach Generator	MS3108R12S 3S
R1	Resistor 10K OHM 1/2W Carbon	(Tol 5%)
R2 R3	Resistor 15 OHM 1/2W Carbon	(Tol 5%)
R4 R5	Resistor 15 OHM 1/2W Carbon	(Tol 5%)
SW1	Switch Scope Input	MS24659 23G
SW2	Switch Audio On/Off (Micro)	5 E-T1 S
SW3	Switch Power On/Off	MS35059 22
T1 T2	Speed Control - Power Stat Superior Electric Co (0 140Vac 60 Hz)	Type 10B

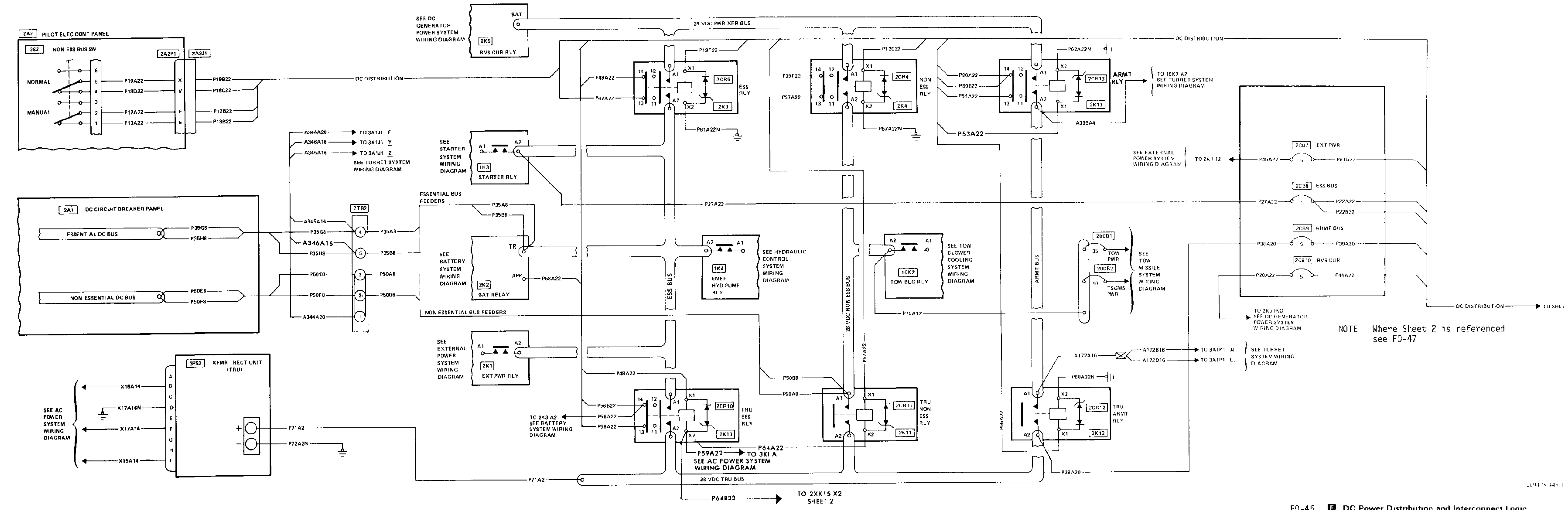
CODE NO	EQUIPMENT	PART DESIGNATION	CKT LTR	NO TES	NO OF UNITS	OPER TIME MIN	ELECTRICAL REQUIREMENTS PER UNIT																	
							115 VOLTS 3 PHASE			115 VOLTS 1 PHASE			26 VOLTS 1 PHASE			PWR FACT	VOLTAGE		FREQ		PWR SOR INF			
							VA	WATTS	VAR	VA	WATTS	VAR	VA	WATTS	VAR		MIN	MAX	MIN	MAX				
AC BUS SYS																								
26 VAC																								
F085	FLIGHT INSTRUMENTS COURSE IND 212 070 180 3				F	1	15 00							9 12	1 46	9 00	0 160	24 5	27 5	300	420	SPEC		
R053	RADIO NAV & COMM LF/ADF REC AN/ARN 89				R	1	15 00							4 01	2 52	3 12	0 629	24 5	27 5	380	420	MEA		
R102	VOR/LOC/GS AN/ARN 123					1	15 00							10 40	8 32	6 24	0 800	24 5	27 5	380	420	SPEC		
X023	AC POWER PF COR CAP 5 MFD 100V				X	1	15 00							8 60	1 71	8 43	0 189	24 5	27 5	360	440	MEA		
115 VAC																								
C032	FLIGHT CONTROLS SCAS SYS				C	1	15 00				69 00	59 34	35 21				0 860	108 0	118 0	360	440	MEA		
E046	ENGINE INSTRUMENTS FUELQTSYS 209 060 602				E	1	15 00				2 92	2 91	0 26				0 996	107 5	119 5	360	440	MEA		
E040A	FUELQTYIND					1																		
E040B	FUELQTYXMR					2																		
26 VAC																								
F018	FLIGHT INSTRUMENTS COMPASSSYS AN/ASN 43				F	1	15 00													380	420	MEA		
F018A	DIR GYRO (N-998) 1/ASN					1					16 39	15 36	6 73				0 937	108 0	118 0	380	420	MEA		
F018B	XMTX T 0111 1/ASN /					1																		
F025	ATT GYRO LEAR SIGLER 9000C					1	15 00	17 94	15 93	8 25							0 888	108 0	118 0	380	420	MEA		
F078	HSI IND 209 070 660					1	15 00				25 00	20 00	15 00				0 800	108 0	118 0	380	420	SPEC		
F087	ATT INDBPH 209 075 661 1					1	15 00	10 57	9 99	3 45							0 945	108 0	118 0	380	420	SPEC		
H068	HEATING RAD CPT BL 209 073 901 1				H	1	15 00				2 64	2 30	1 30				0 871	107 5	119 5	360	440	MEA		
X025	AC POWER DC PWR SUP BENDIX 9840 1				X	1	15 00										0 980	108 0	118 0	360	440	CAL		
AC BUS ARMAMENT																								
115 VAC ARMAMENT																								
A003	ARMAMENT HELMET ST				A	1	15 00				13 35	13 35	0 0				1 000	107 5	119 5	380	420	MEA		
A039	TURRET SYS M 197					1	15 00	82 88	82 73	4 97							0 996	108 5	117 5	360	420	MEA		
X026	AC POWER DC PWR SUP BENDIX 9840 1				X	1	15 00										0 980	108 0	118 0	360	440	CAL		
AC BUS TOW																								
115 VAC (WITH TOW ENERGIZED)																								
A001	ARMAMENT TOW REF ST XM 65				A	1	15 00	27 92	-24 53	13 14							0 882	108 5	117 5	380	420	MEA		
A002	TOW MIS SY XM 65					1	15 00	110 64	104 23	37 11							0 942	108 5	117 5	380	420	MEA		

POWER SOURCE COMPONENT DATA

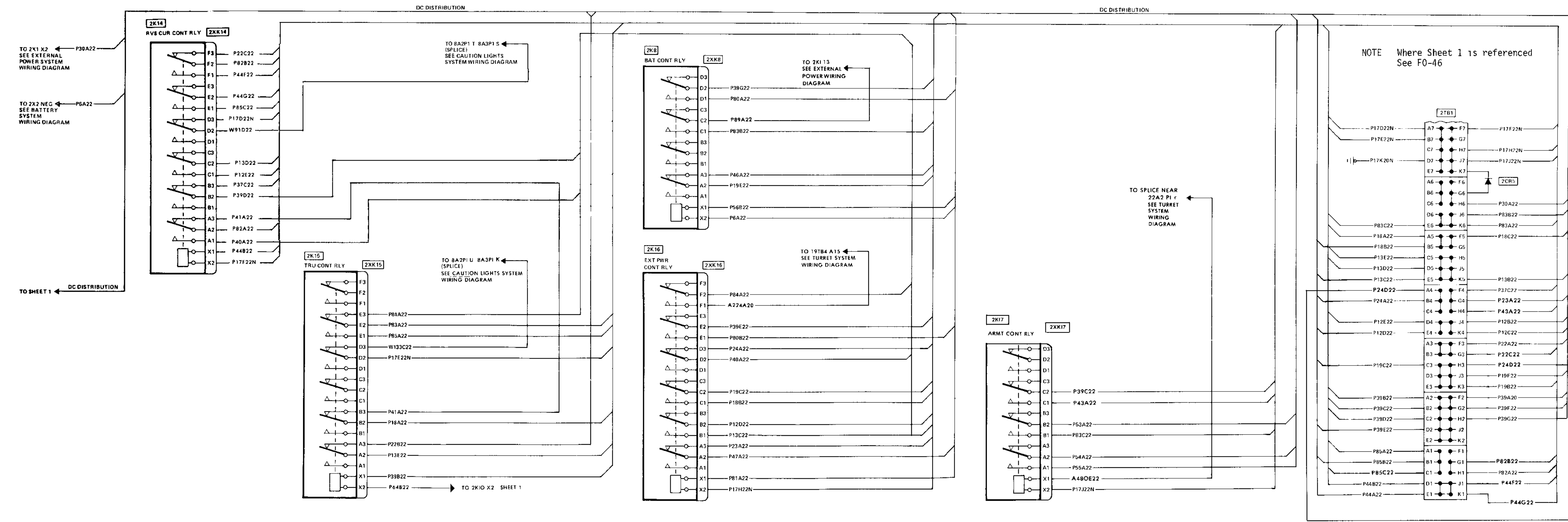
ITEM	ALTERNATOR	STBY INVERTER	26V AC XFMR
No. Units	1	1	1
Rating	10 KVA	750 VA	150 VA
Voltage	115 VAC	115 VAC	26 VAC
Frequency	400 Hz	400 Hz	400 Hz
Power Factor	0 76 Lag	0 76 Lag	0 76 Lag
Configuration	1 0 Lag	0 95 Lead	
	3 Phase	3 Phase	
	Wye	Wye	
Manufacturer	Bendix	Bendix	
Model No	209 075	209 075	209 075
	997 1	572	363 1
Voltage Reg	+2 2%	-8 7%	
Regulator P/N	409 376	203	
Frequency Reg	420 Hz to 360 Hz	2 5%	

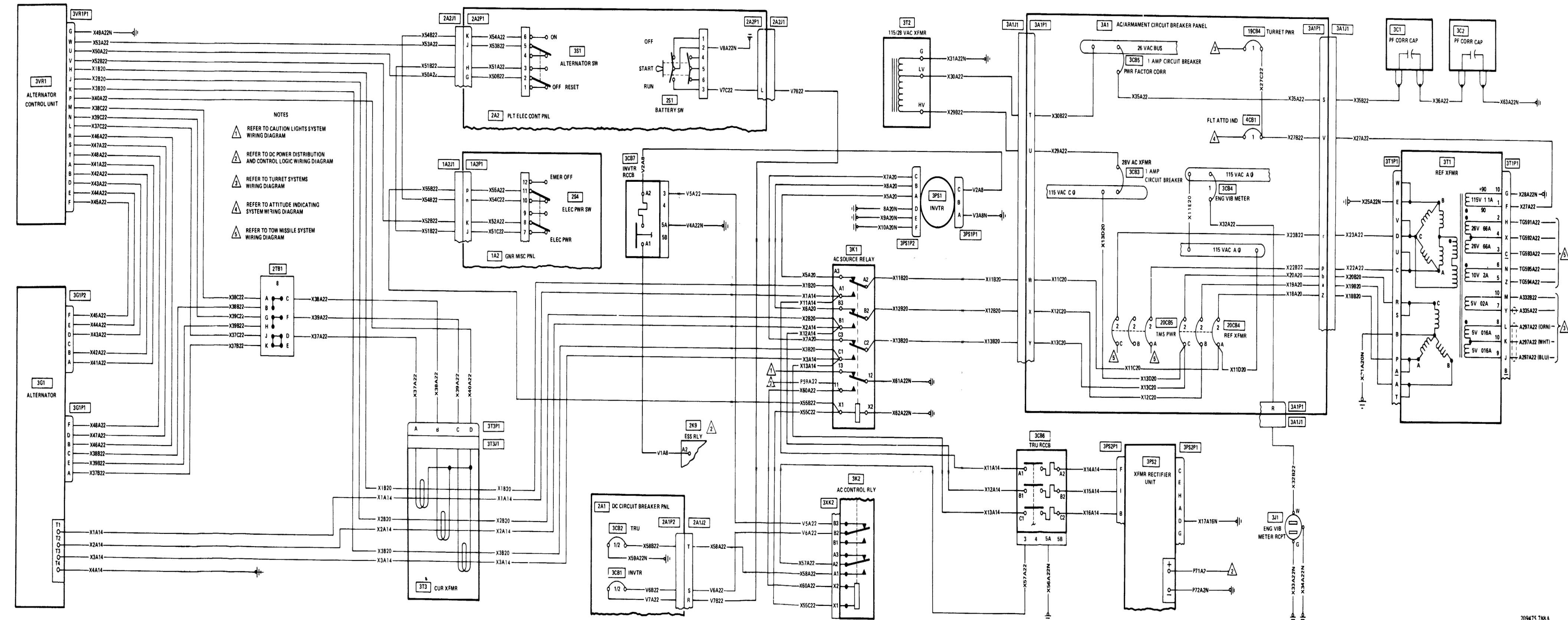


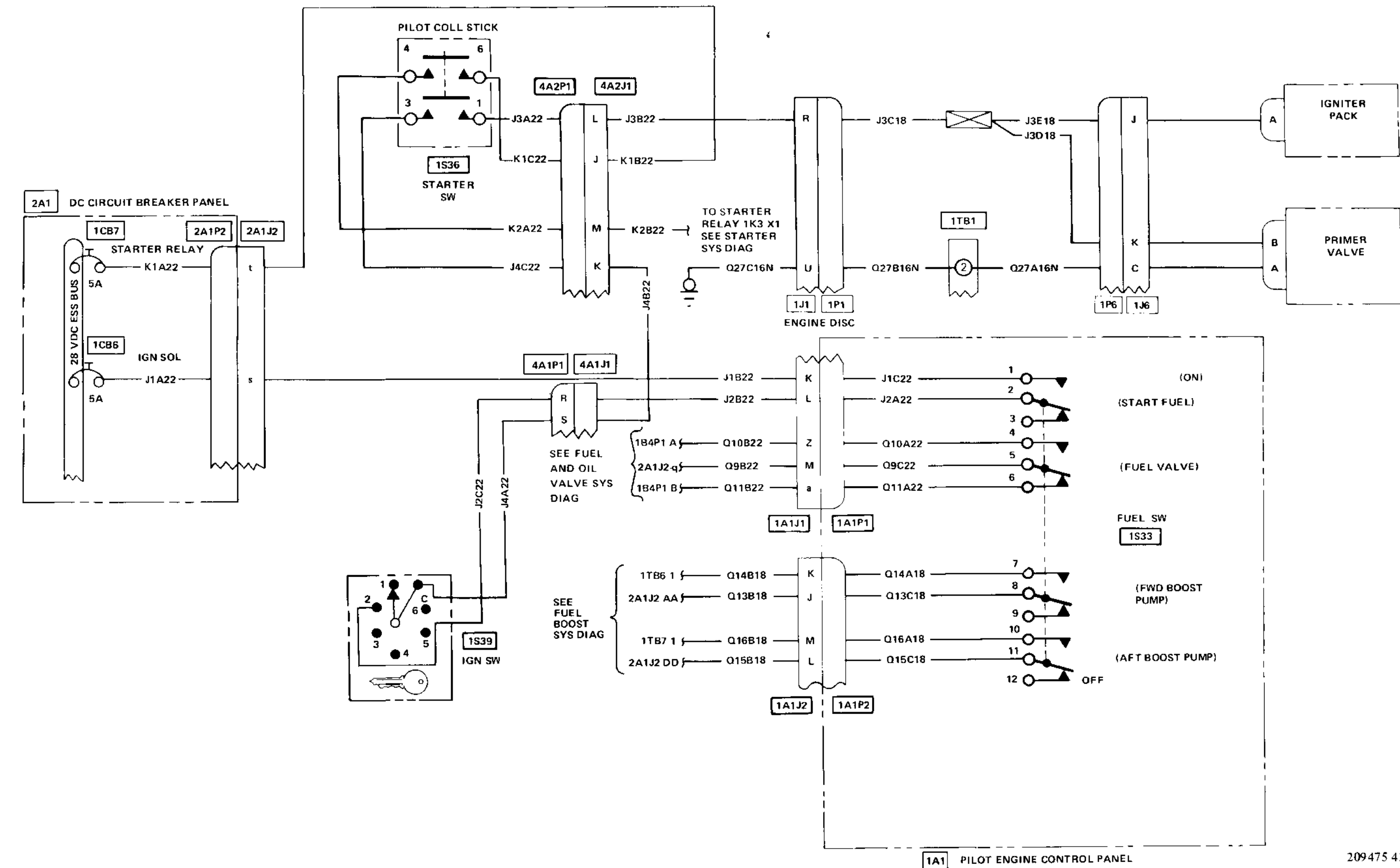




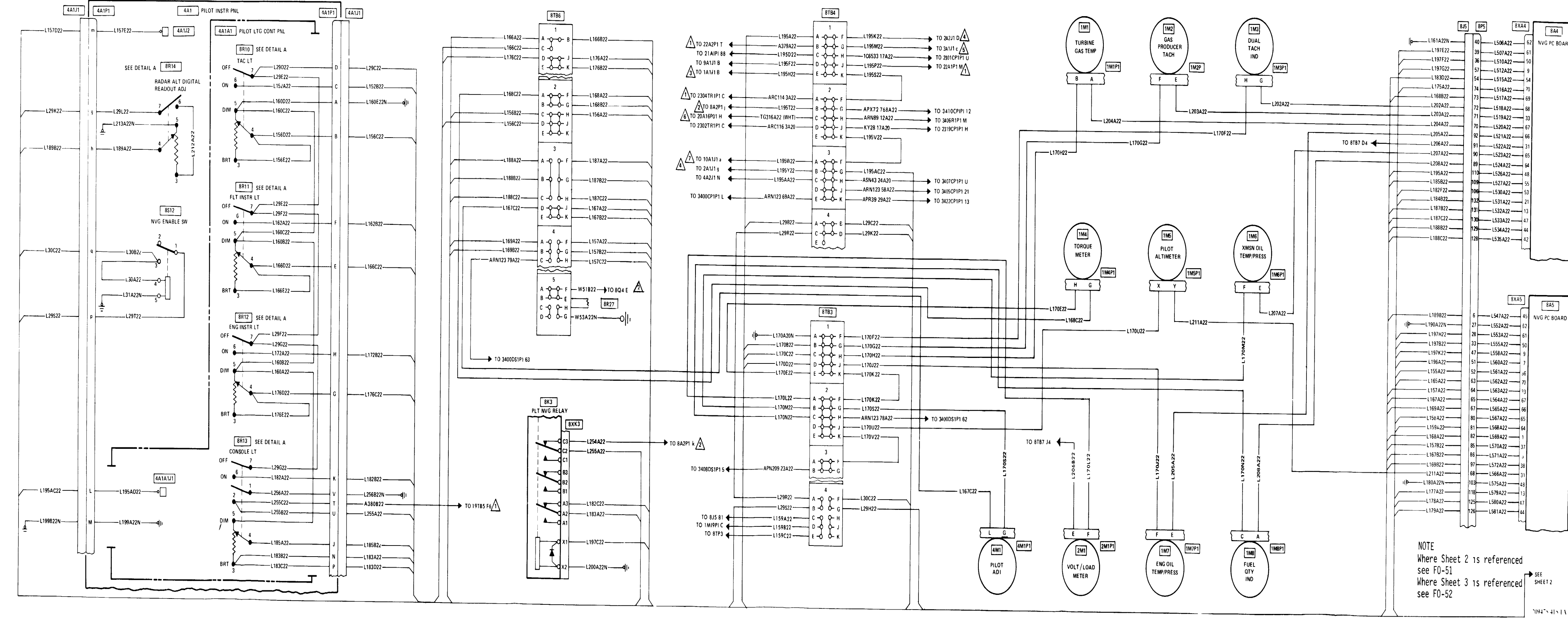
F0-46 DC Power Distribution and Interconnect Logic



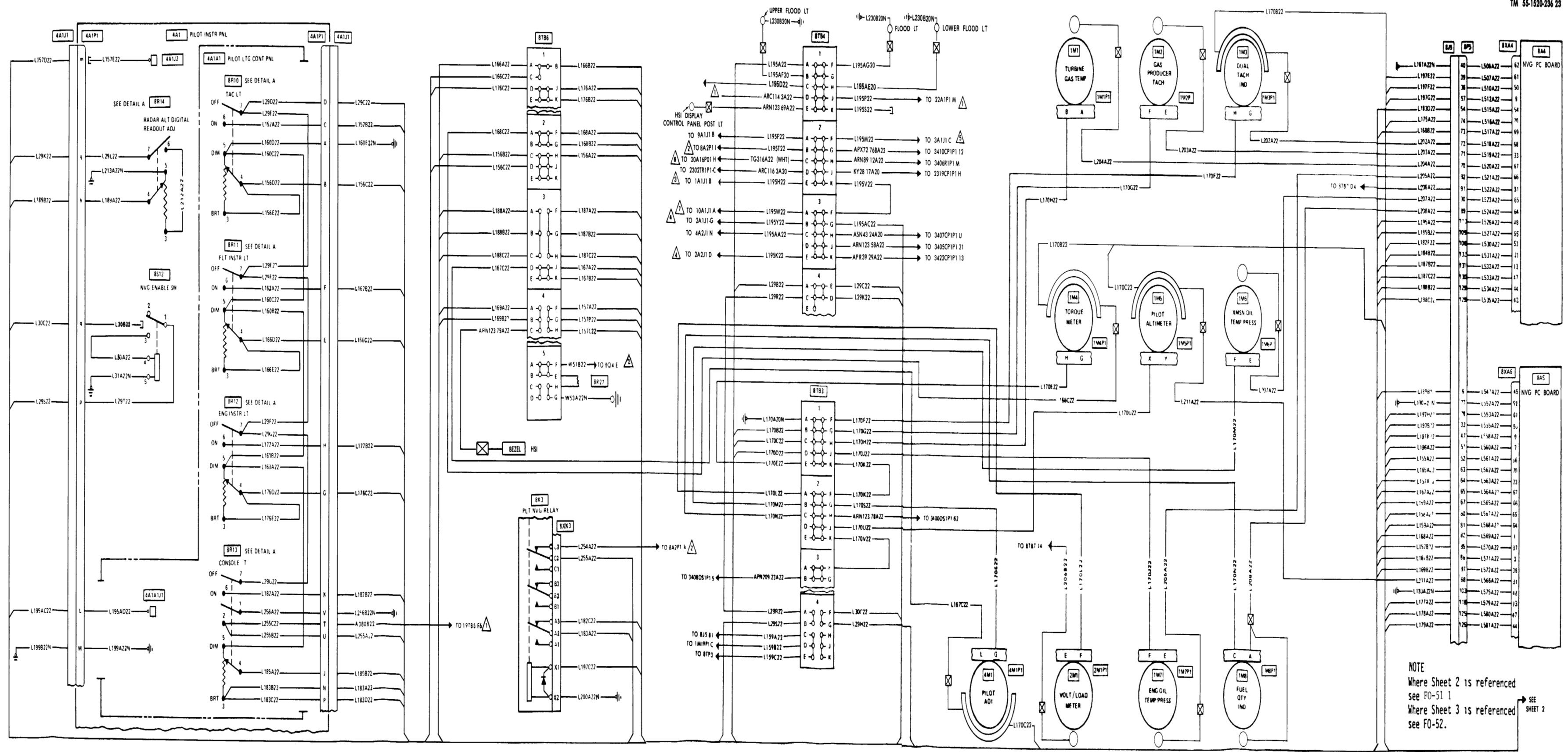


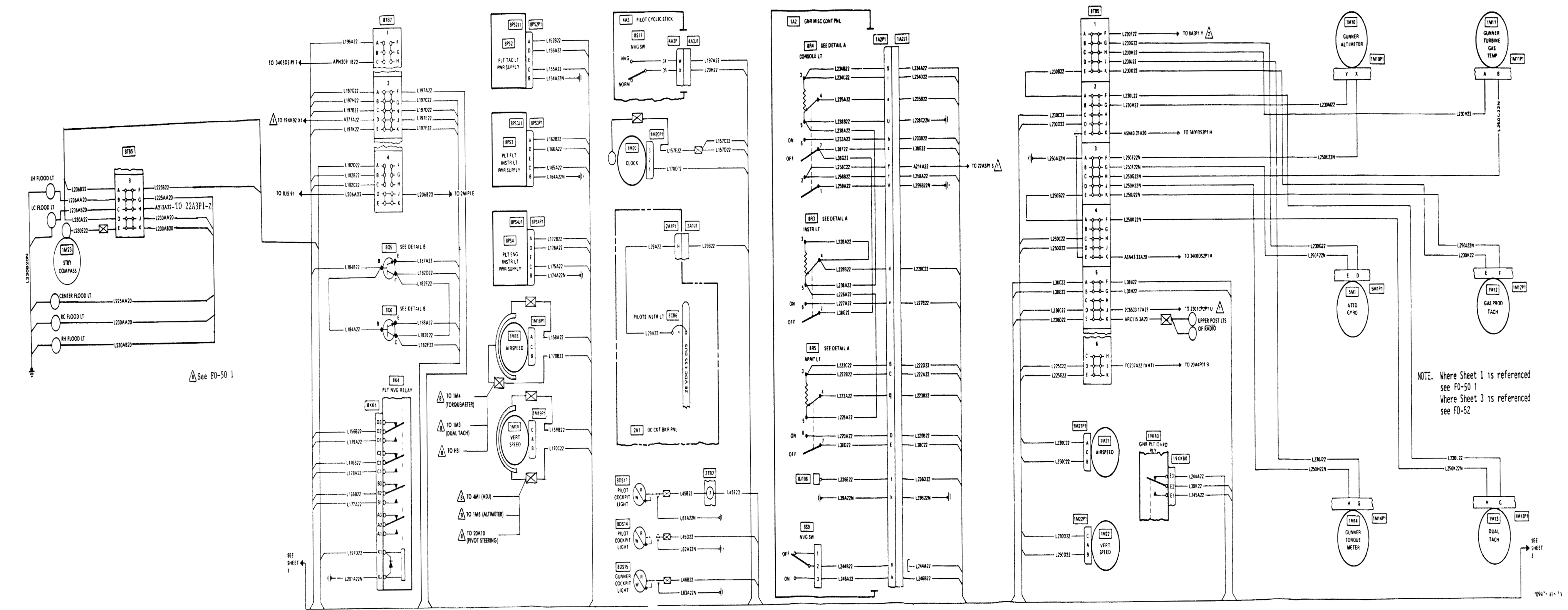


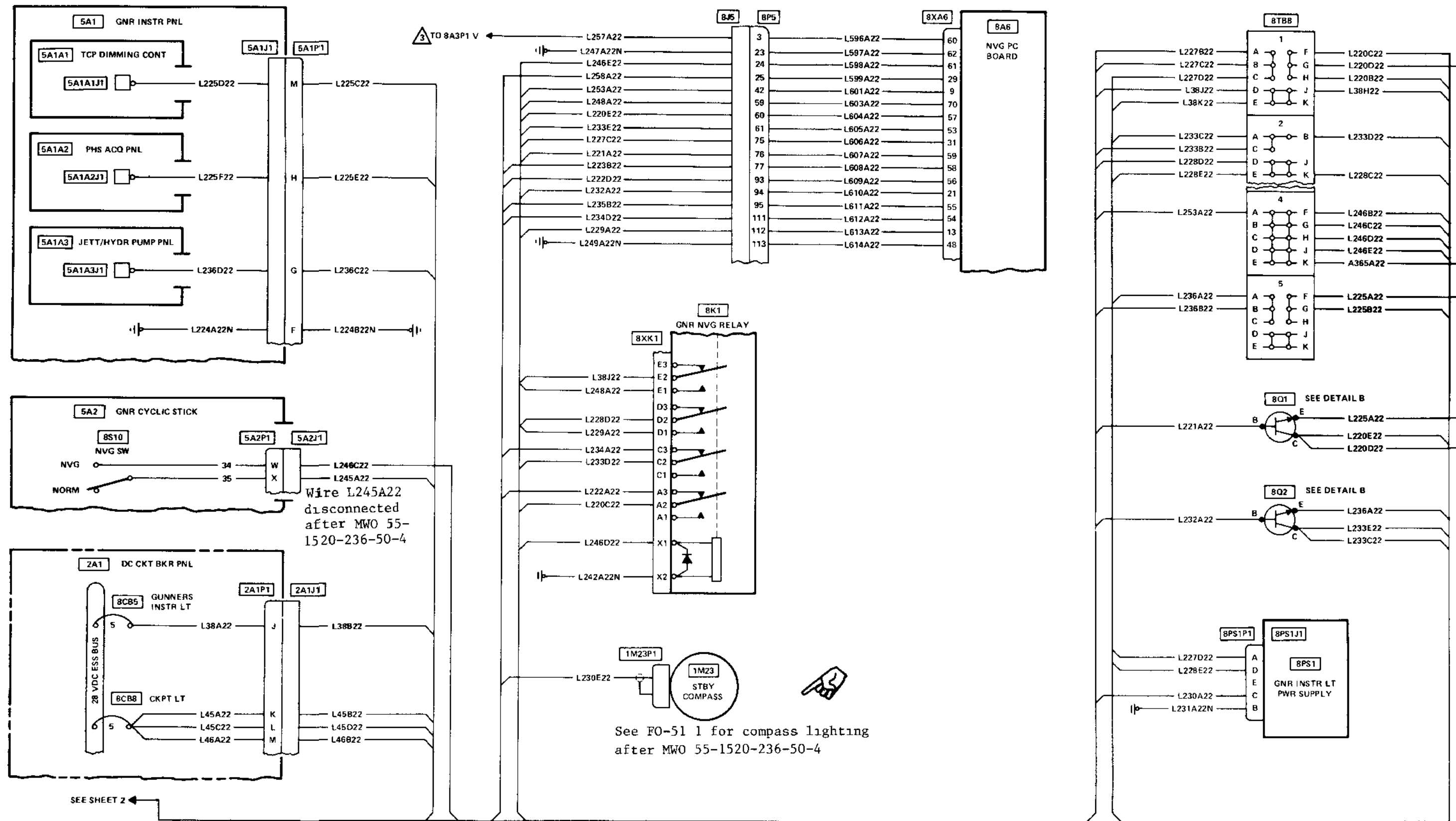
FO-49 Ignition System



NOTE
Where Sheet 2 is referenced
see FO-51
Where Sheet 3 is referenced
see FO-52

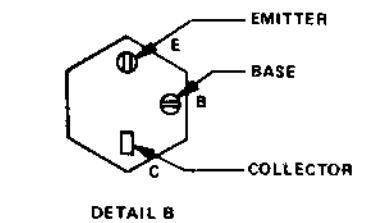
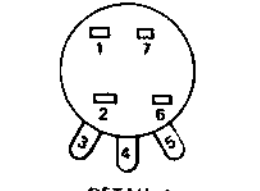






Wire L245A22 disconnected after MWO 55-1520-236-50-4

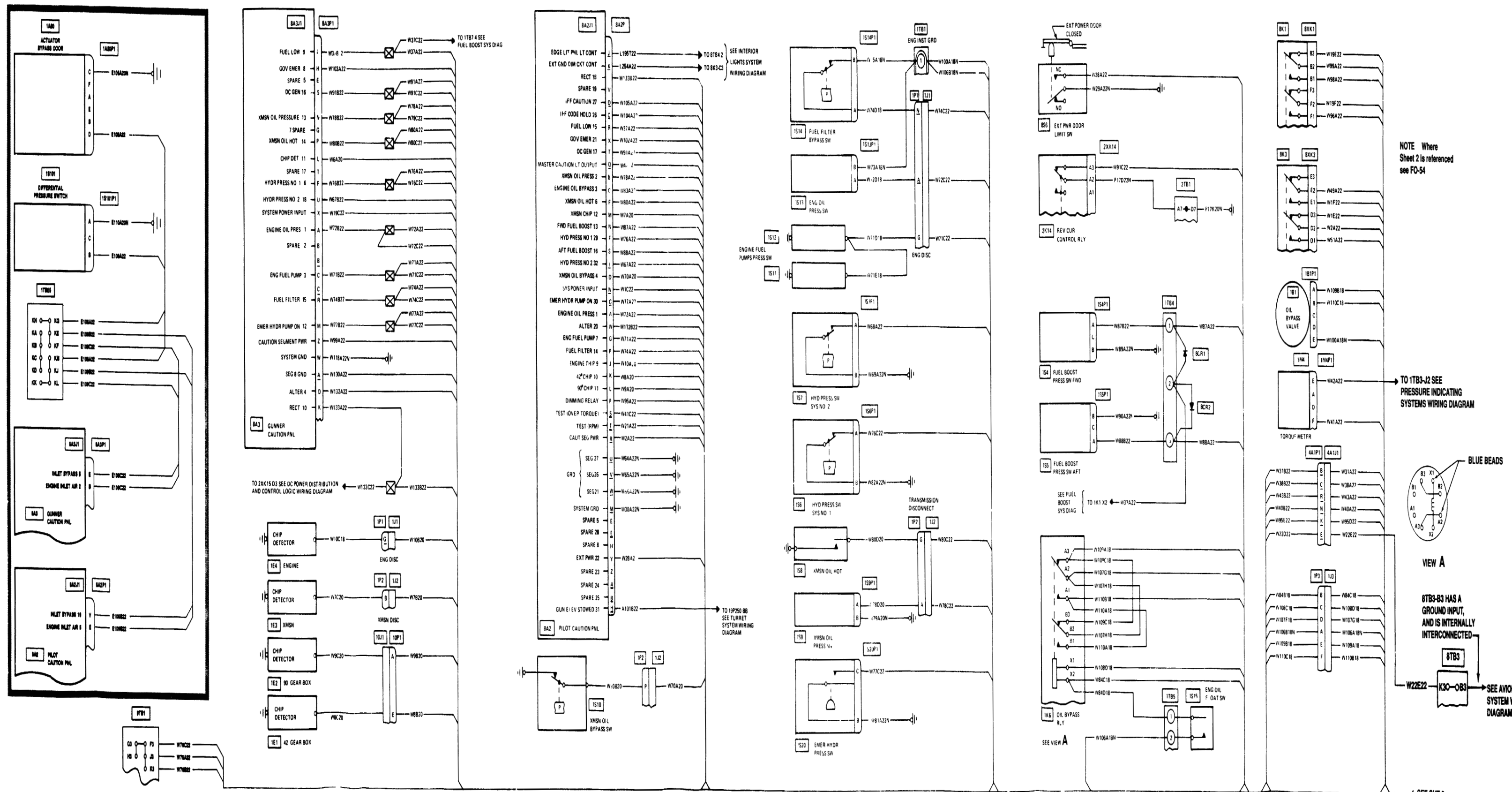
See FO-51 1 for compass lighting after MWO 55-1520-236-50-4



- NOTES
- 1 SEE TURRET SYSTEM WIRING DIAGRAM
 - 2 SEE CAUTION LIGHTS SYSTEM WIRING DIAGRAM
 - 3 SEE ENGINE SYSTEM WIRING DIAGRAM
 - 4 SEE DC POWER SYSTEM WIRING DIAGRAM
 - 5 SEE AC POWER SYSTEM WIRING DIAGRAM
 - 6 SEE TOW MISSILE SYSTEM WIRING DIAGRAM
 - 7 SEE ENVIRONMENTAL CONTROL SYSTEM WIRING DIAGRAM

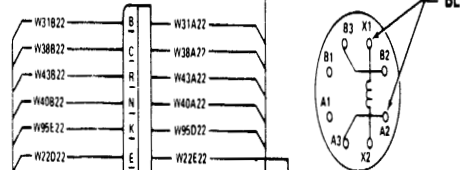
NOTE Where Sheet 1 is referenced see FO-50
Where Sheet 2 is referenced see FO-51

SEE SHEET Z



NOTE Where Sheet 2 is referenced see FO-54

TO 151A-12 SEE PRESSURE INDICATING SYSTEMS WIRING DIAGRAM

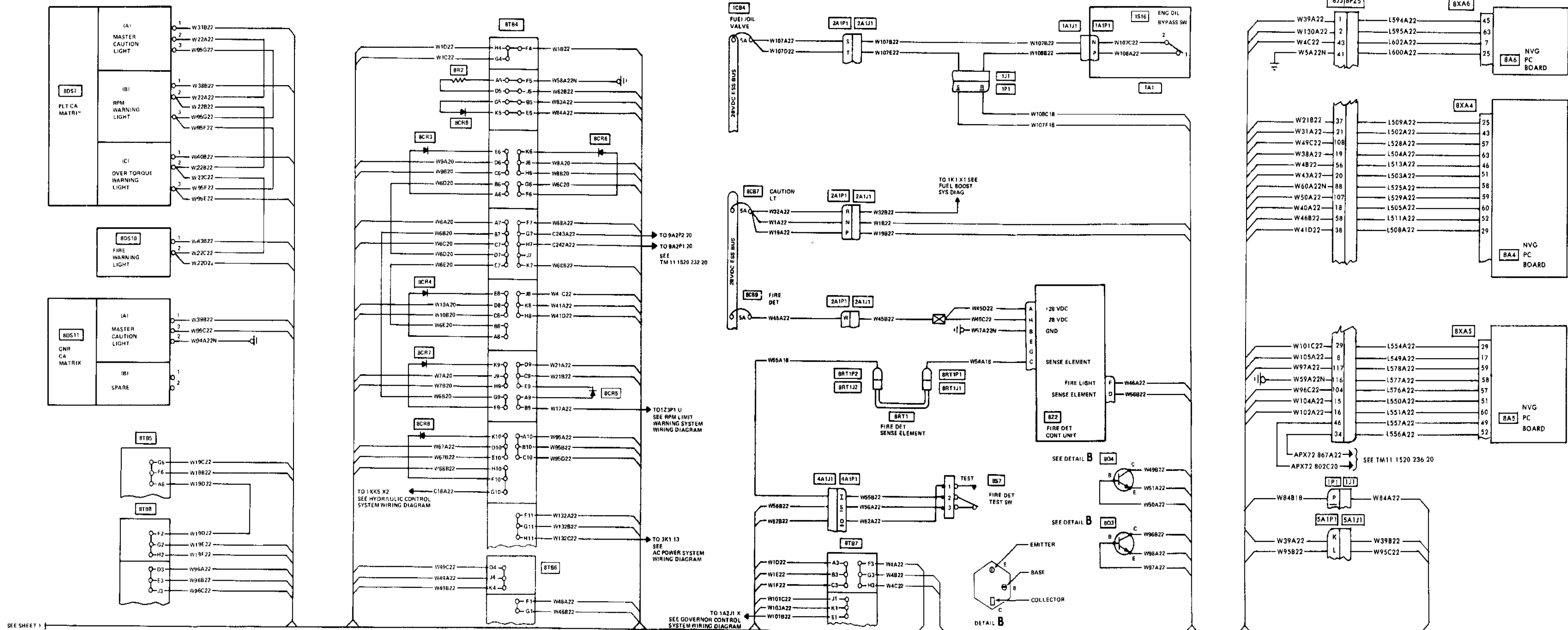


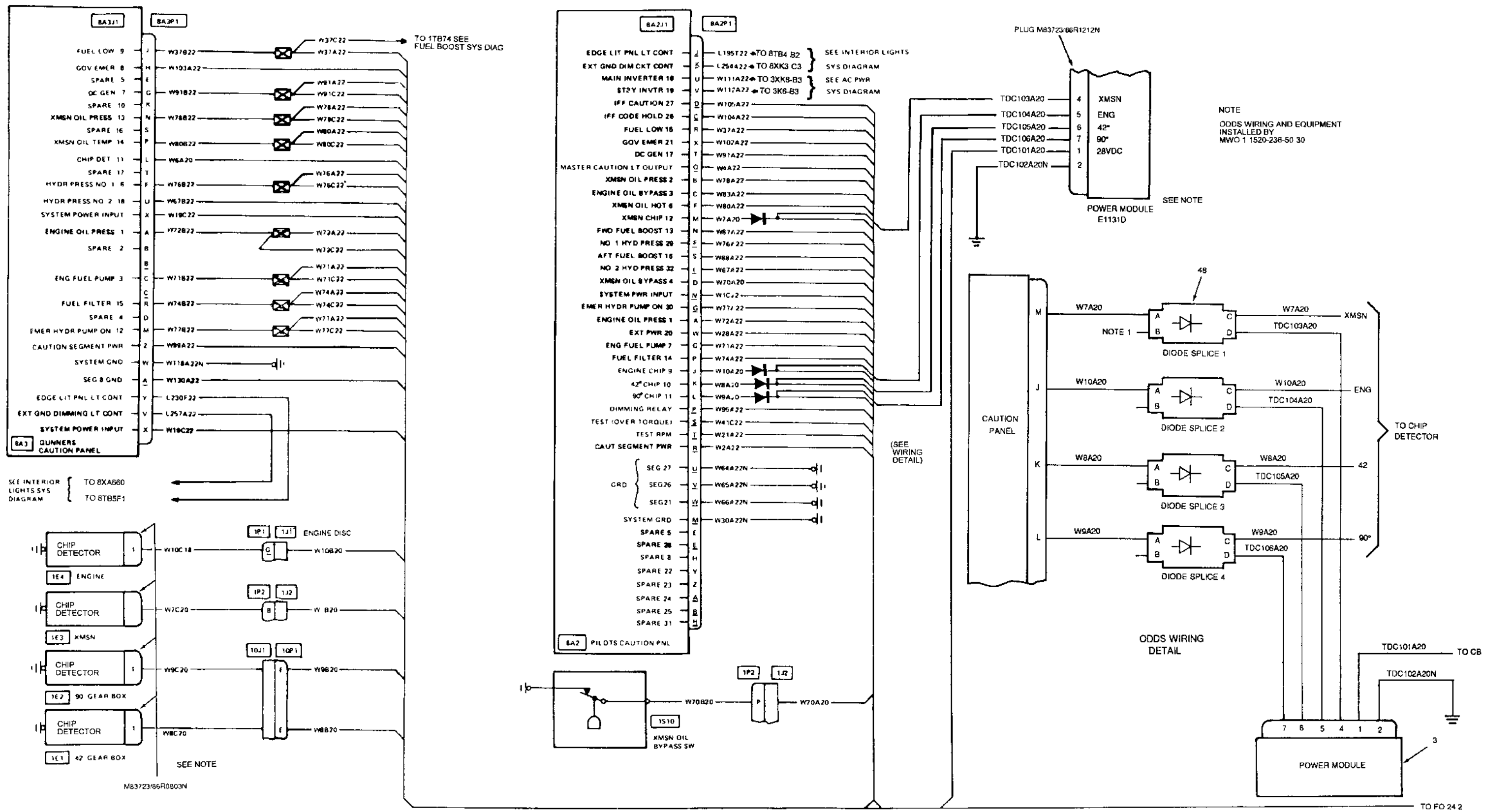
87B3-83 HAS A GROUND INPUT, AND IS INTERNALLY INTERCONNECTED

SEE AVONICS SYSTEM WIRING DIAGRAM

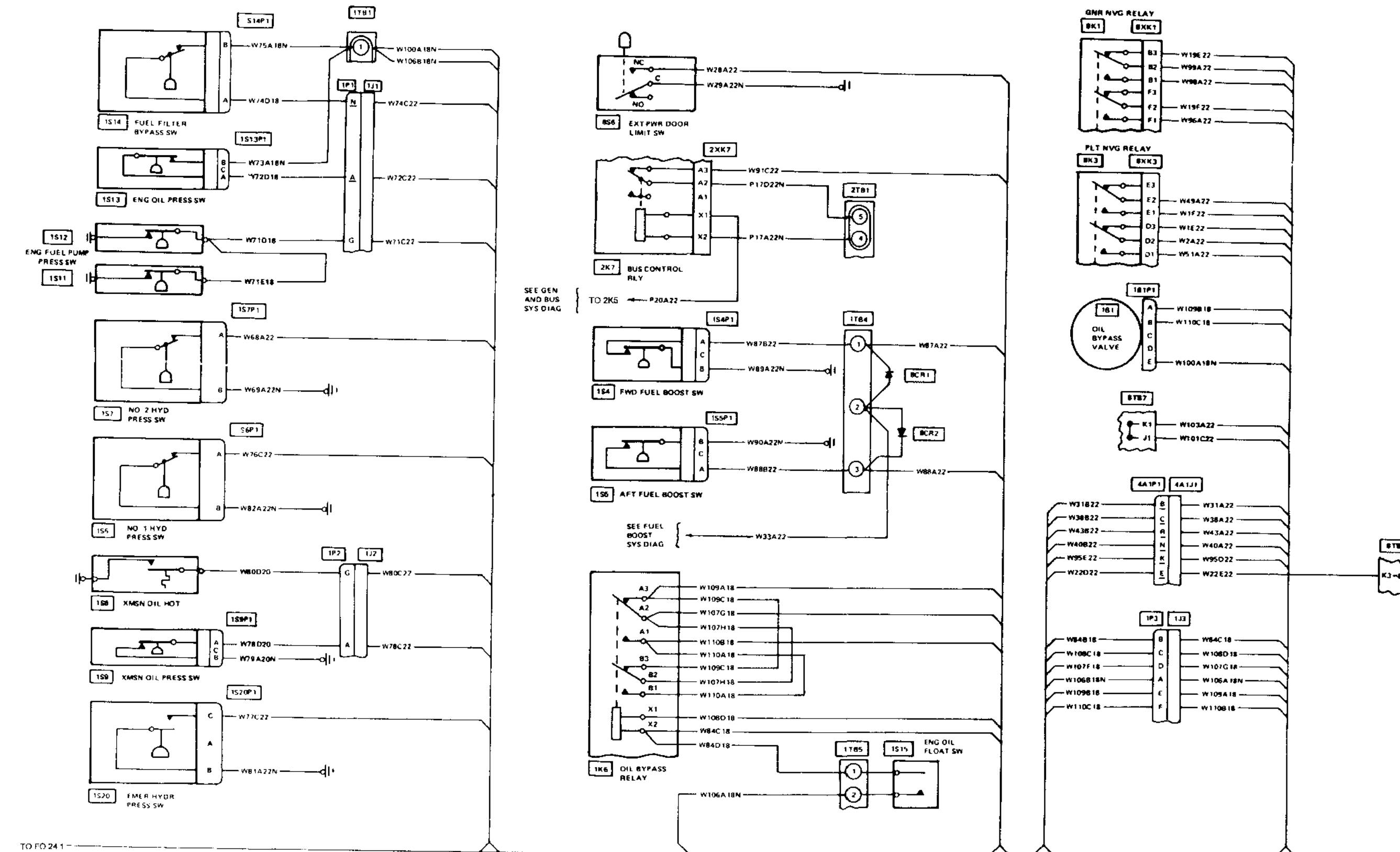
SEE SHIT 2

NOTE Where Sheet 1 is referenced see FO-53

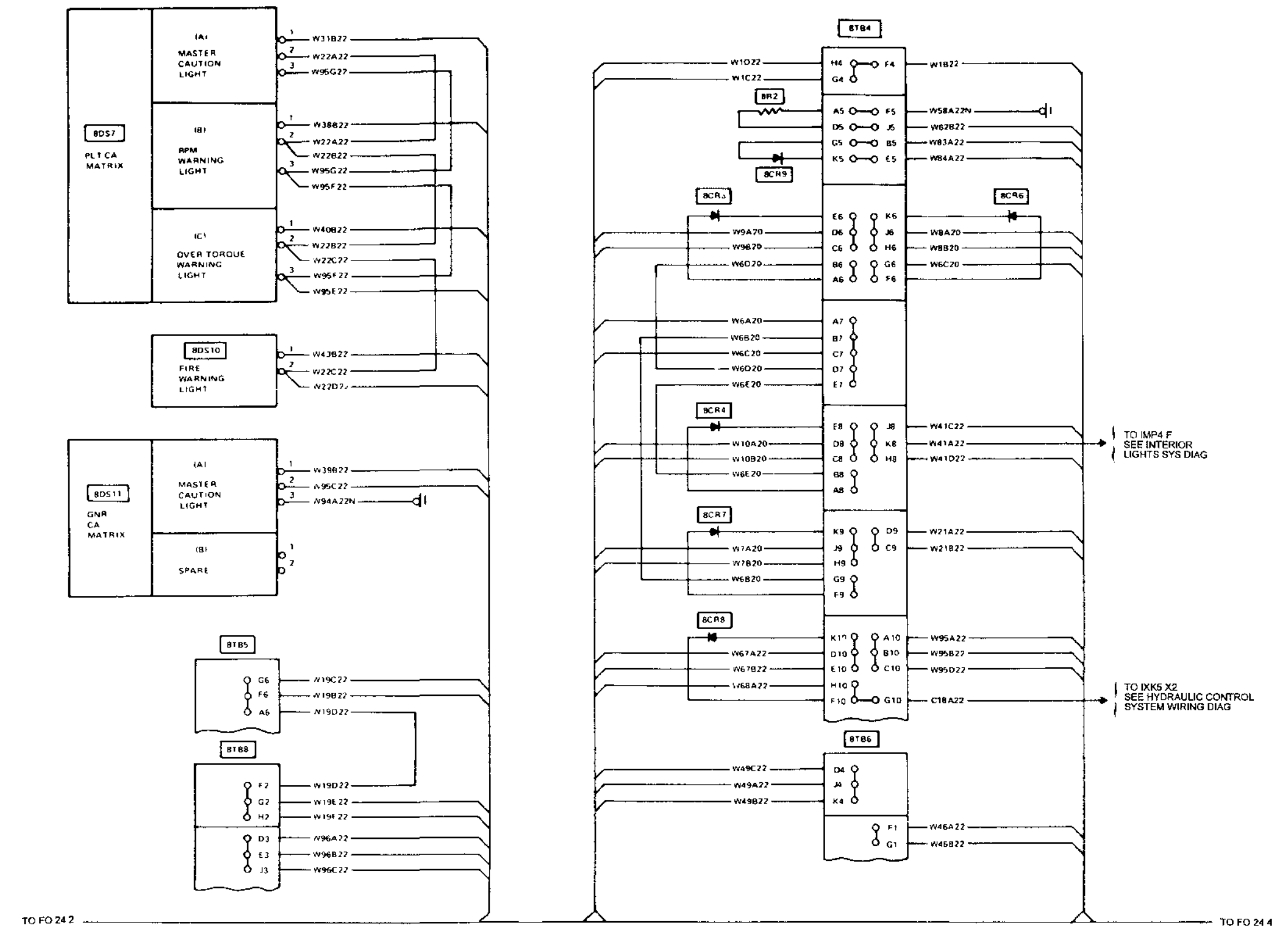




FO 54 1 Caution Lights System (After Incorporation of MWO 1-1520-236-50-30)



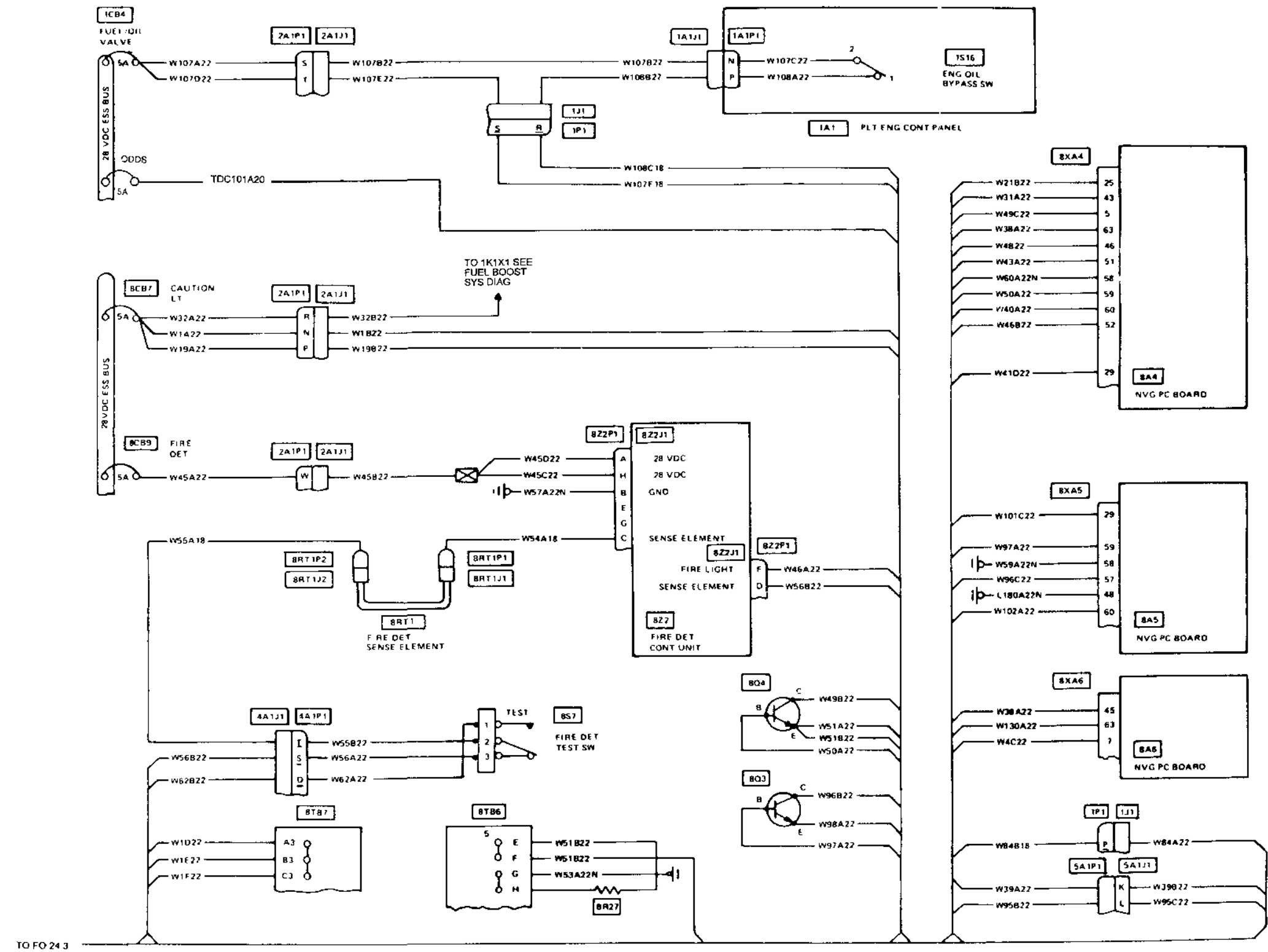
FO 54 2 Caution Lights System (After Incorporation of MWO 1-1520-236-50-30)



TO FO 24 2

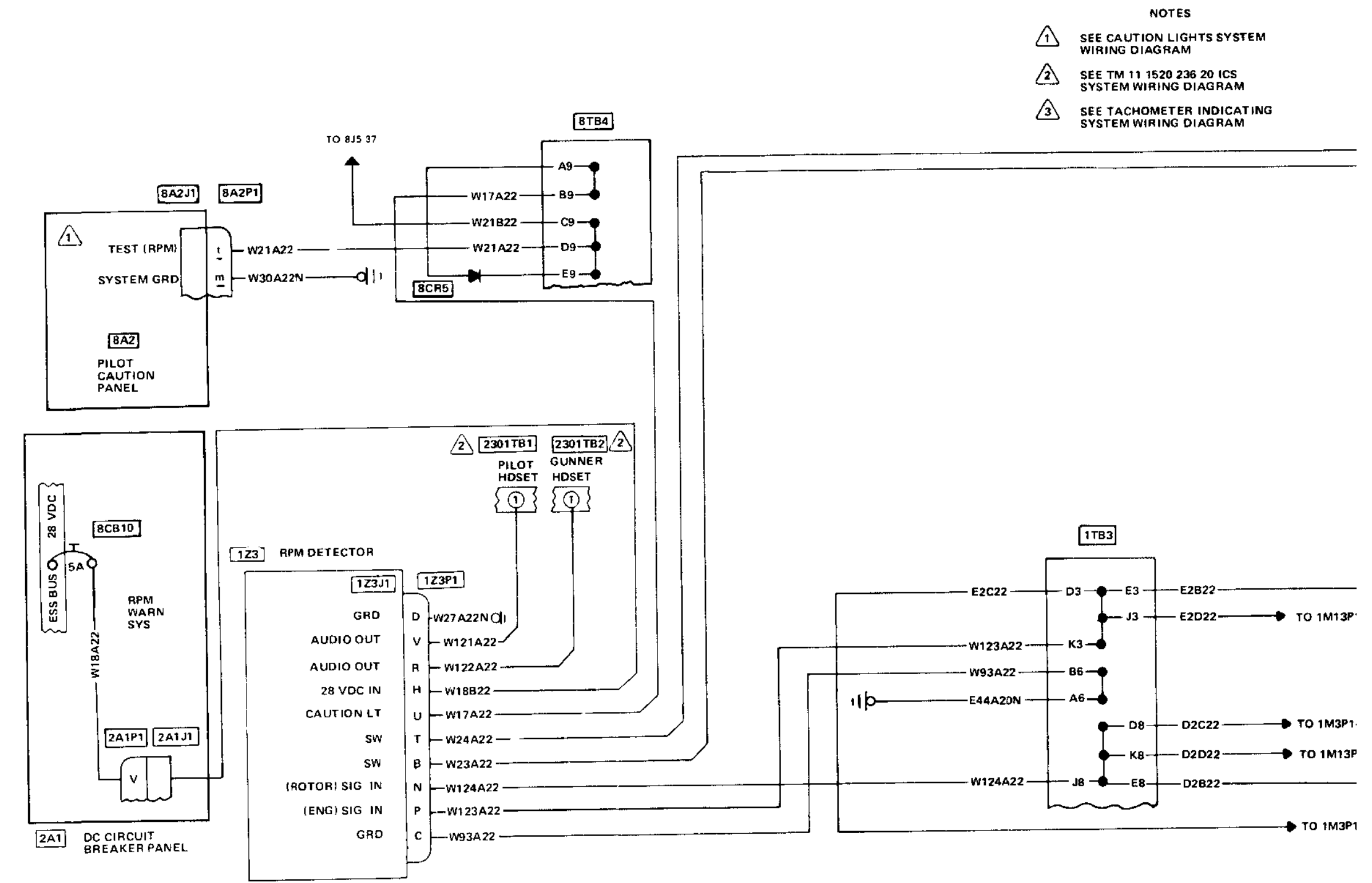
TO FO 24 4

FO 54 3 Caution Lights System (After Incorporation of MWO 1-1520-236-50-30)

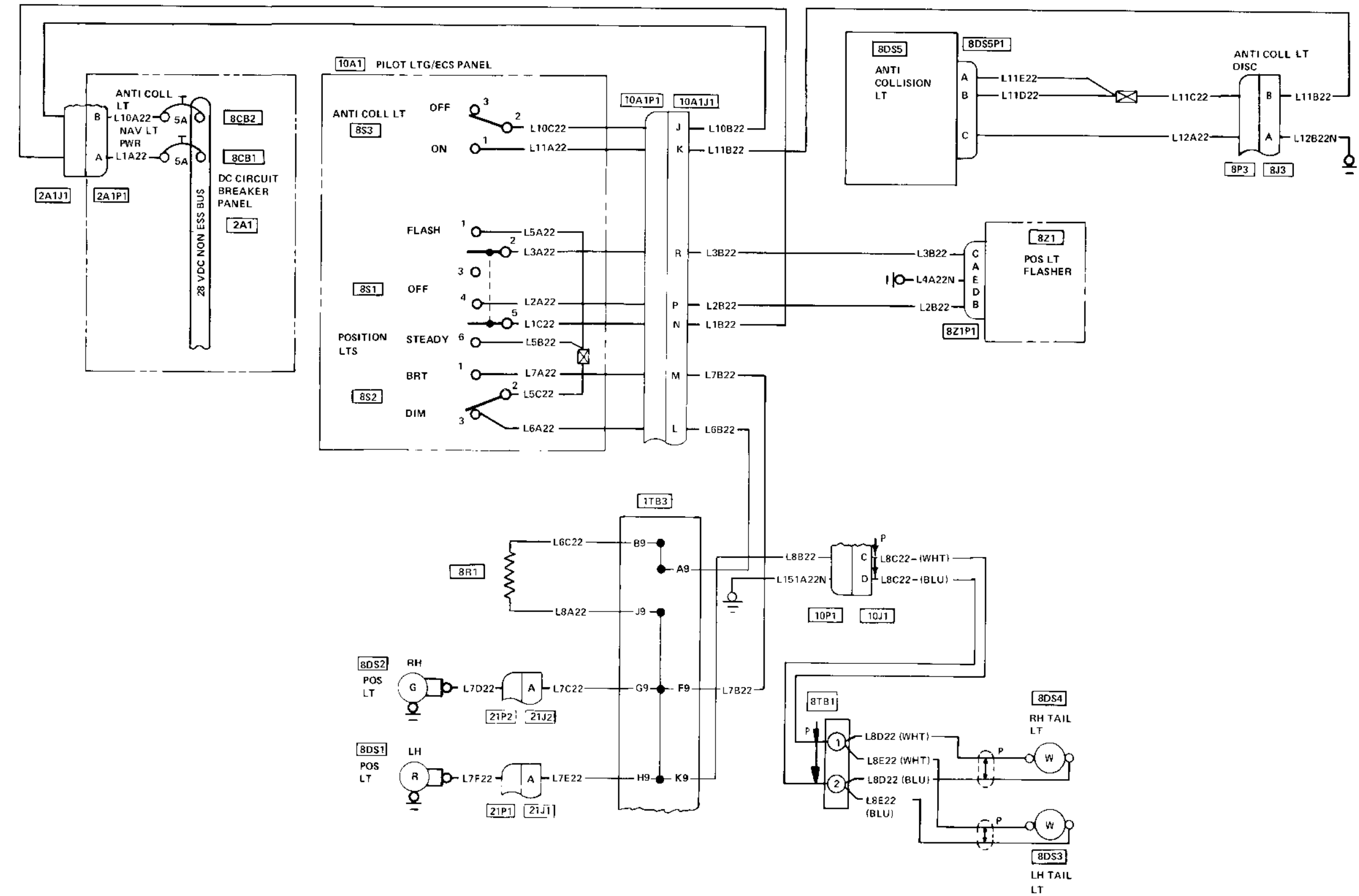


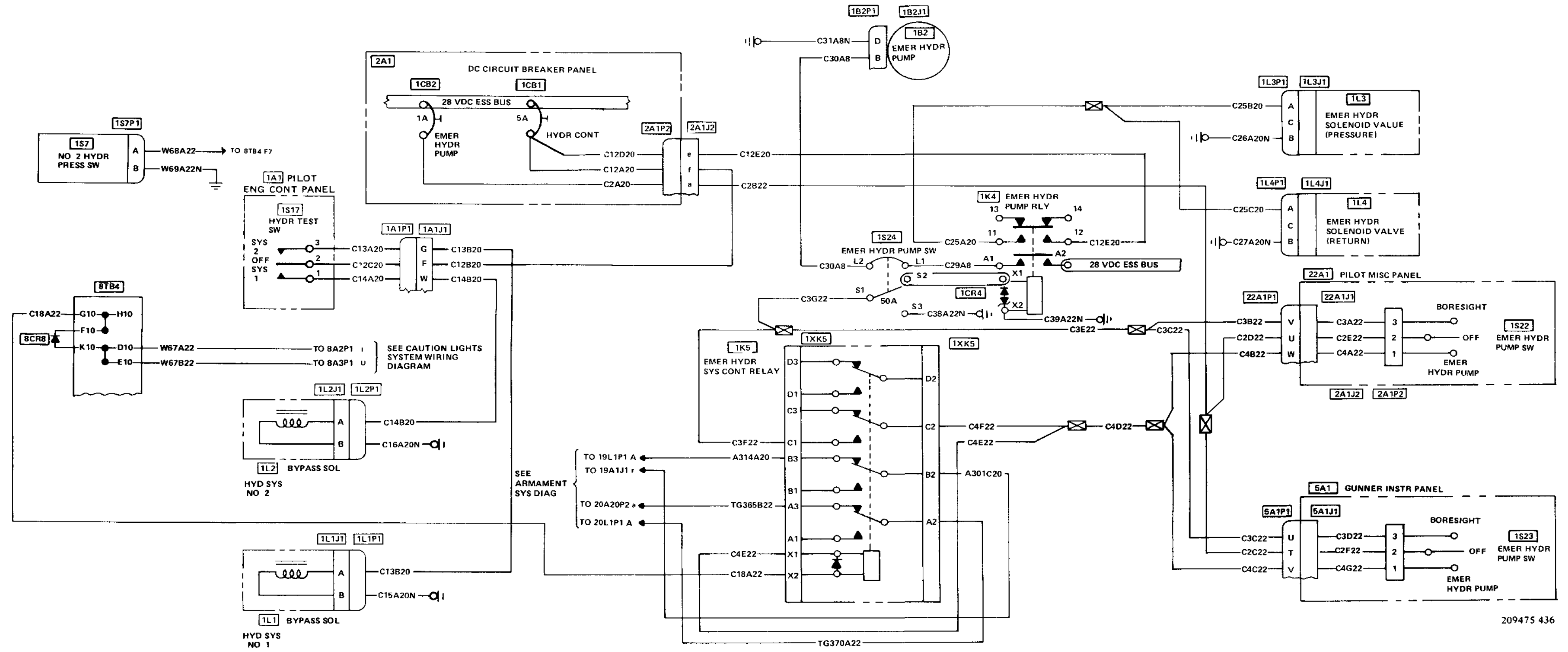
TO FO 243

FO 54 4 Caution Lights System (After Incorporation of MWO 1-1520-236-50-30)

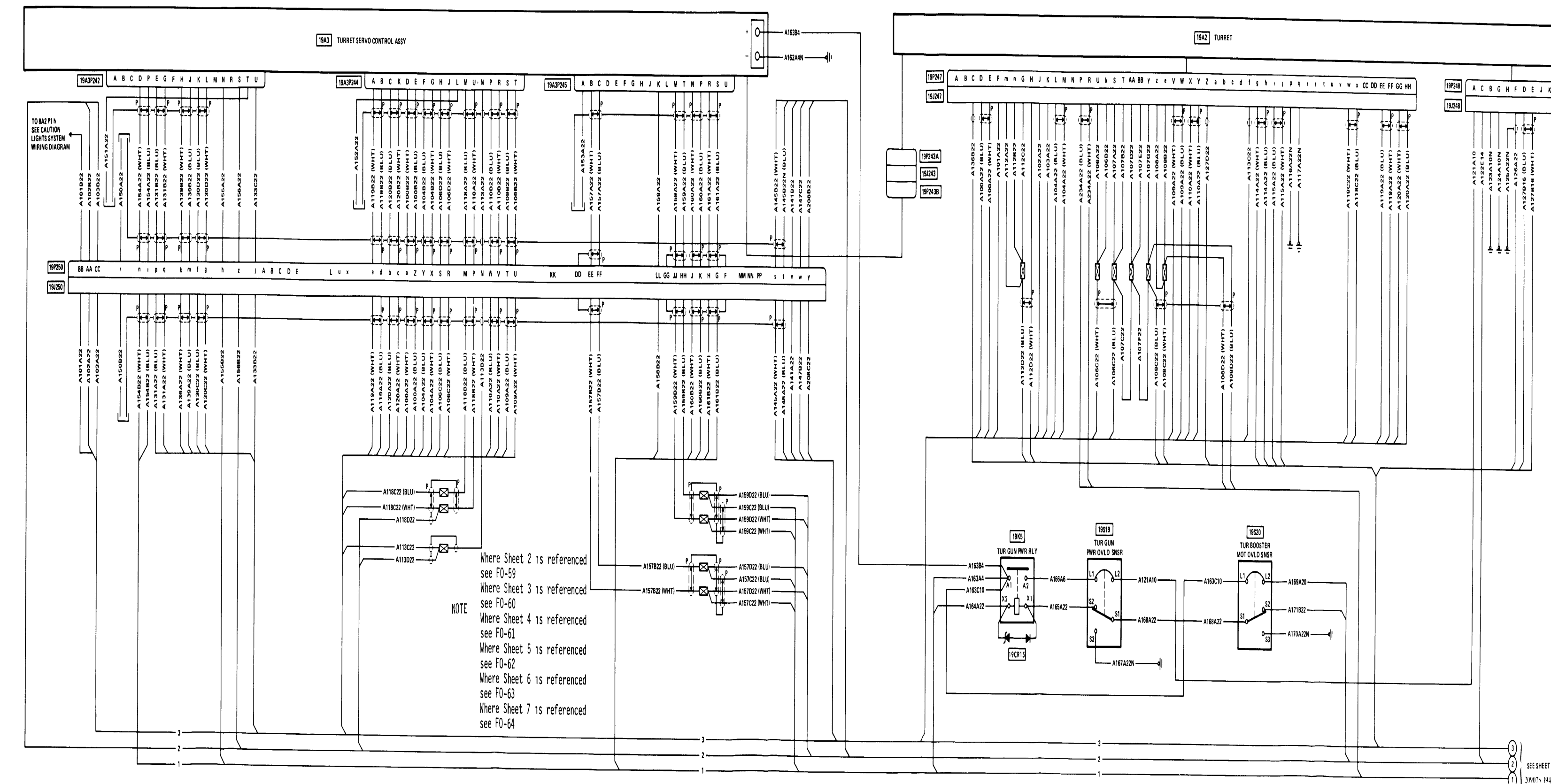


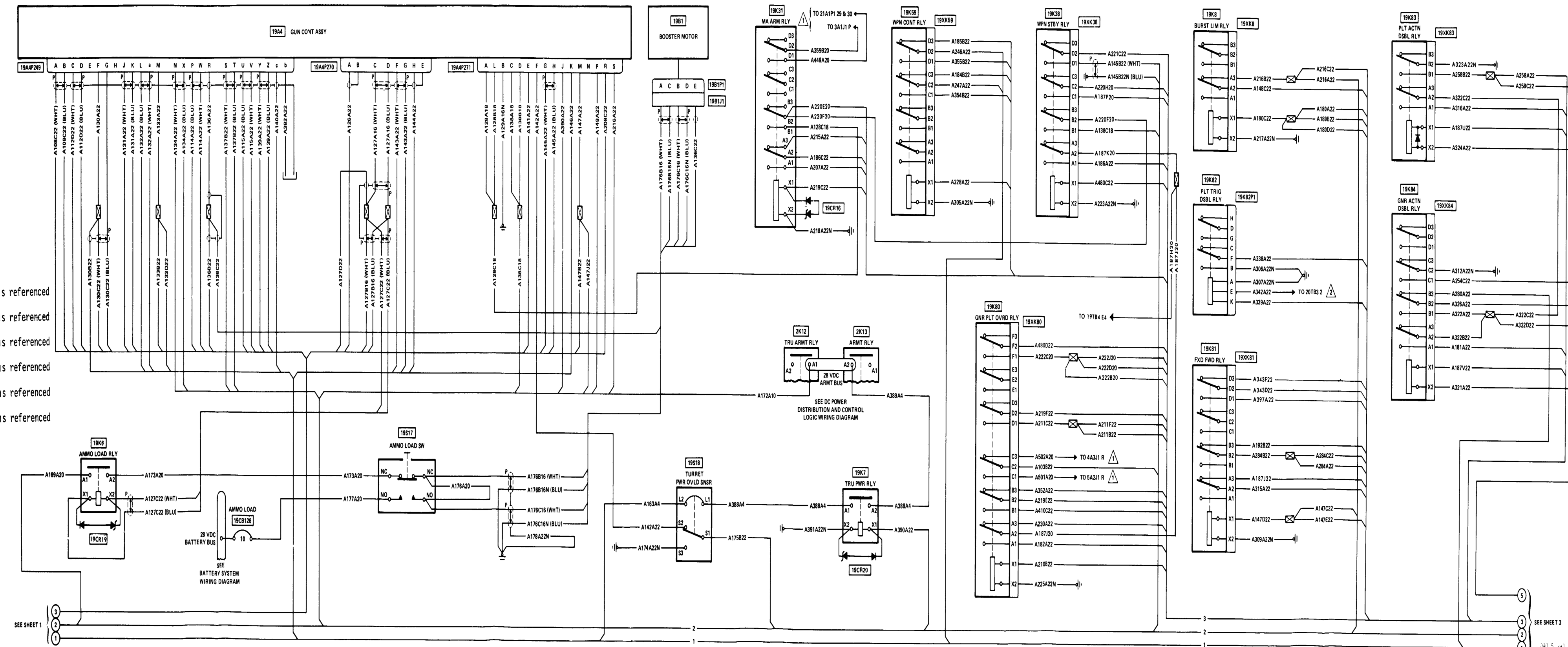
- NOTES
- 1 SEE CAUTION LIGHTS SYSTEM WIRING DIAGRAM
 - 2 SEE TM 11 1520 236 20 ICS SYSTEM WIRING DIAGRAM
 - 3 SEE TACHOMETER INDICATING SYSTEM WIRING DIAGRAM





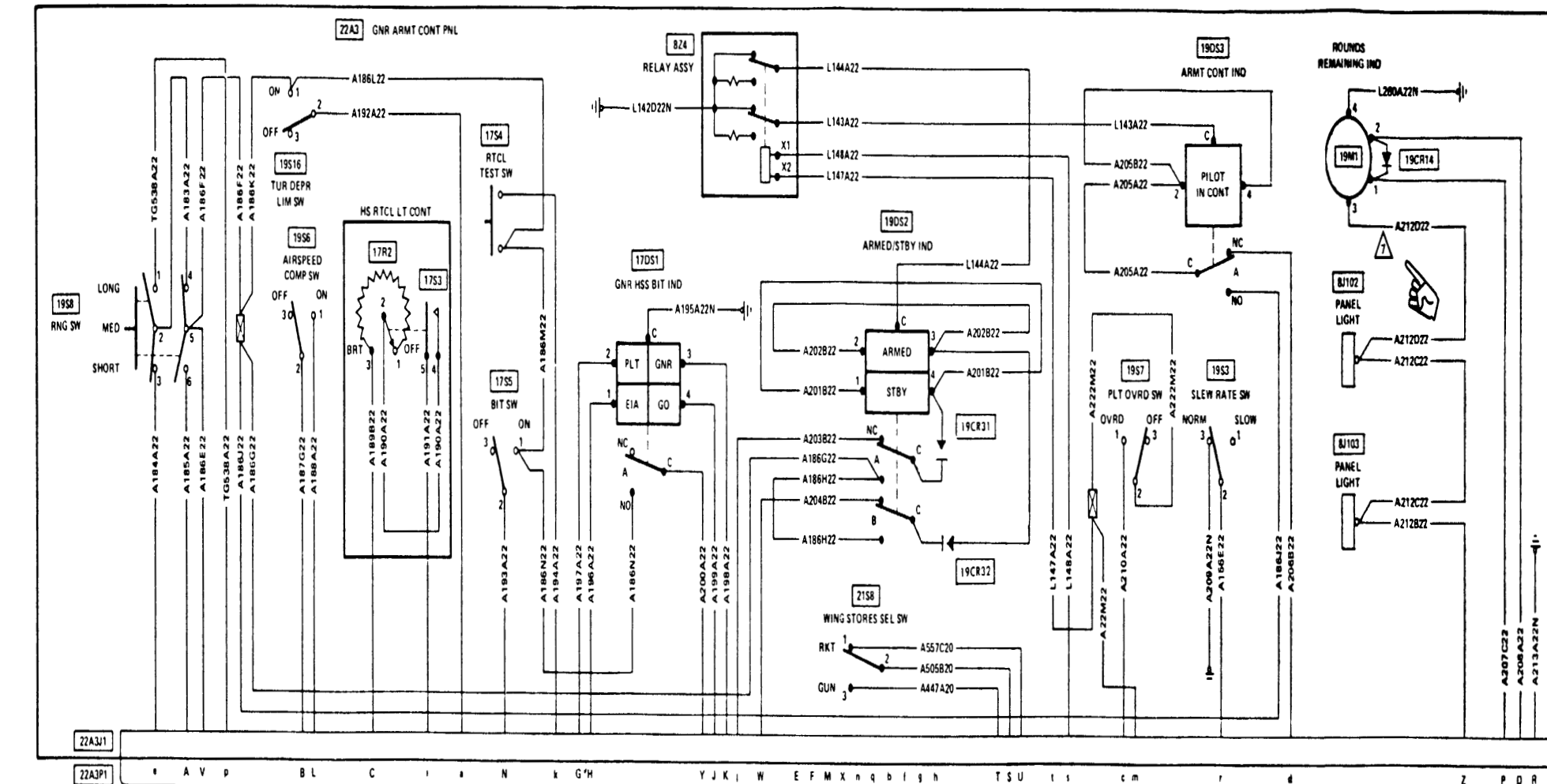
209475 436



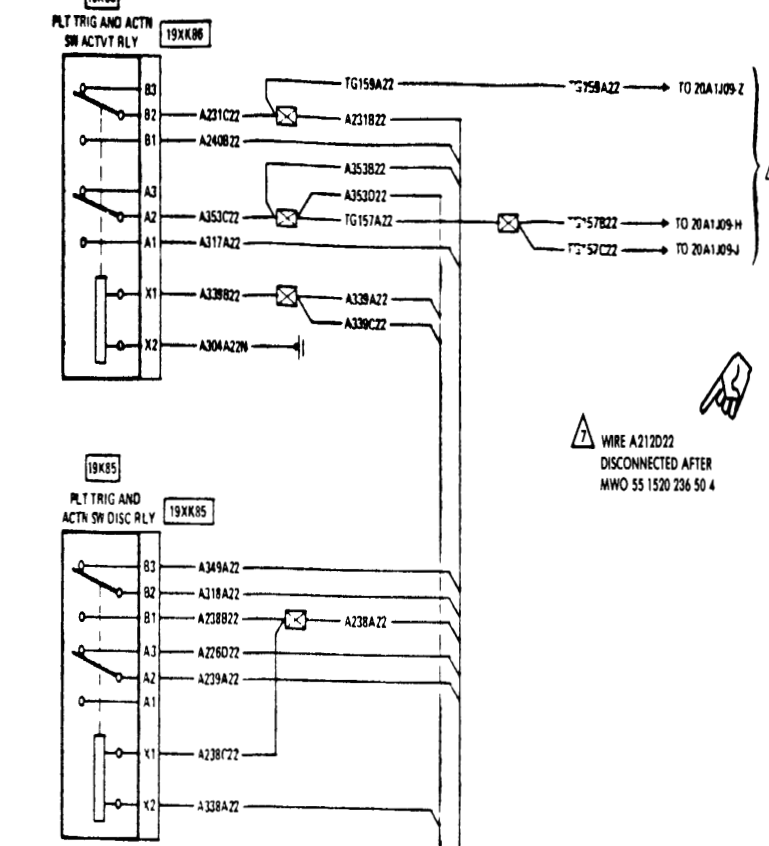
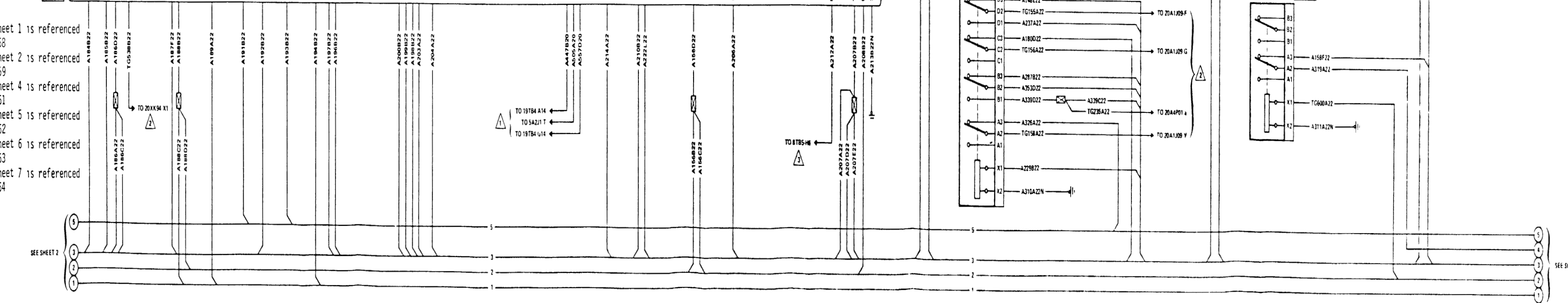


NOTE Where Sheet 1 is referenced see FO-58
 Where Sheet 3 is referenced see FO-60
 Where Sheet 4 is referenced see FO-61
 Where Sheet 5 is referenced see FO-62
 Where Sheet 6 is referenced see FO-63
 Where Sheet 7 is referenced see FO-64

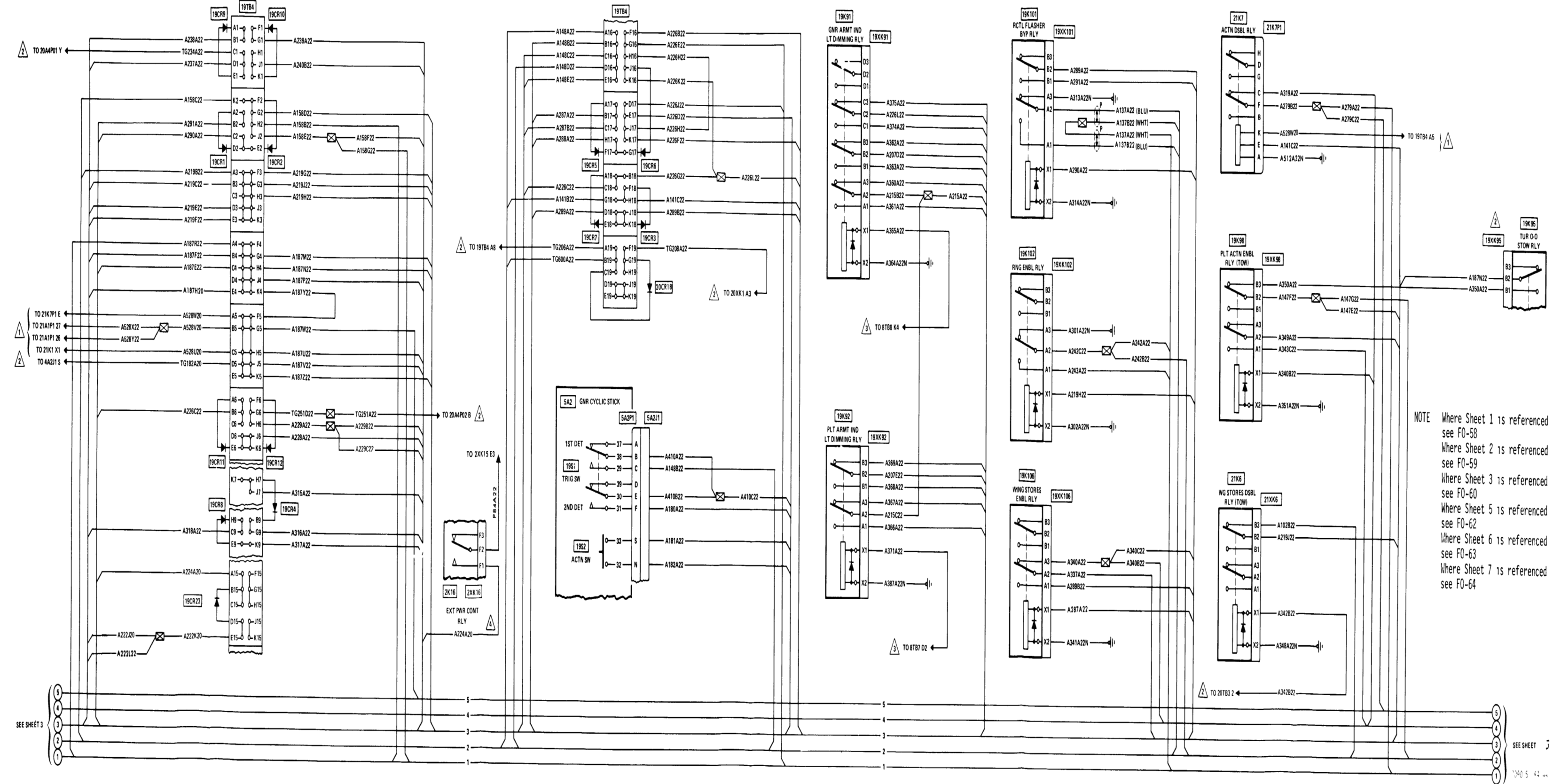




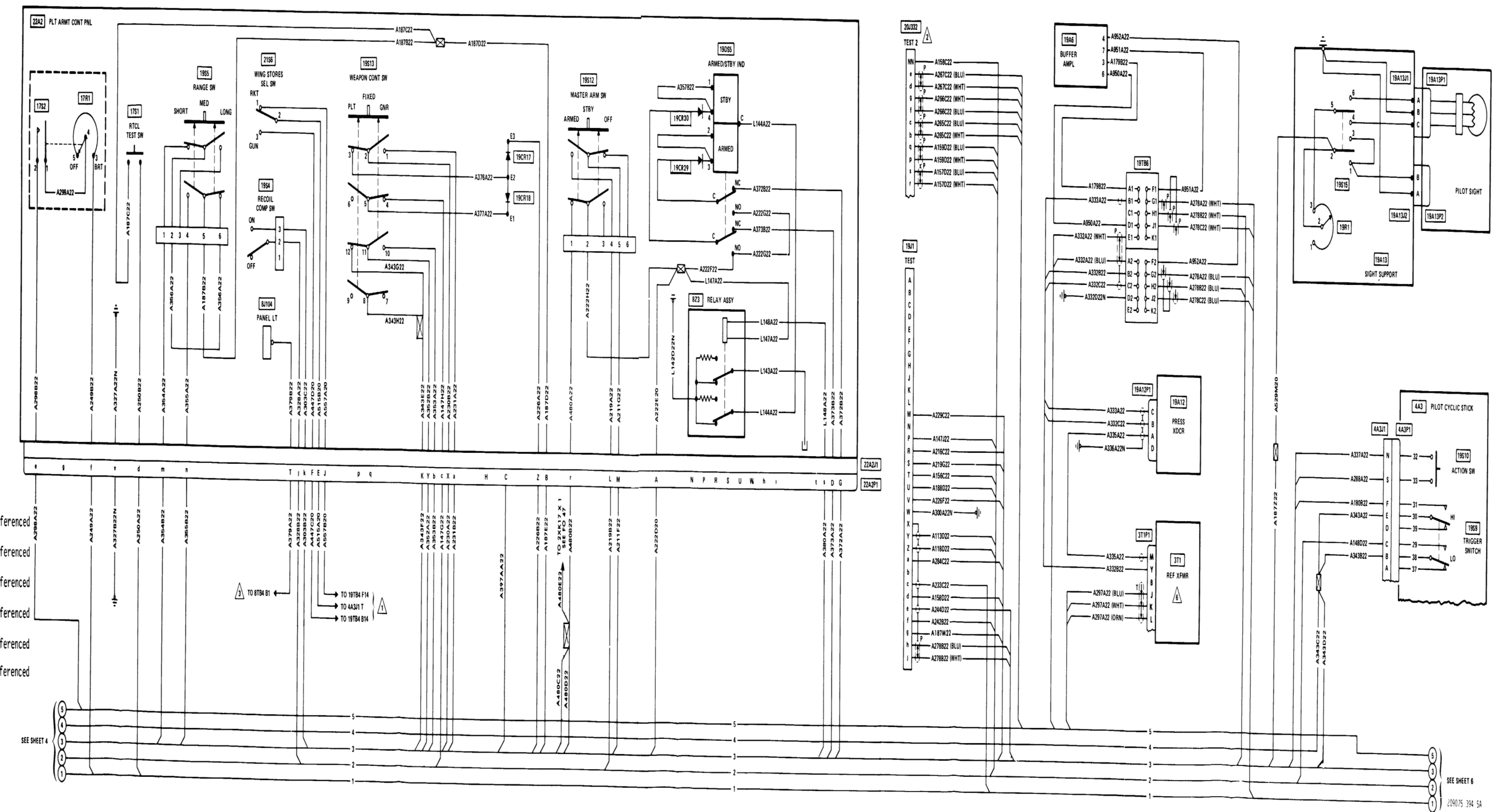
NOTE
 Where Sheet 1 is referenced see FO-58
 Where Sheet 2 is referenced see FO-59
 Where Sheet 4 is referenced see FO-61
 Where Sheet 5 is referenced see FO-62
 Where Sheet 6 is referenced see FO-63
 Where Sheet 7 is referenced see FO-64



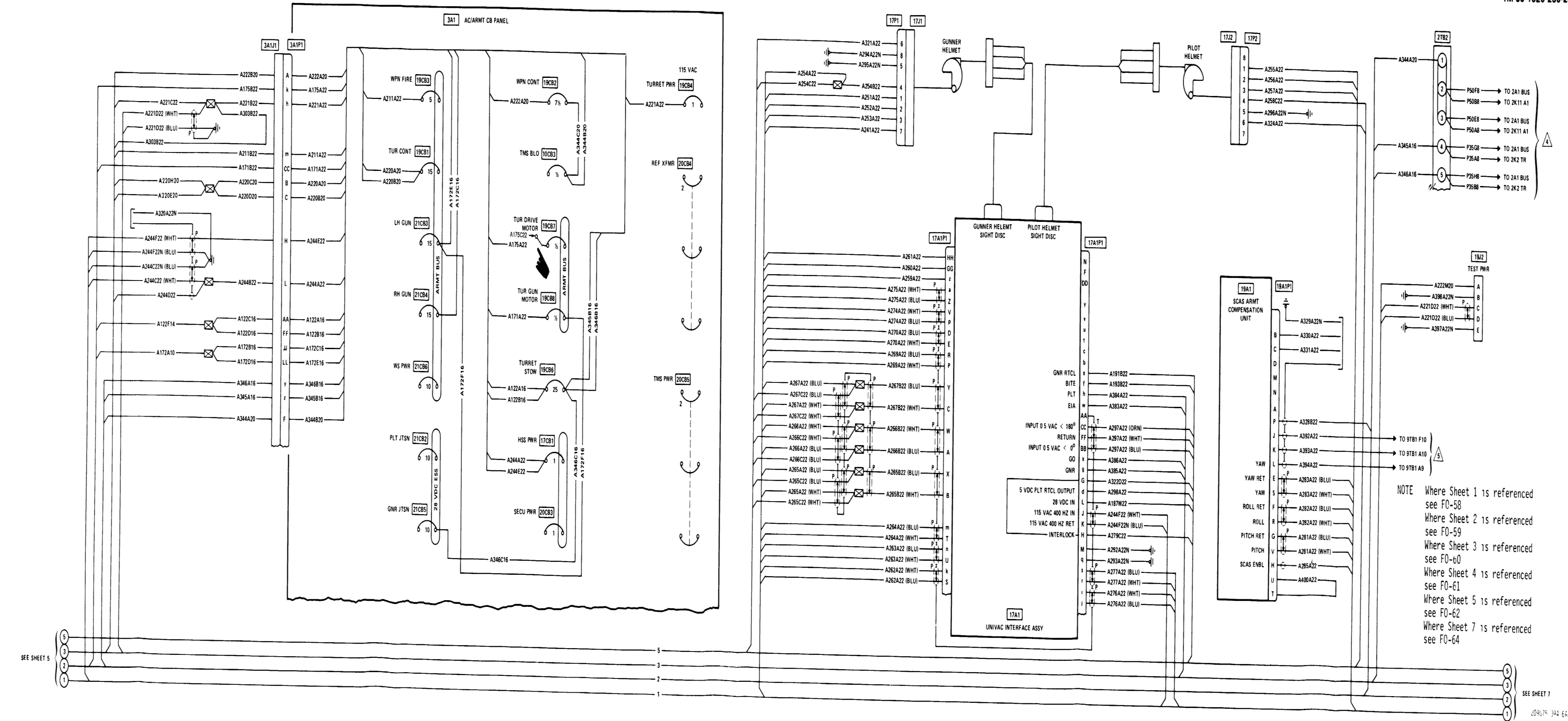
WIRE A21202Z DISCONNECTED AFTER MWG 55 1520 236 50 4

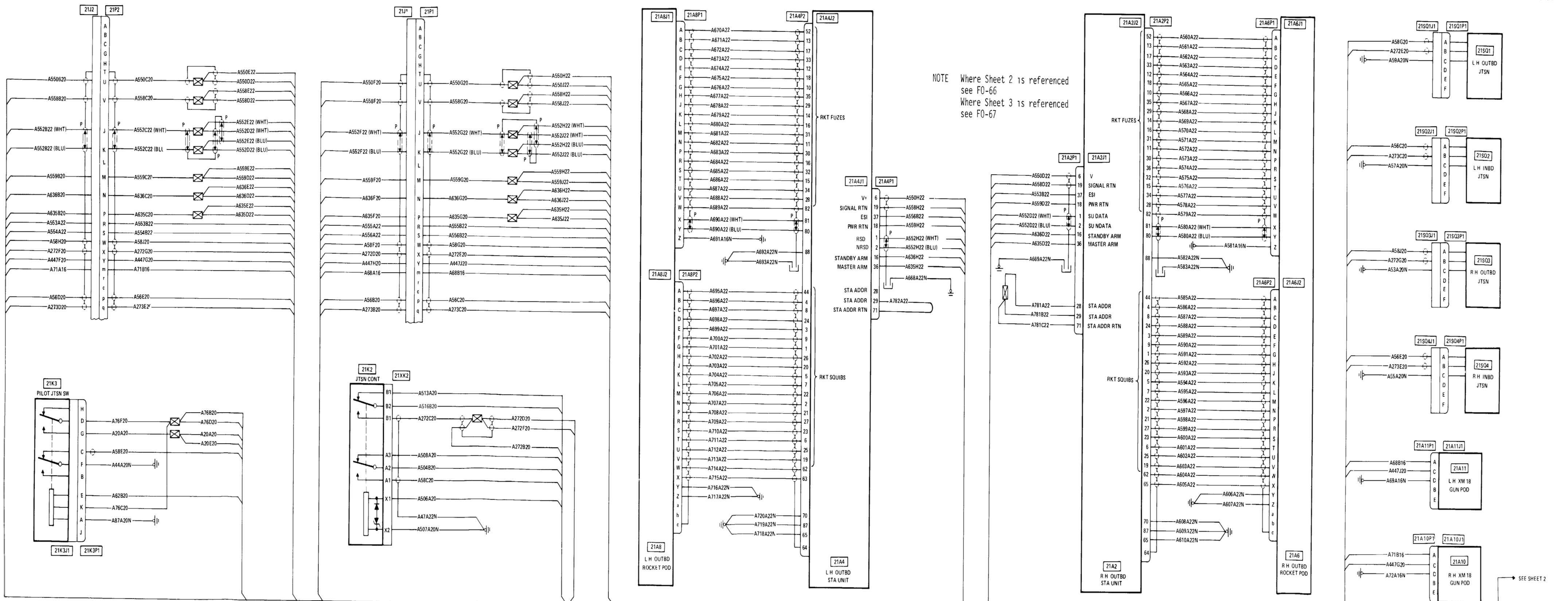


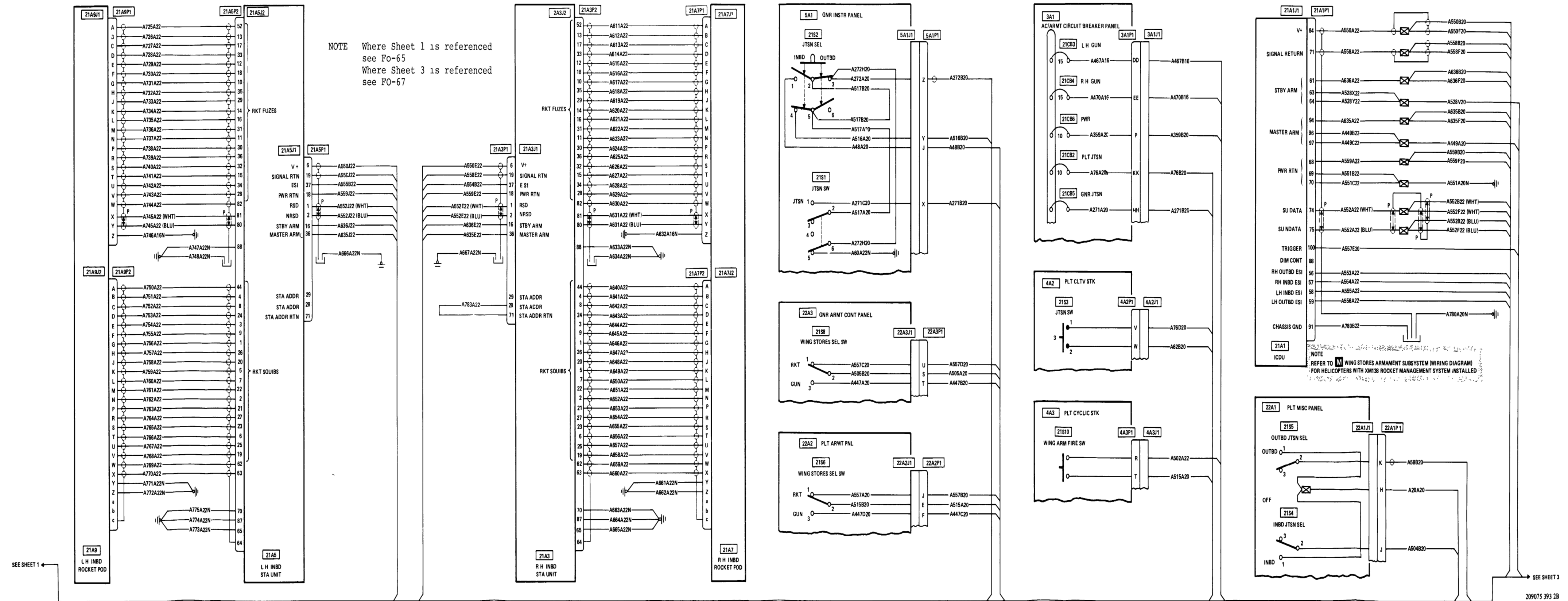
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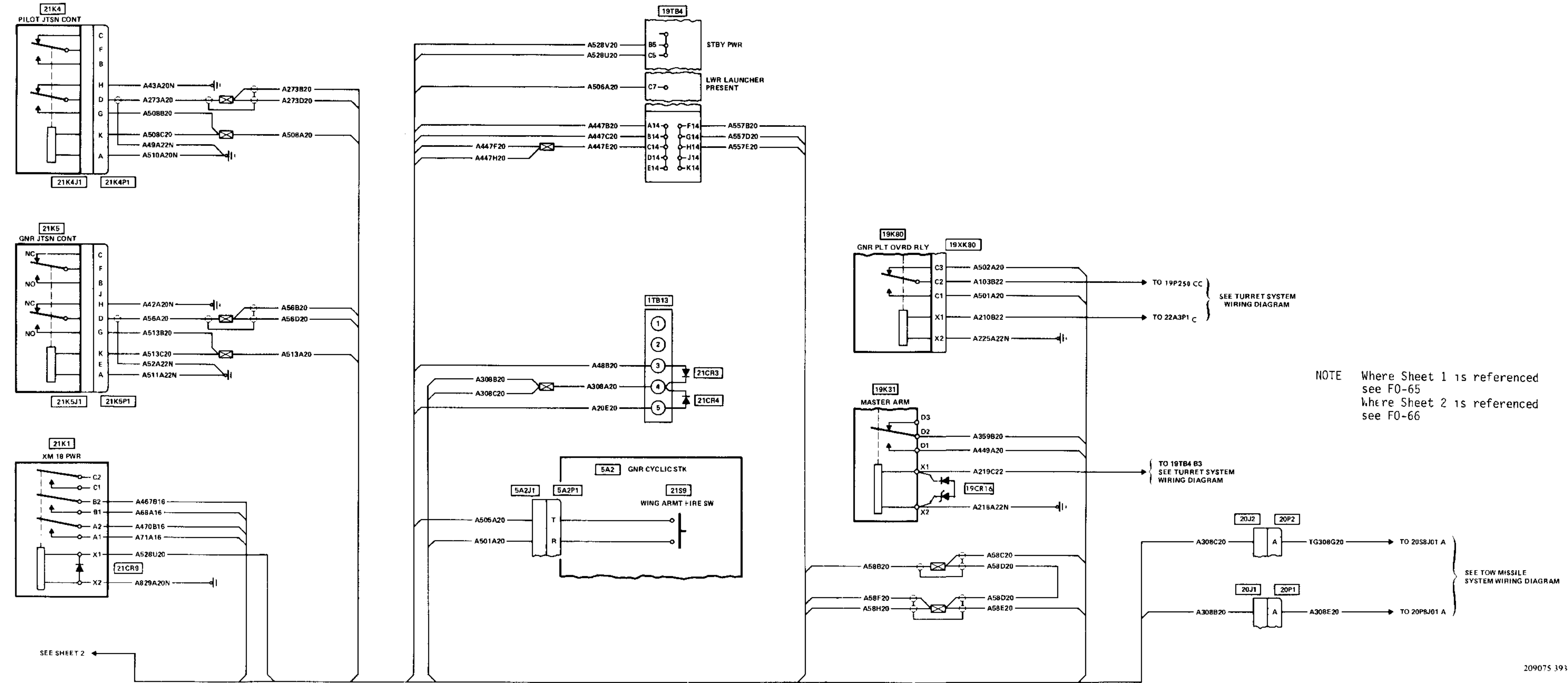


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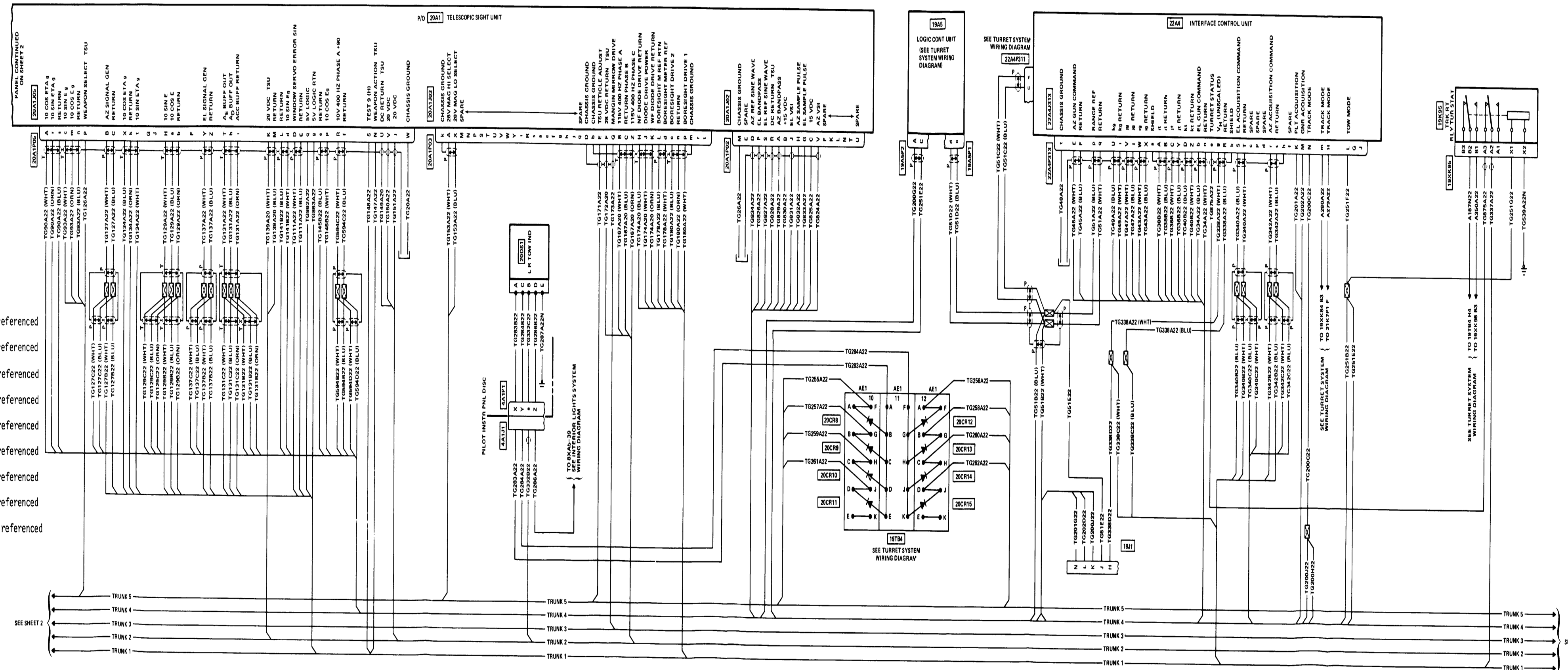








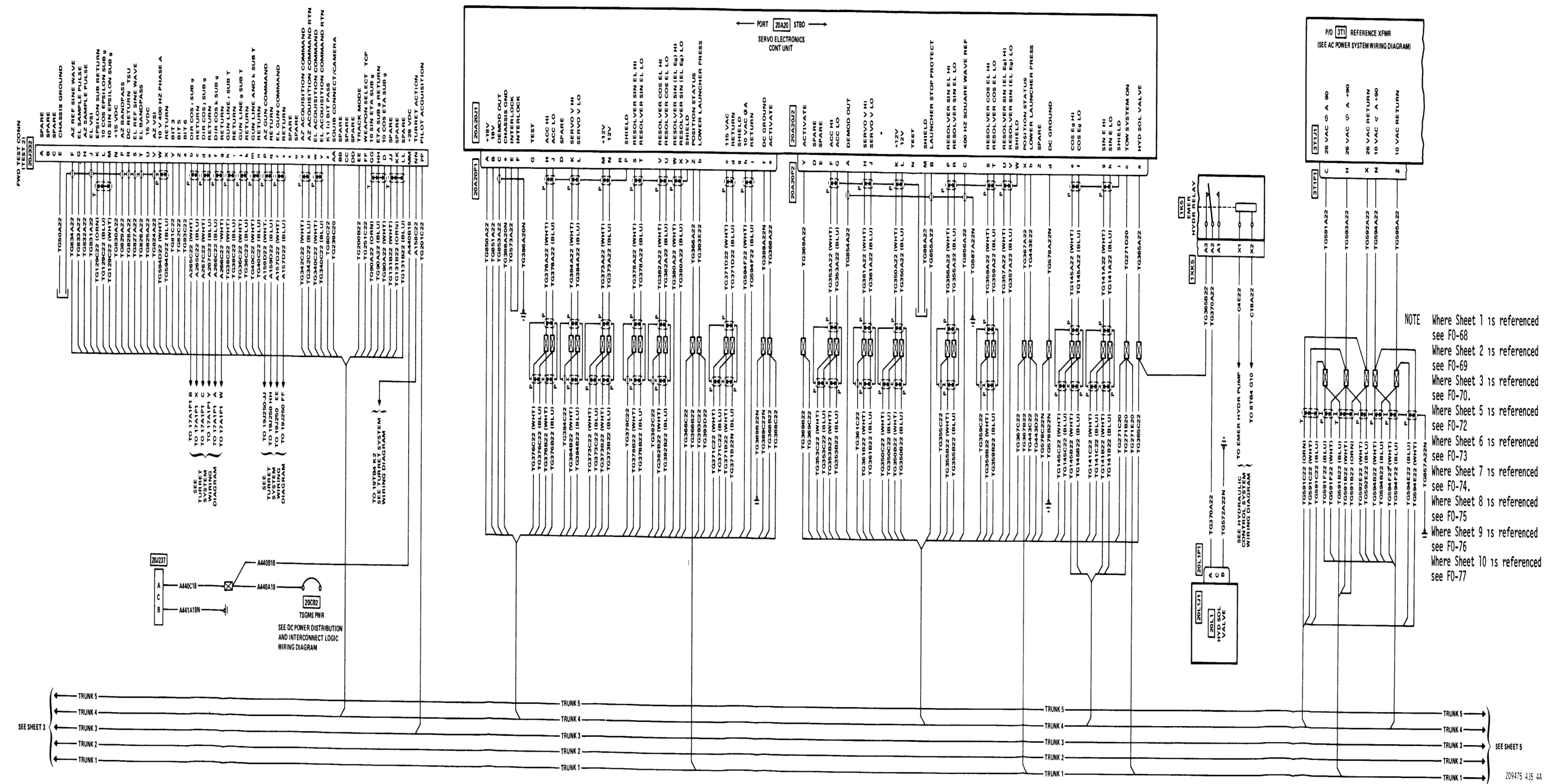
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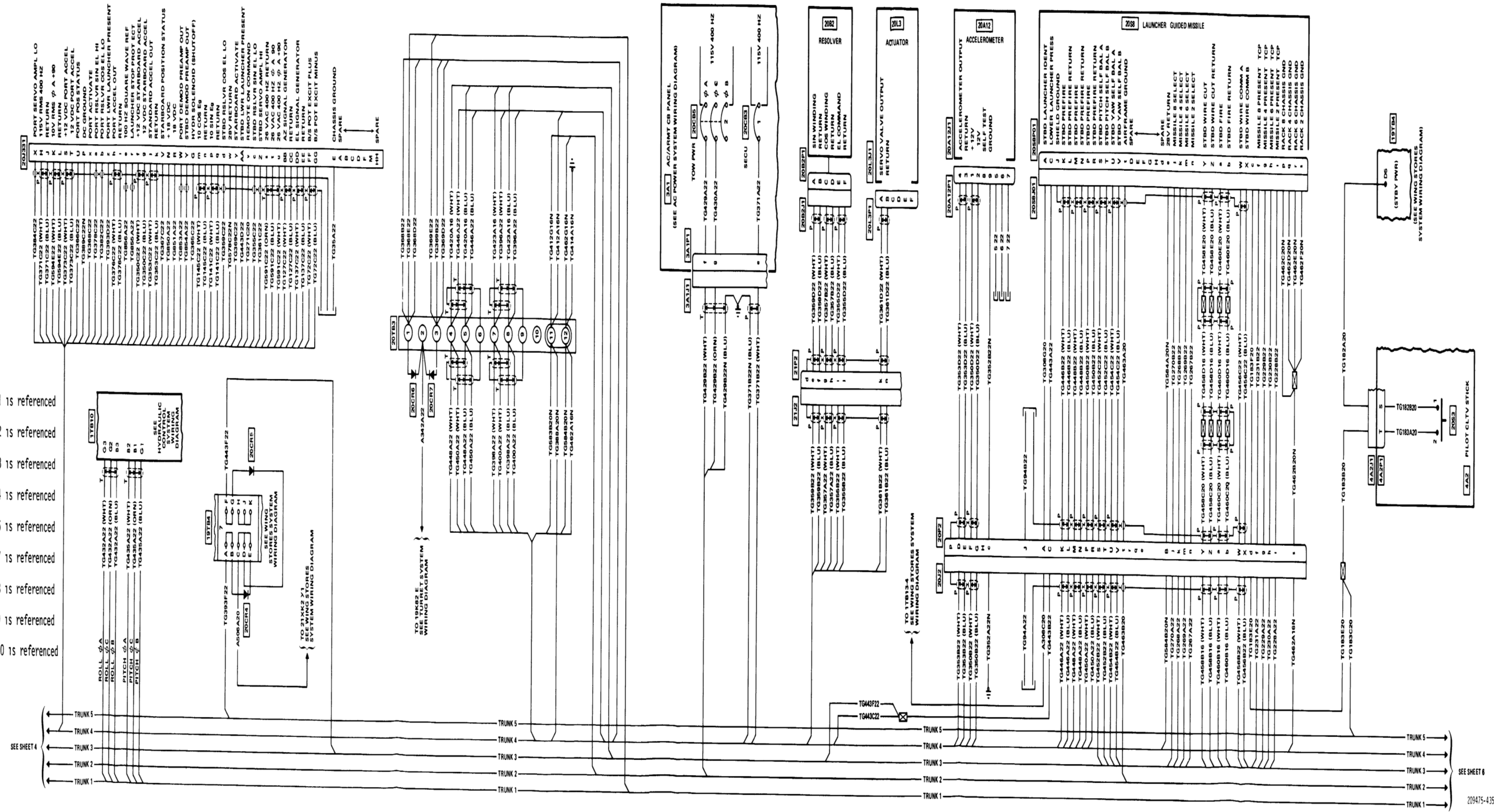
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 TRUNK 4
 TRUNK 3
 TRUNK 2
 TRUNK 1

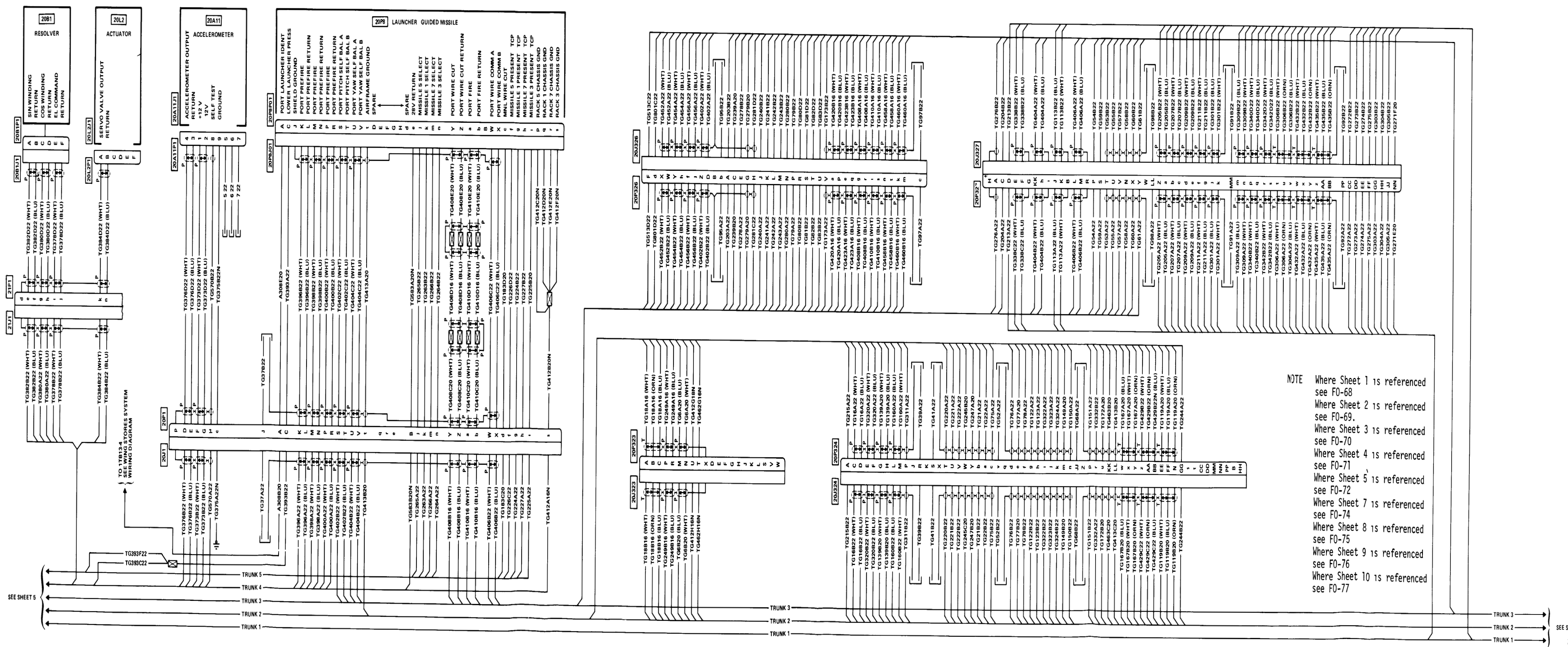
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 TRUNK 2
 TRUNK 1

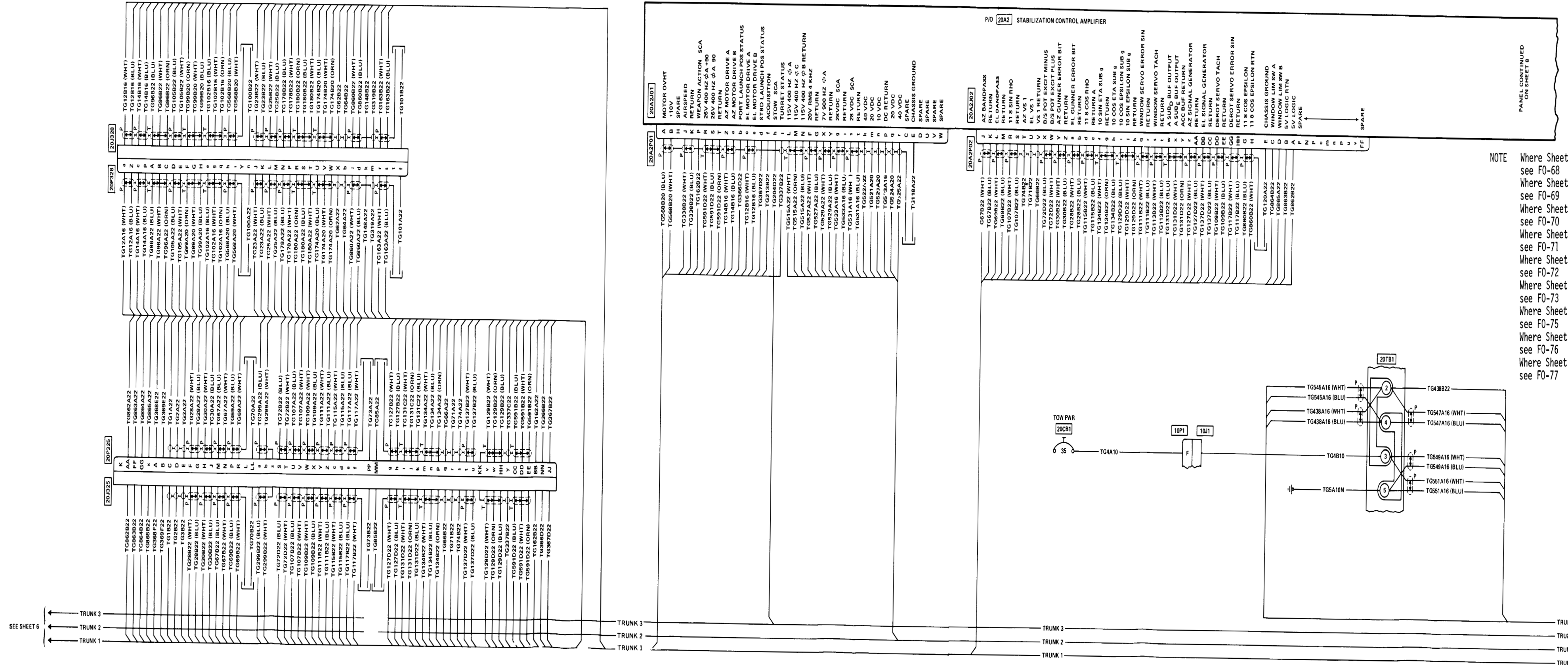
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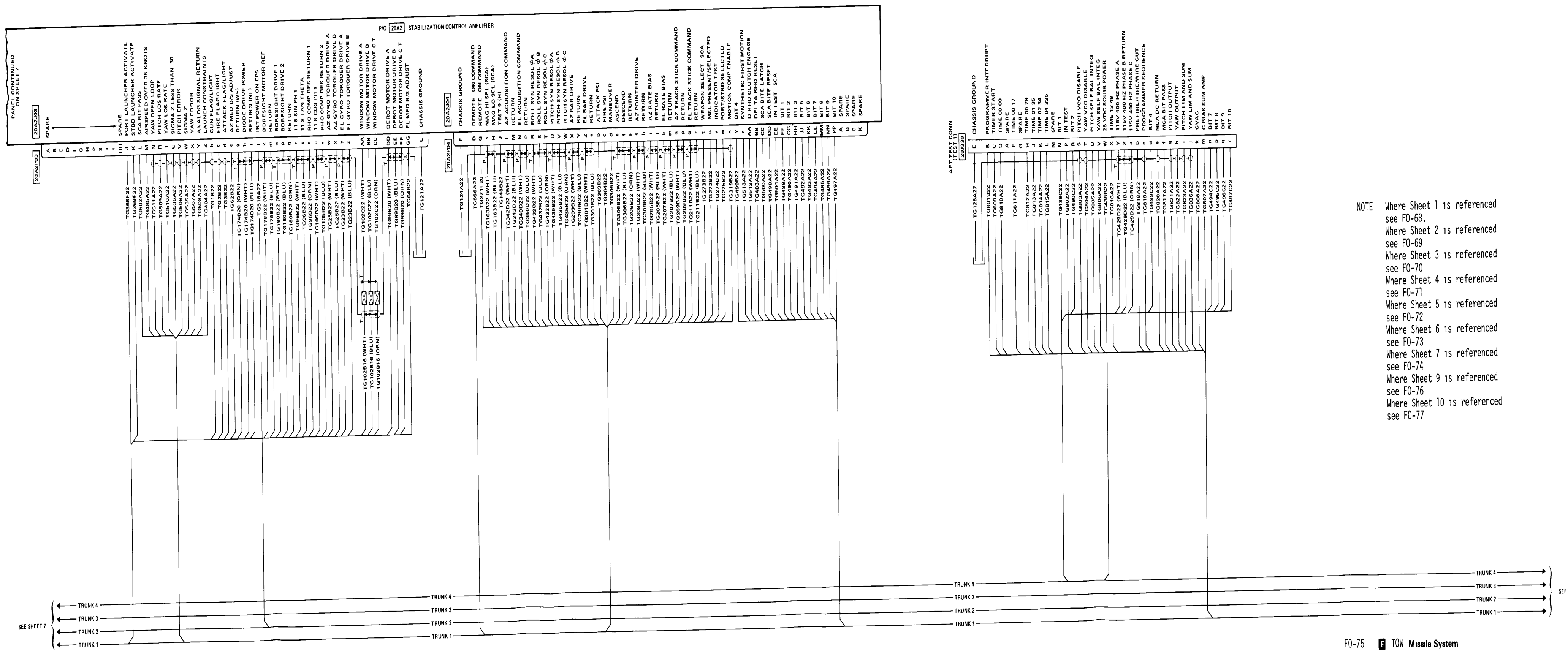


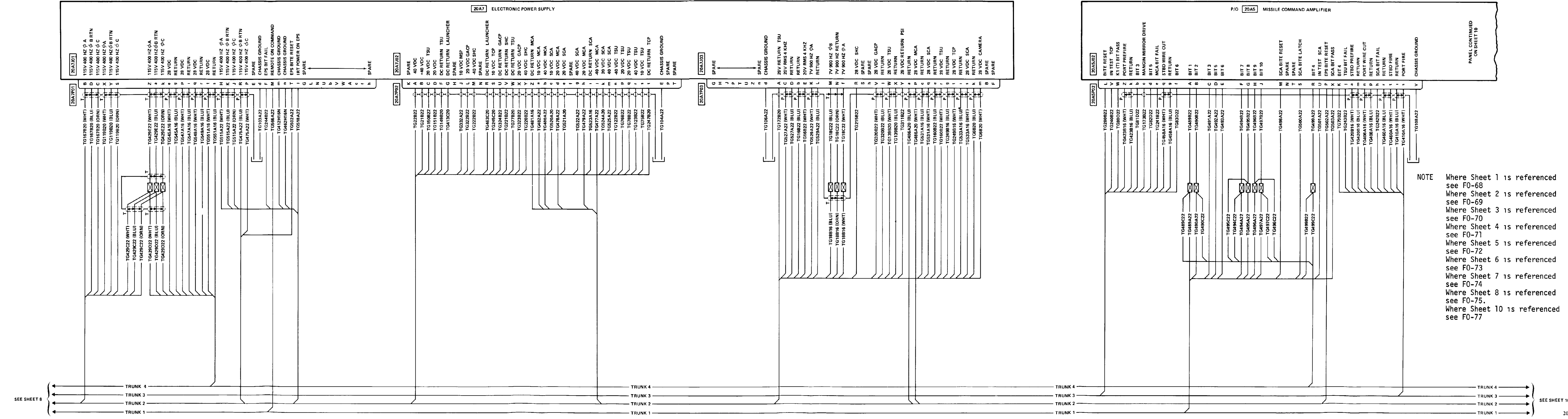
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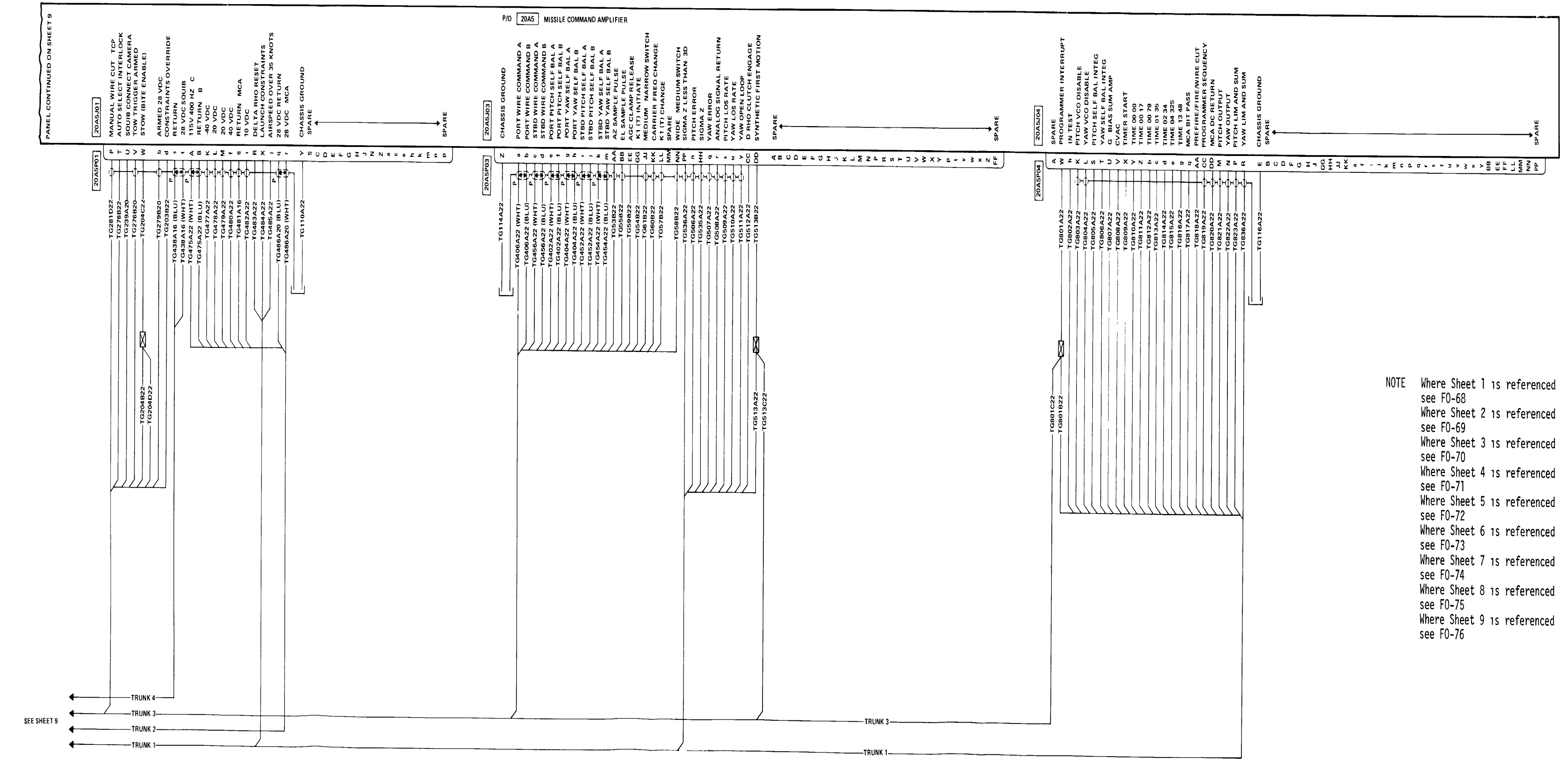








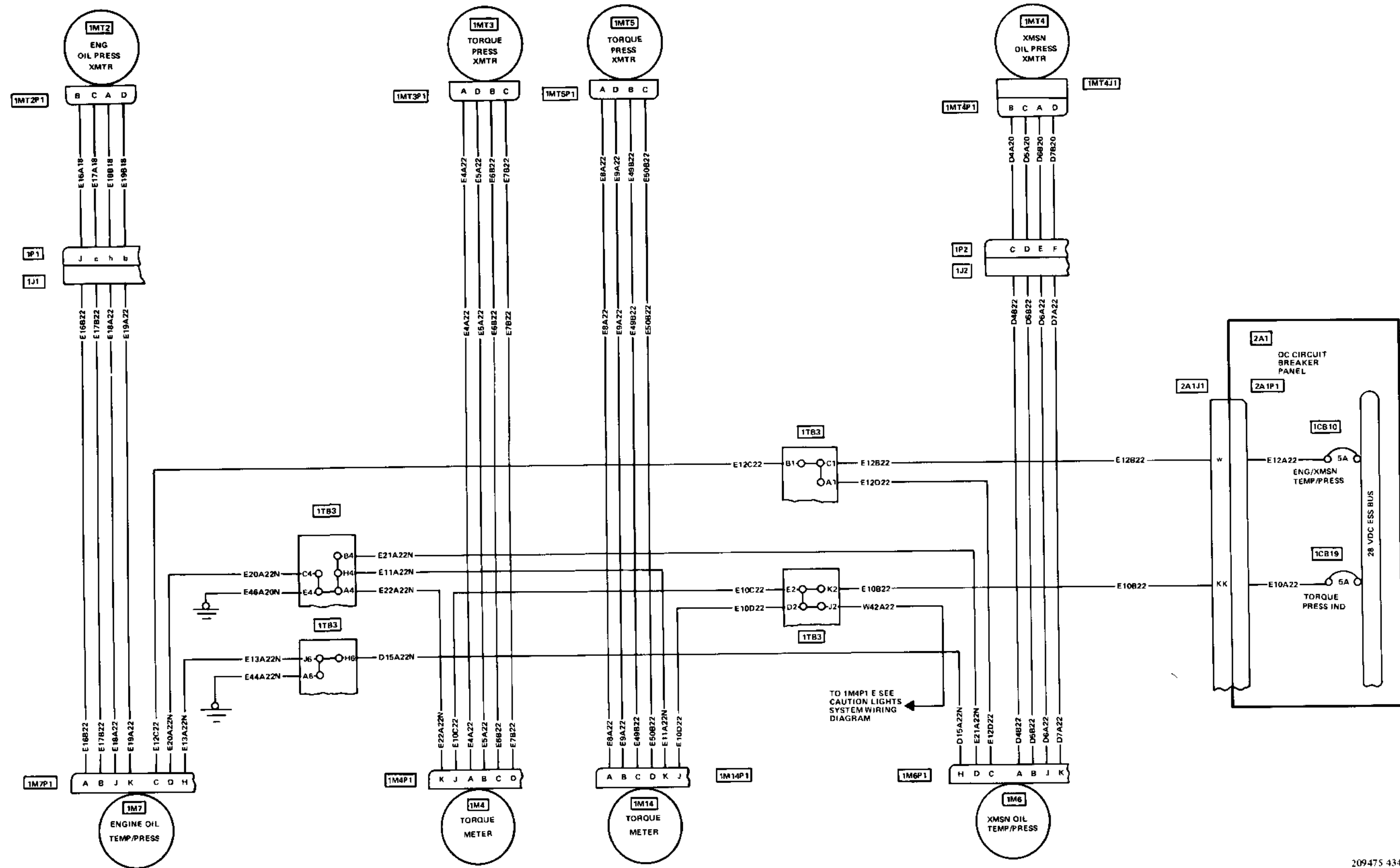
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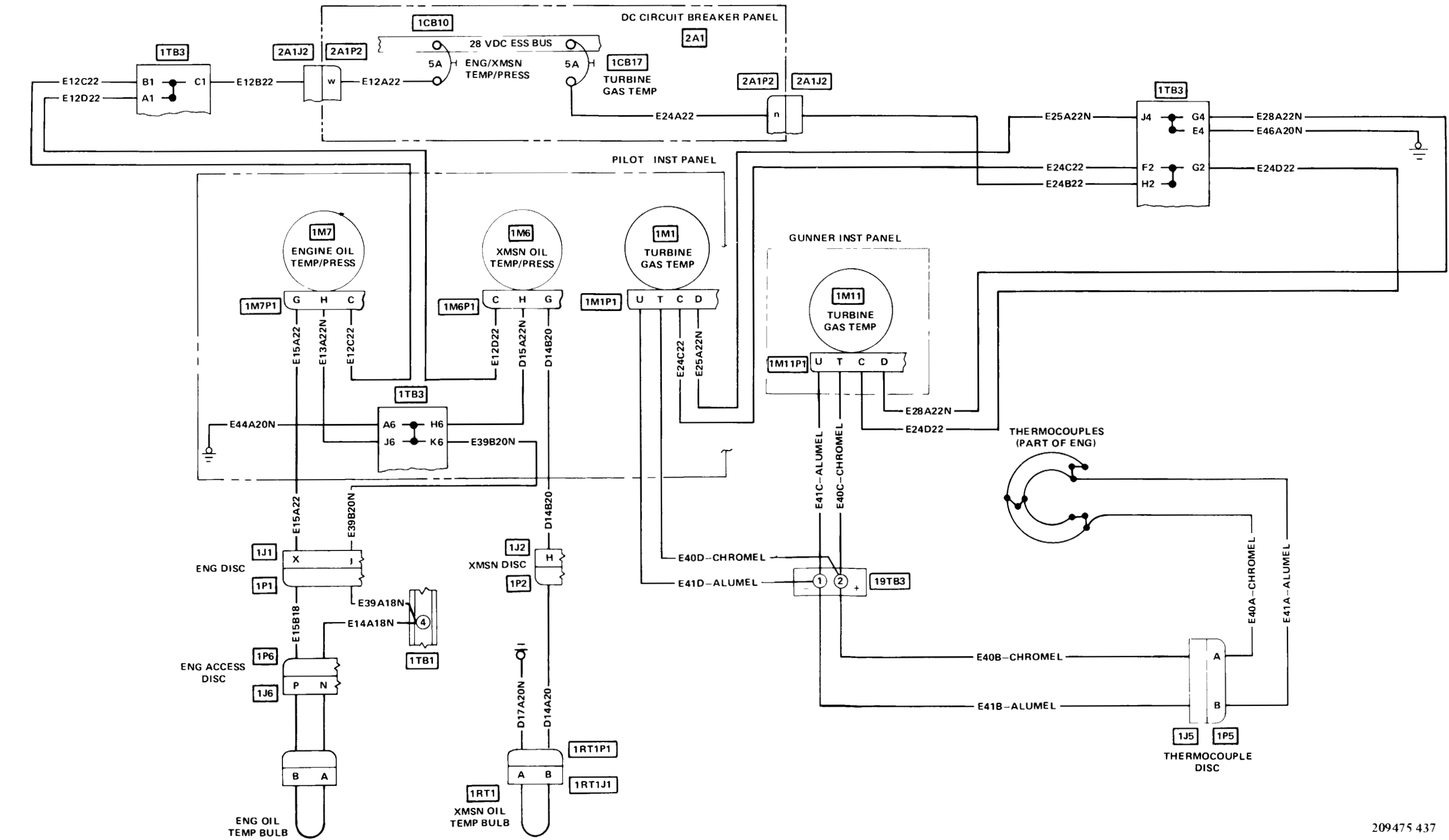


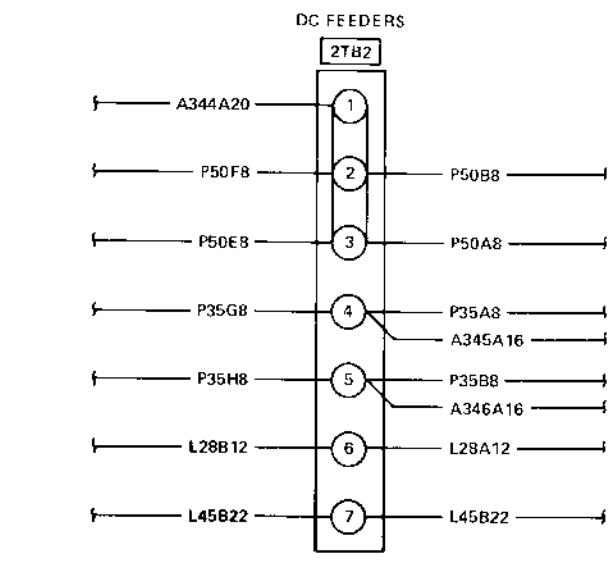
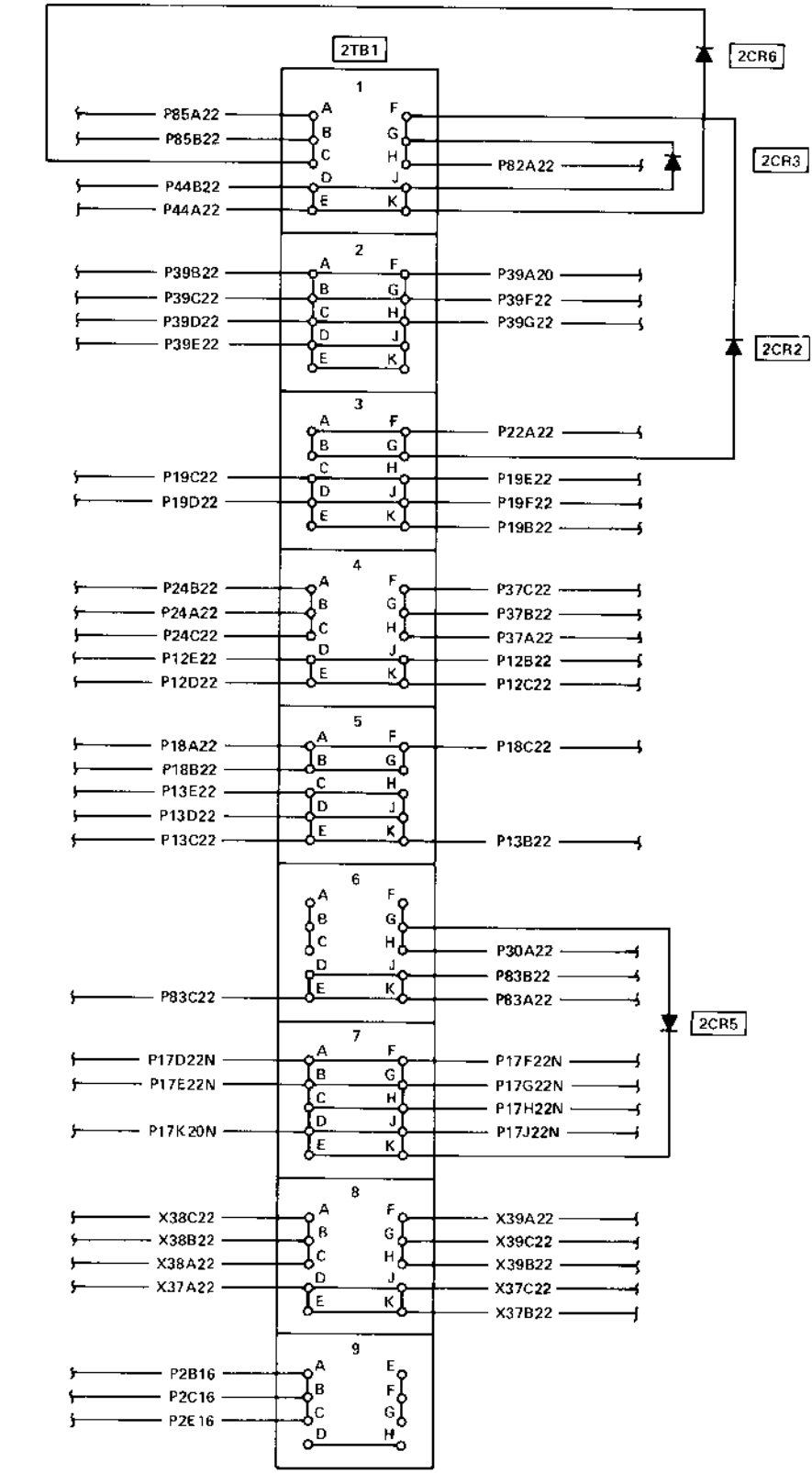
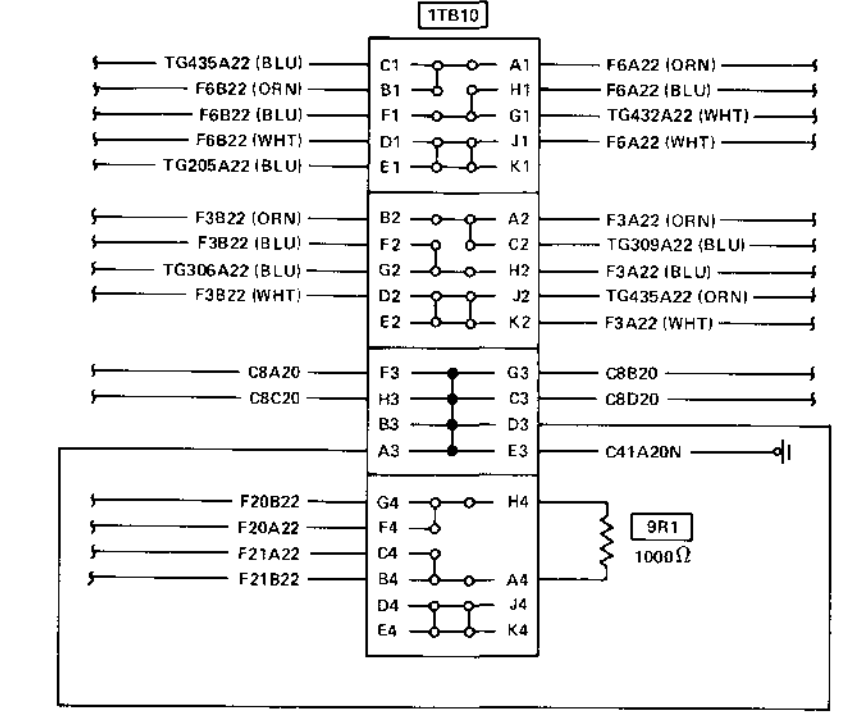
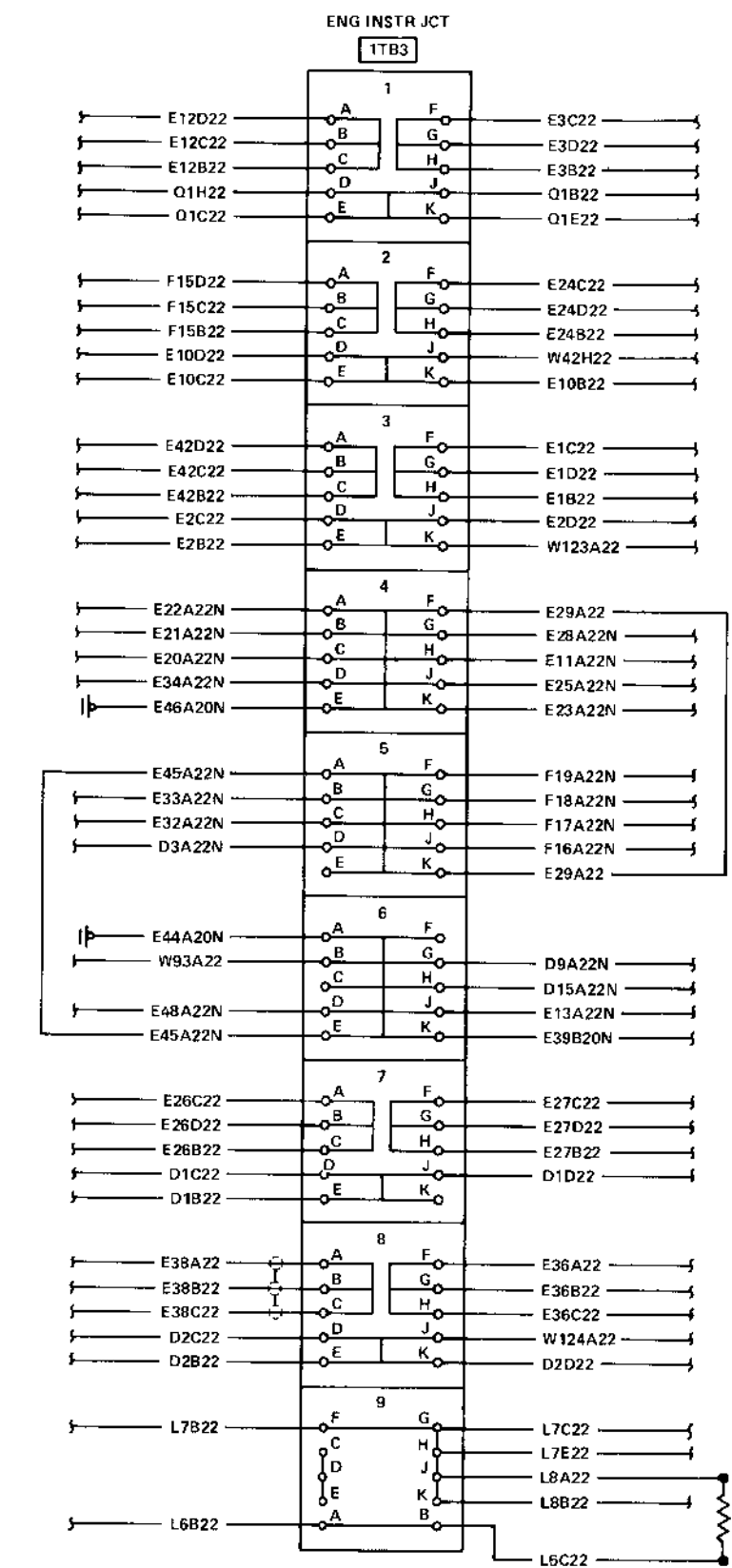
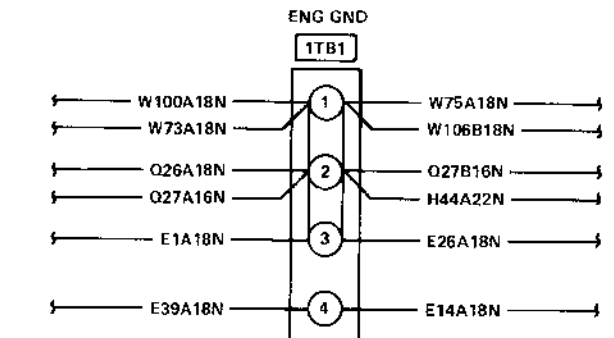
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 Where Sheet 9 is referenced see F0-76

NOTE
 TRUNK LINES ARE NUMBERED AS FOLLOWS

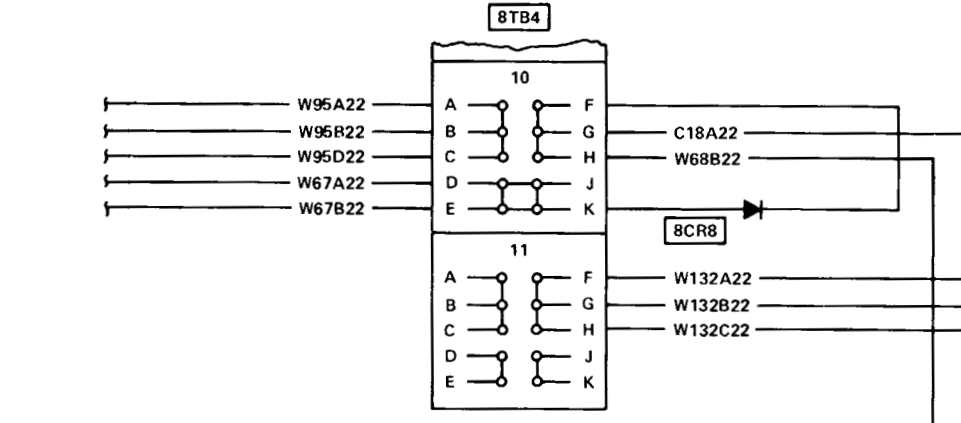
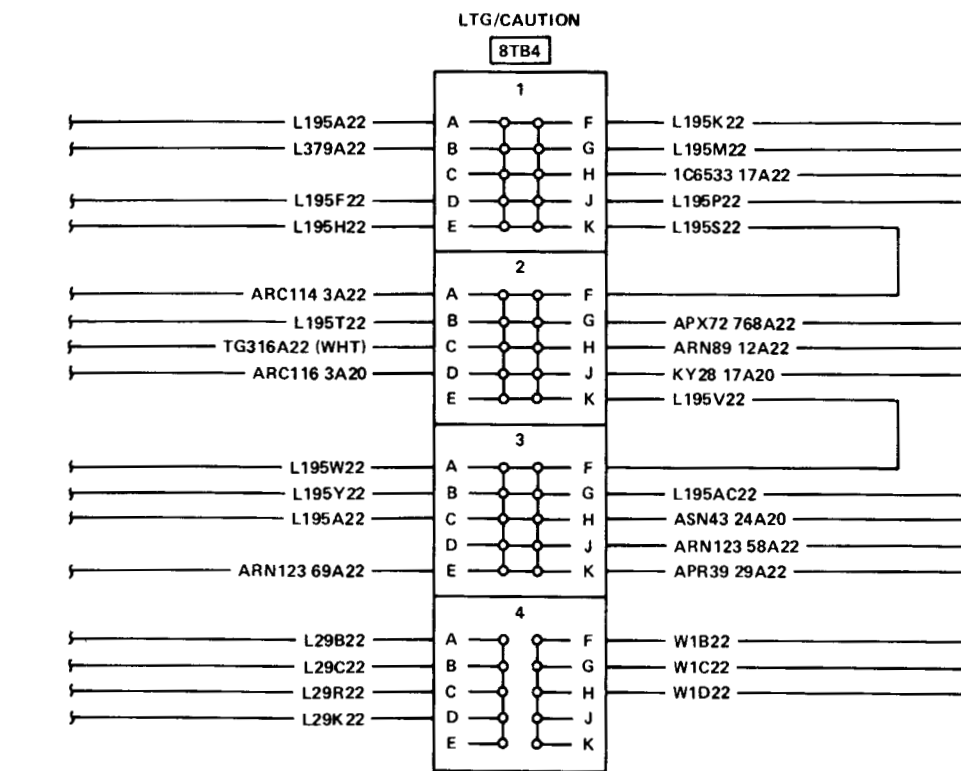
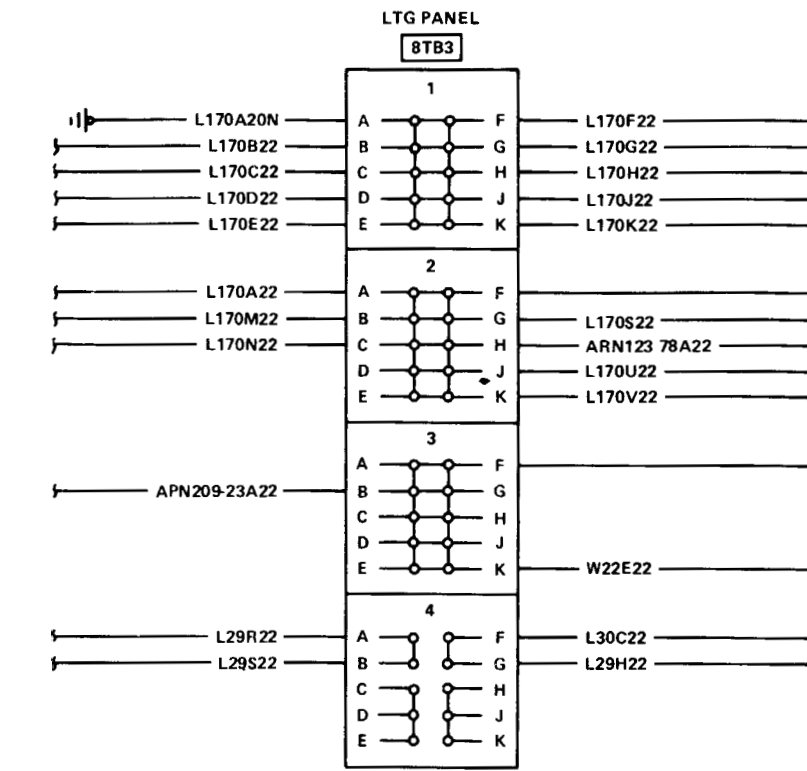
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- TRUNK 3 20A5P01
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20S8J01
- TRUNK 4 22A4P313
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TEST 3
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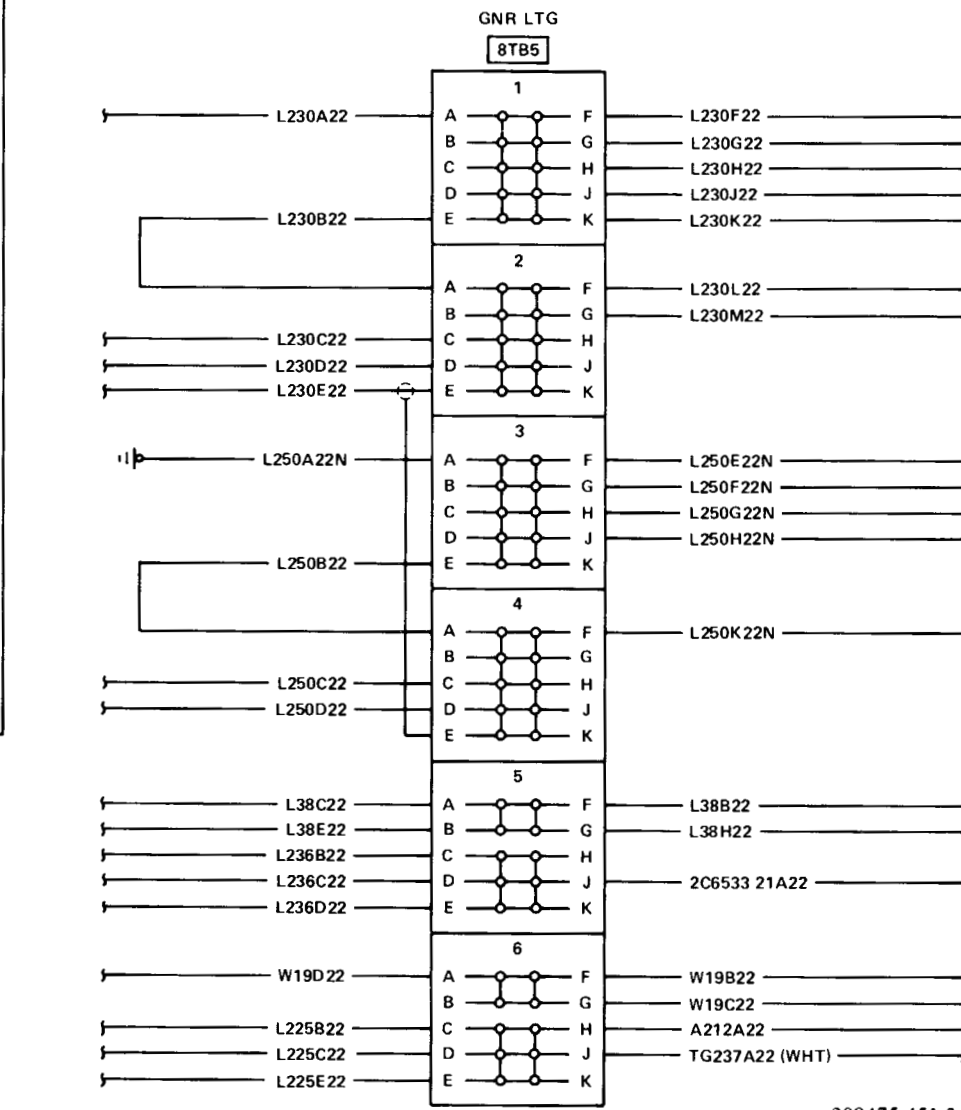
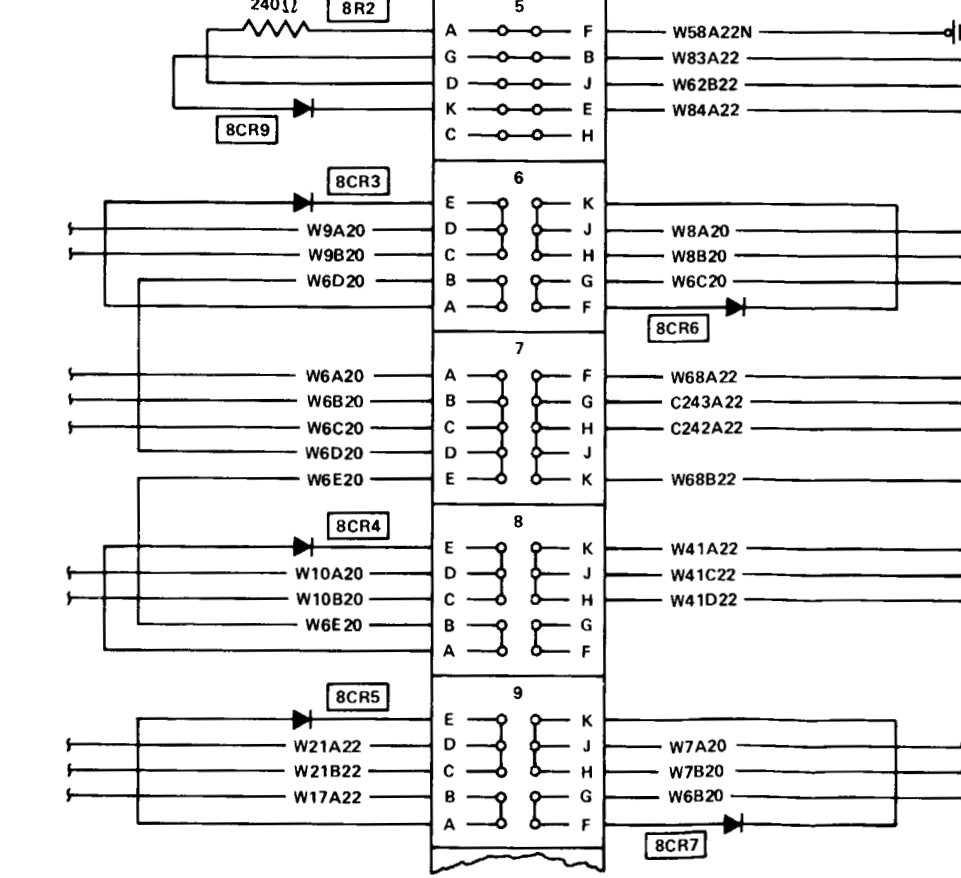


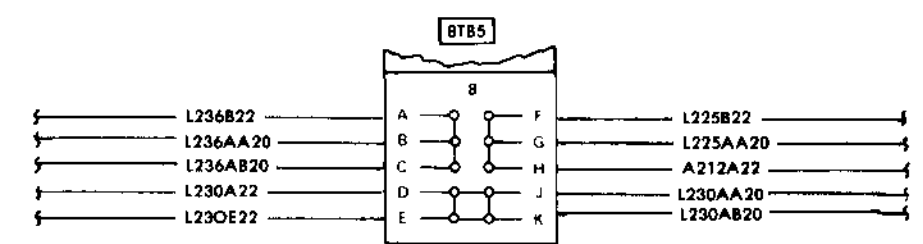
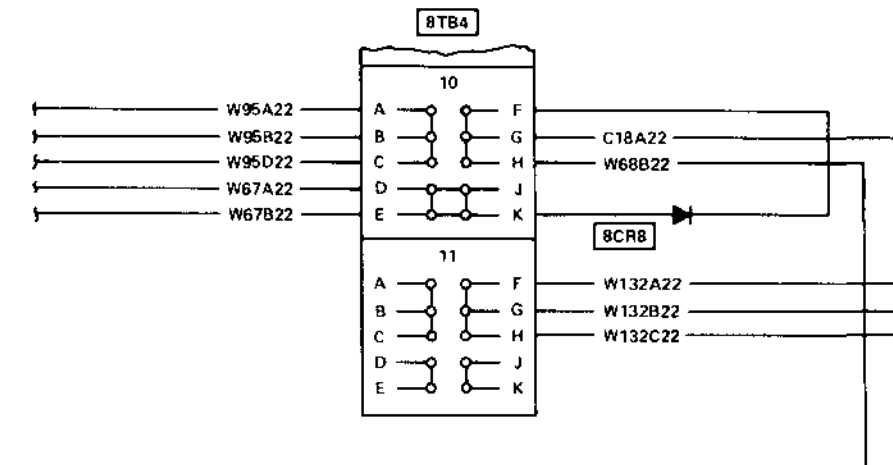
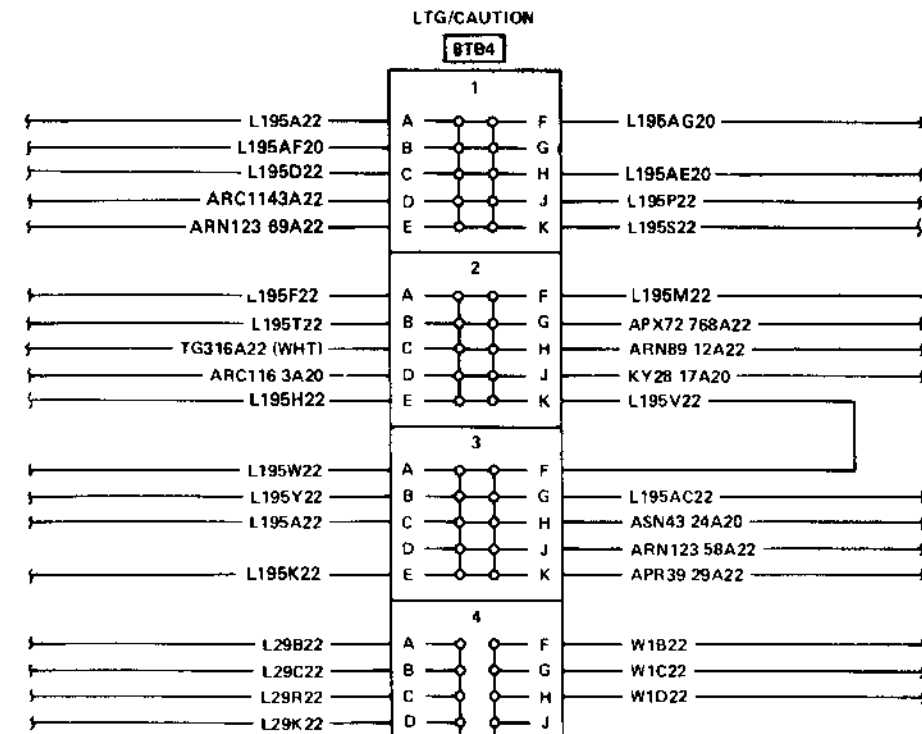
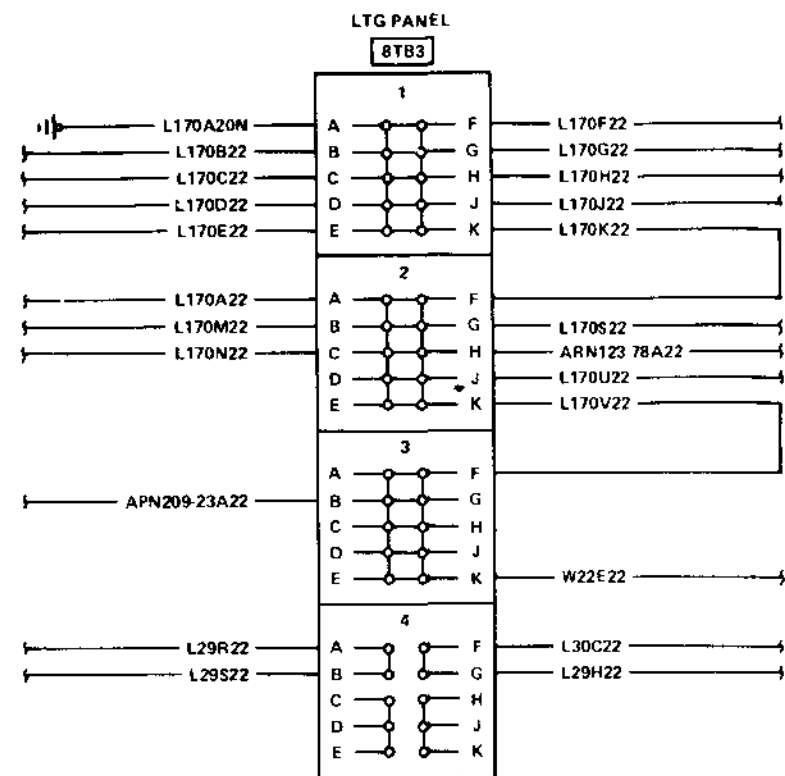


NOTE Where Sheet 2 is referenced see FO-81
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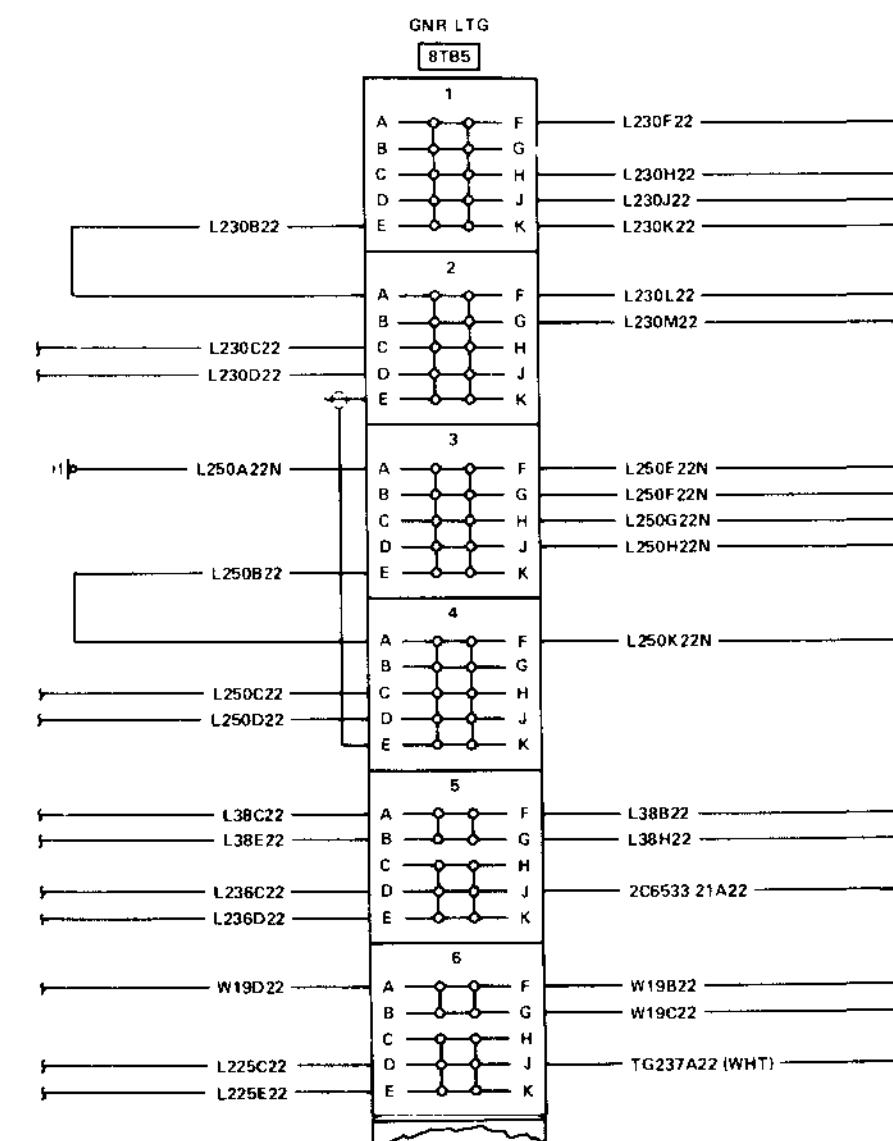
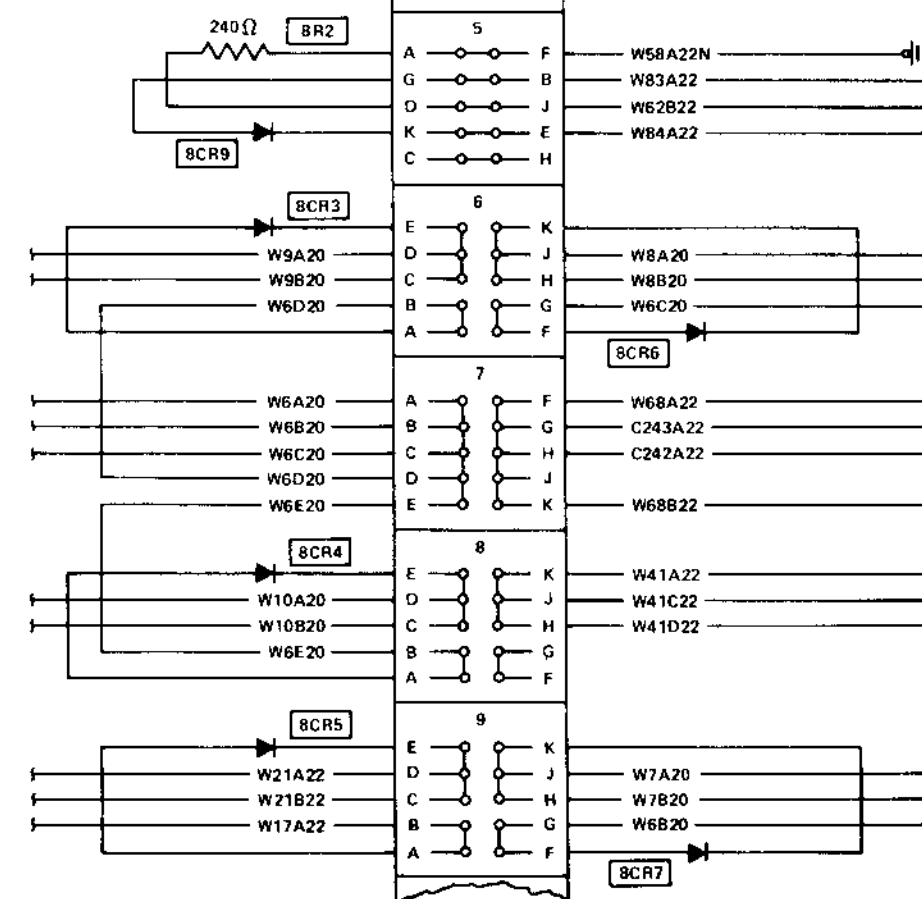


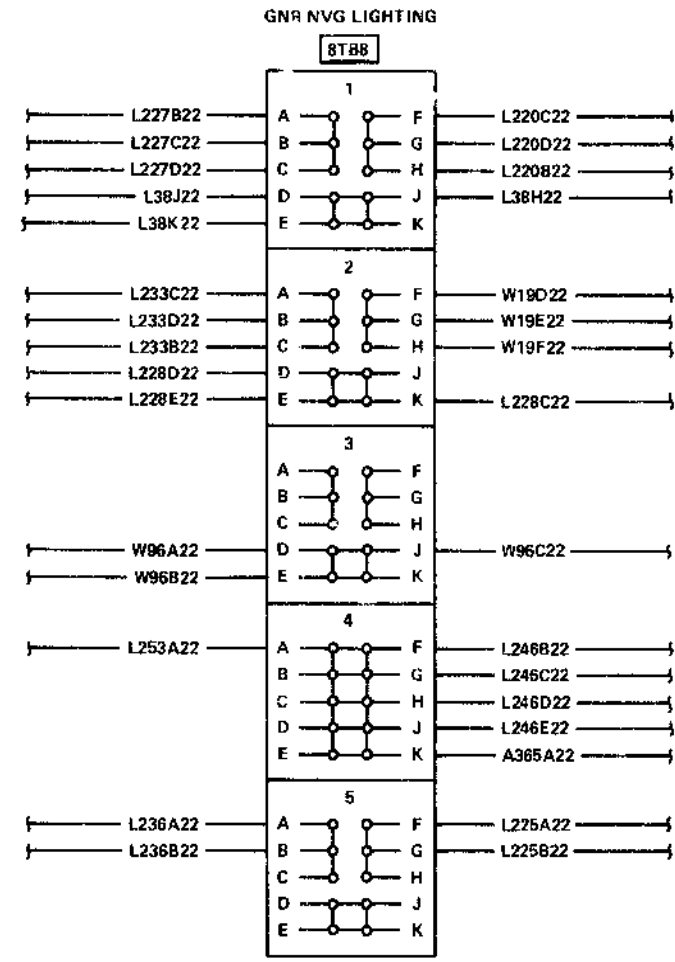
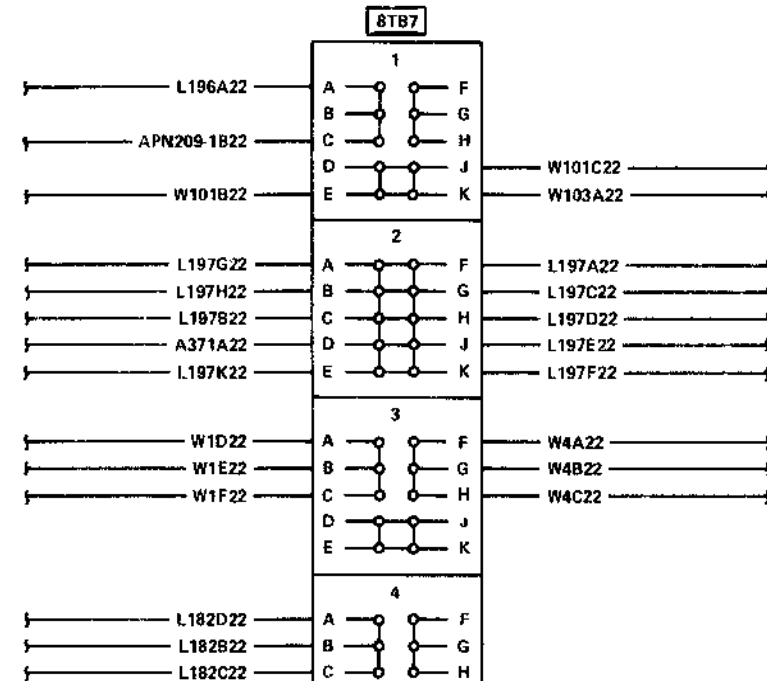
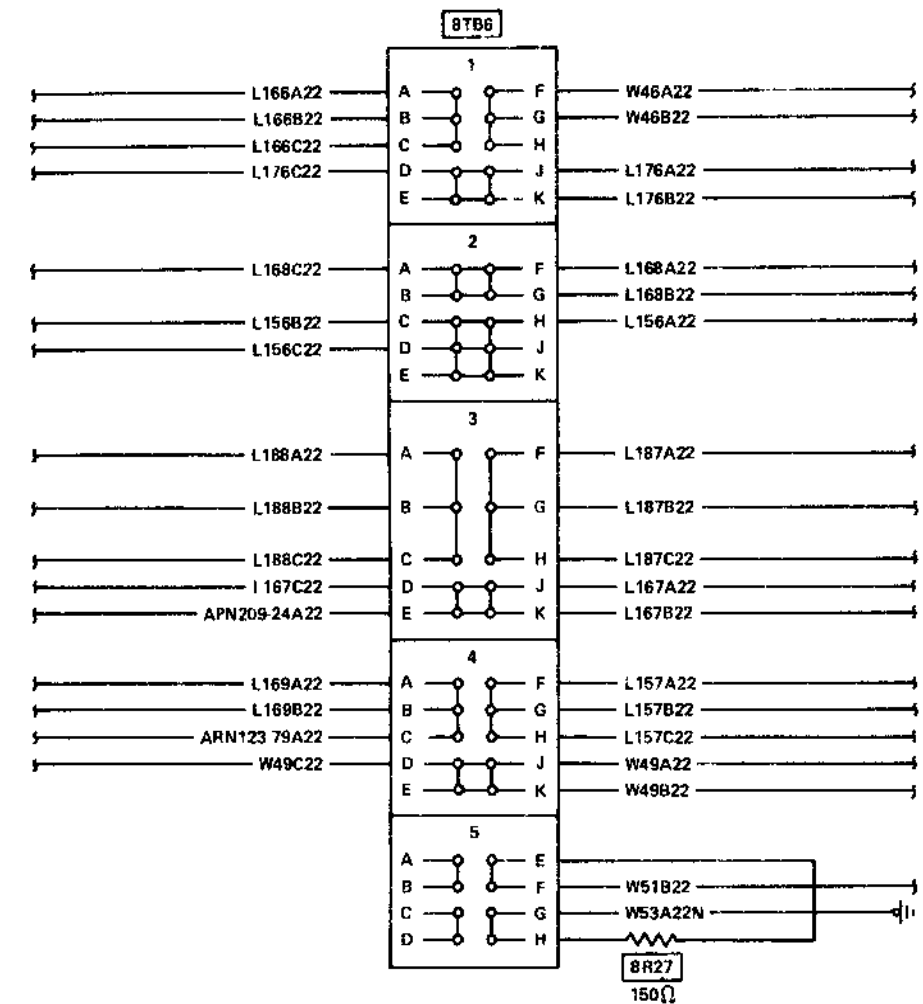
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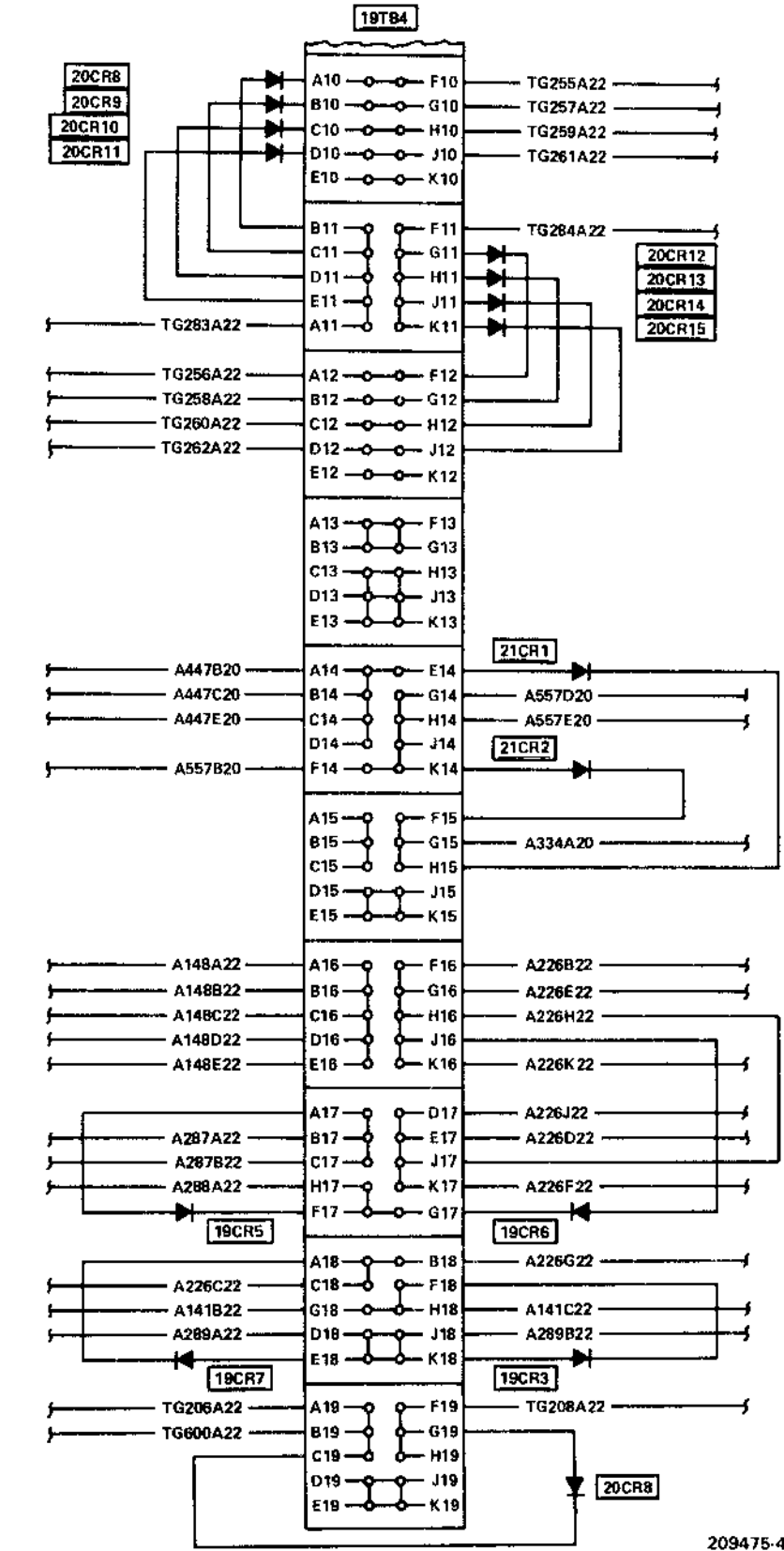
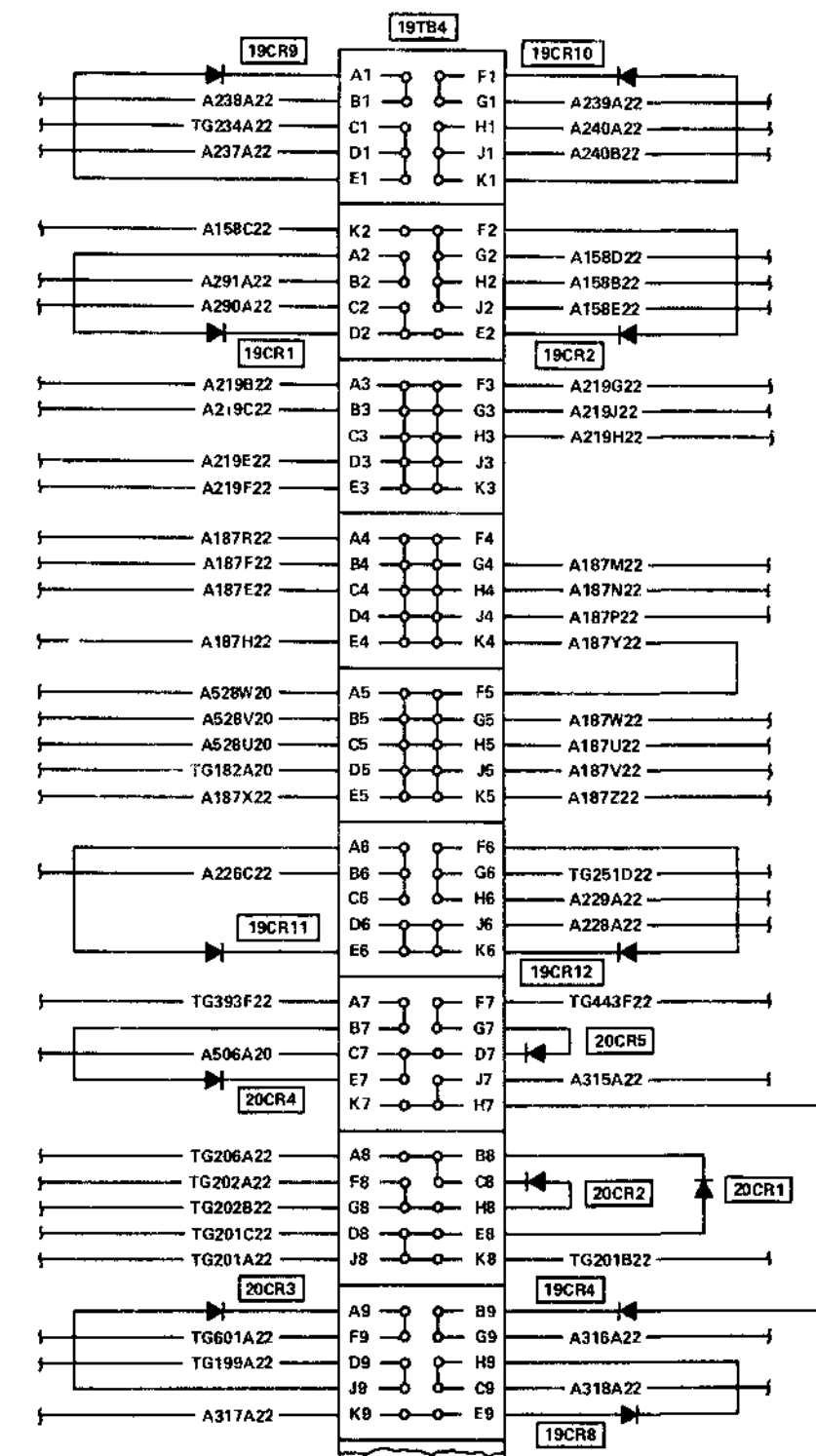


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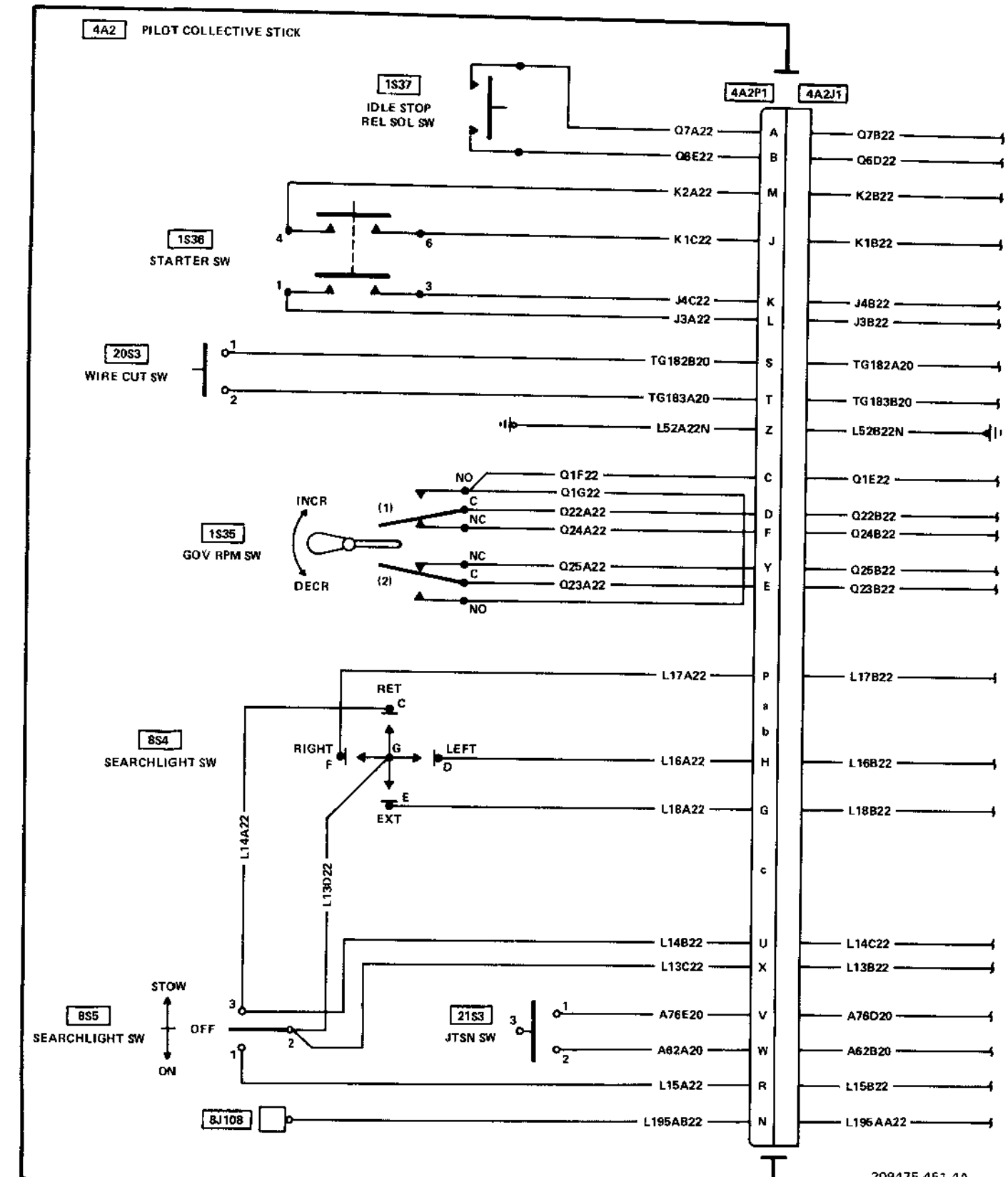
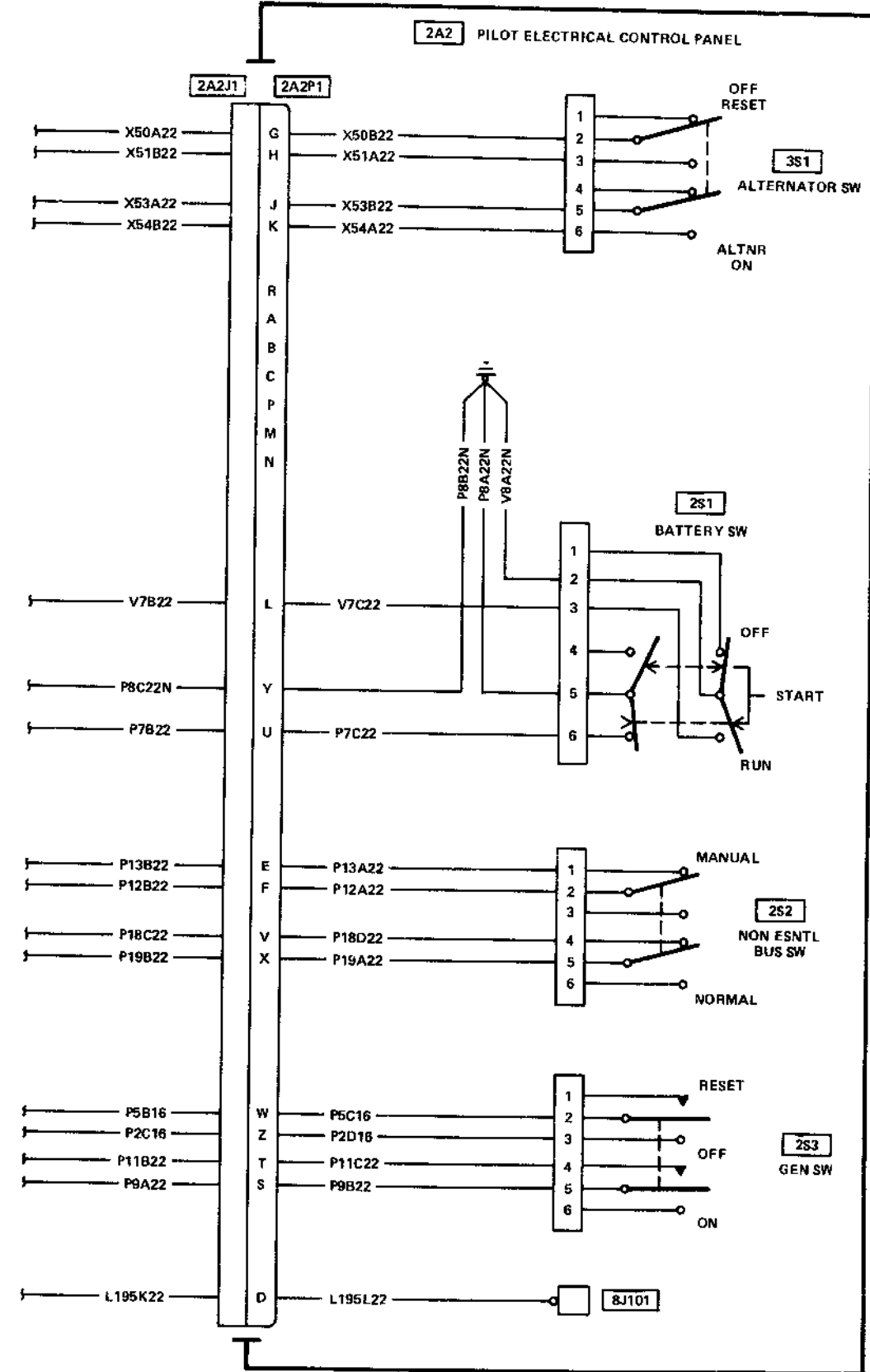
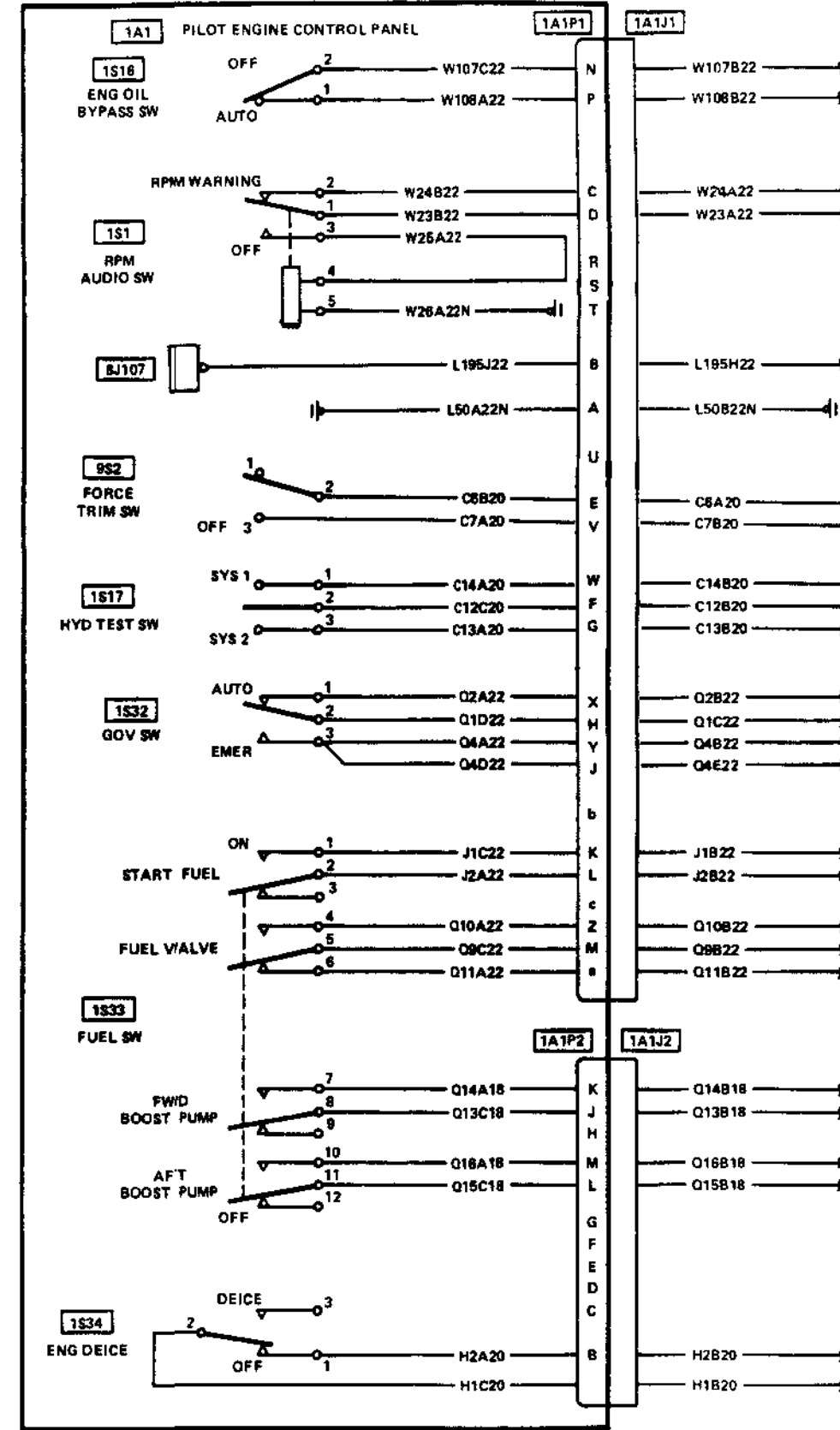


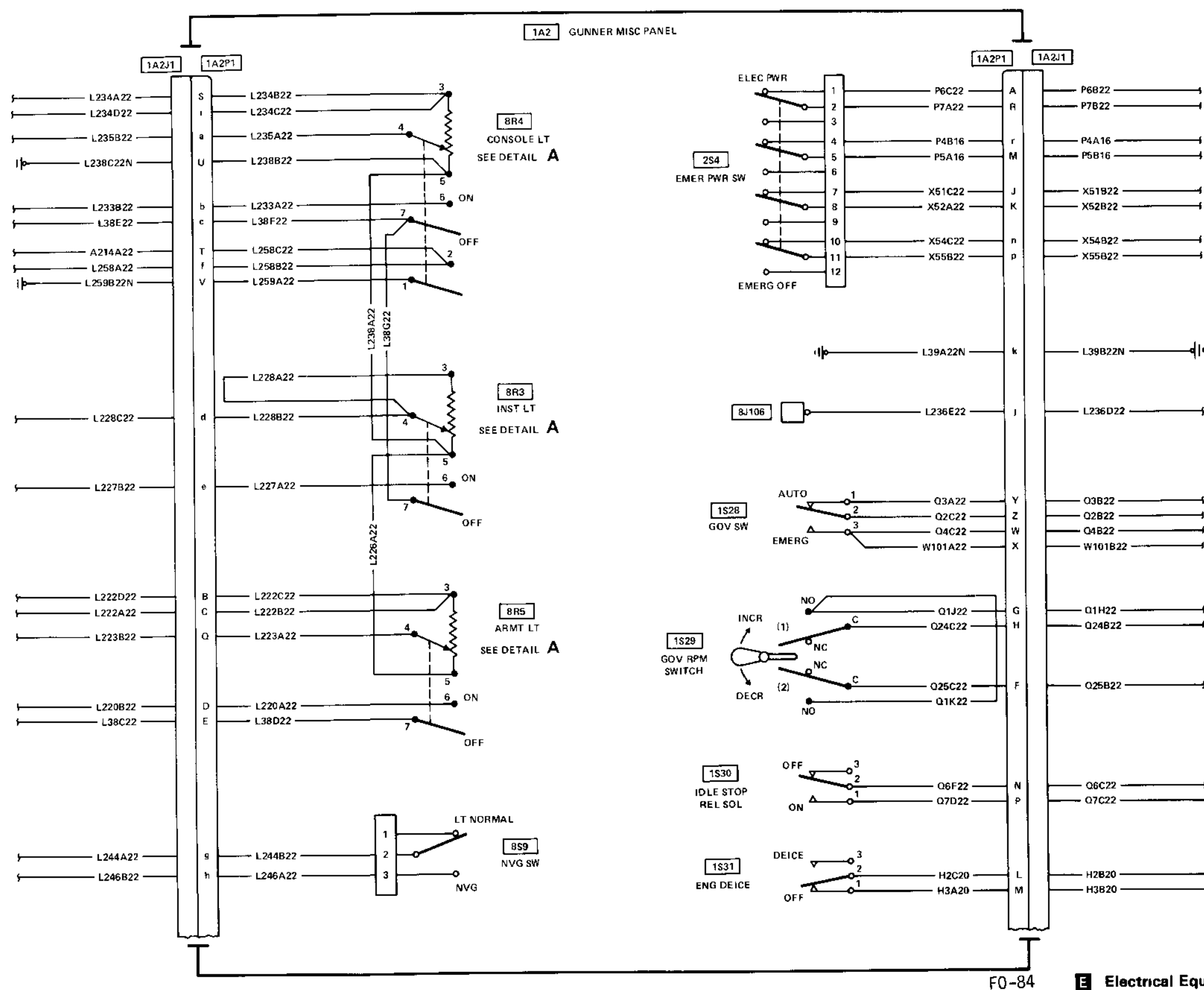


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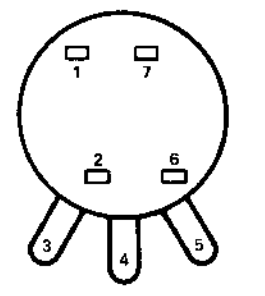


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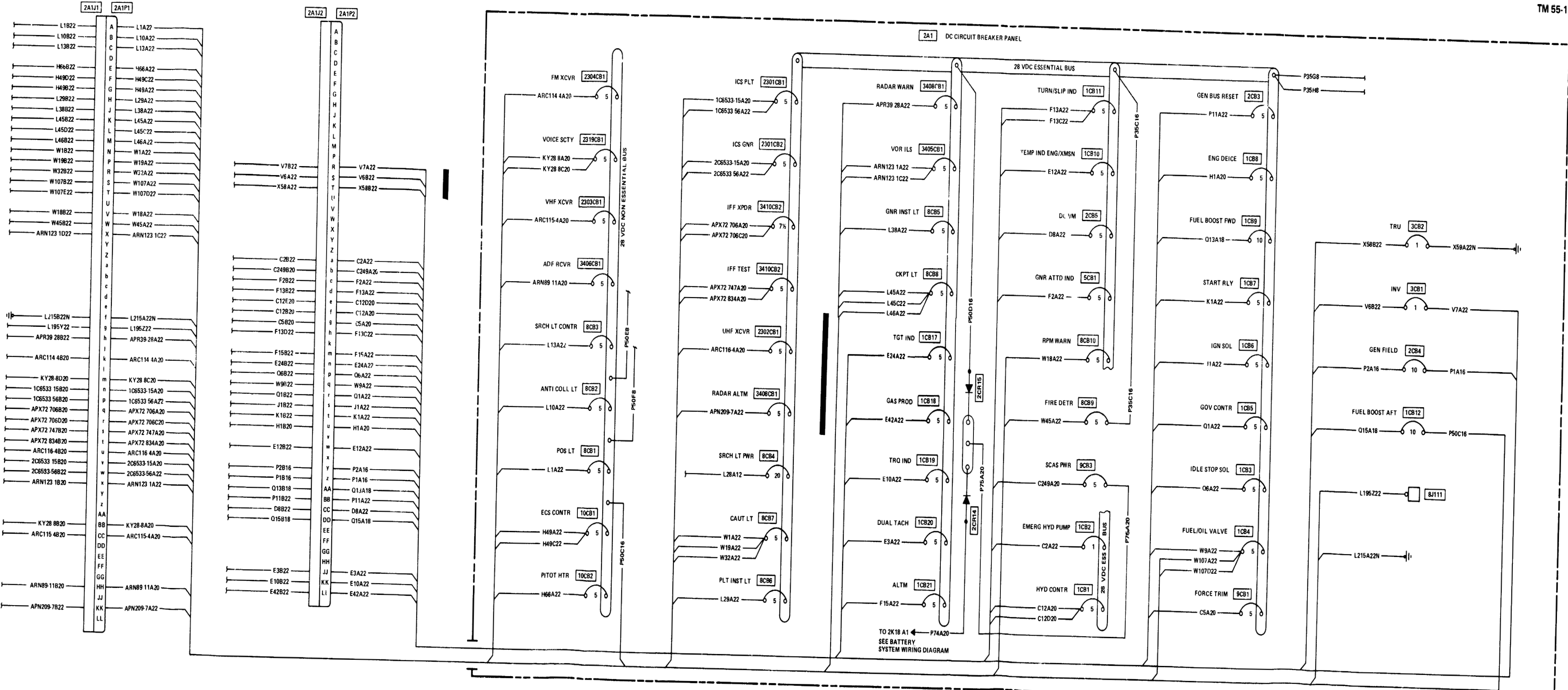


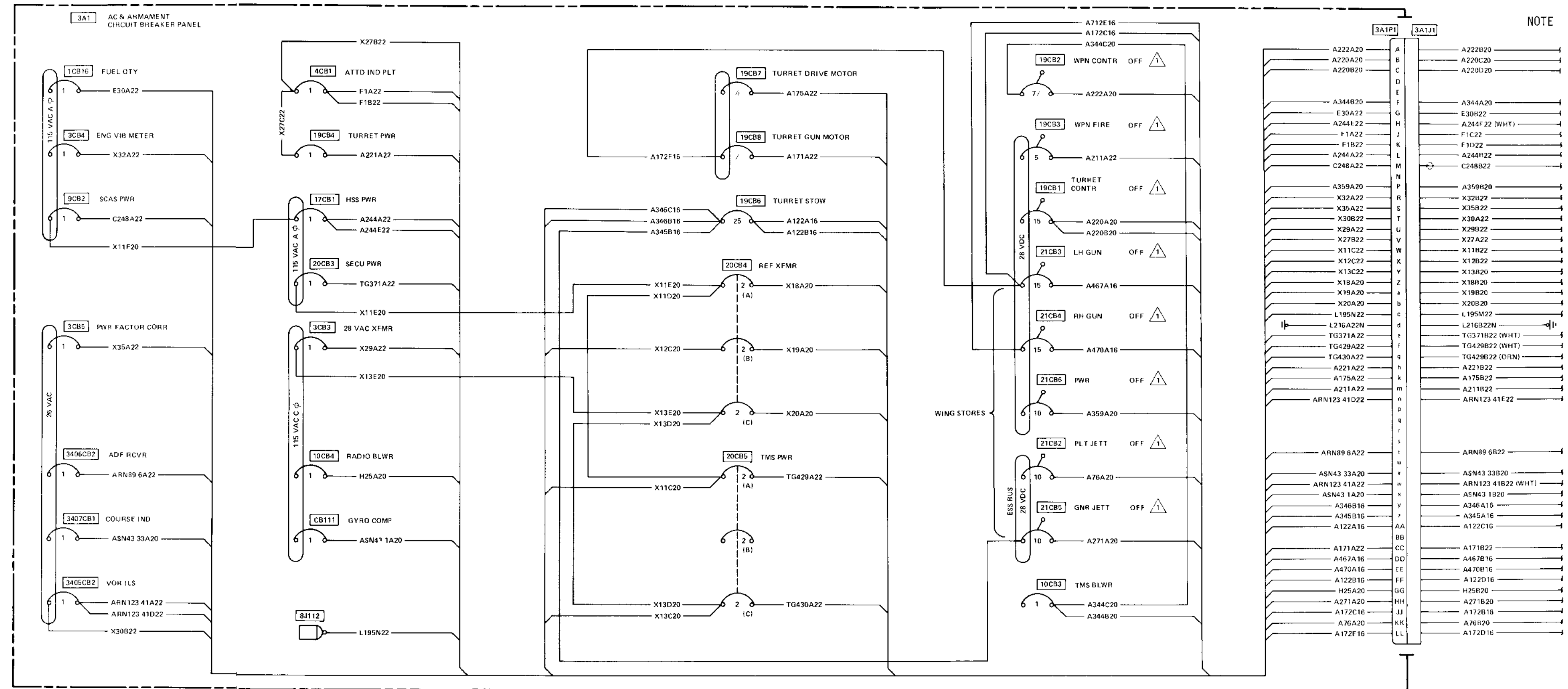
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 Where Sheet 10 is referenced see F0-89
 Where Sheet 11 is referenced see F0-90



VIEW LOOKING AT REAR OF 110-046 () RESISTOR
 DETAIL A

NOTE Where Sheet 1 is referenced see FO 80
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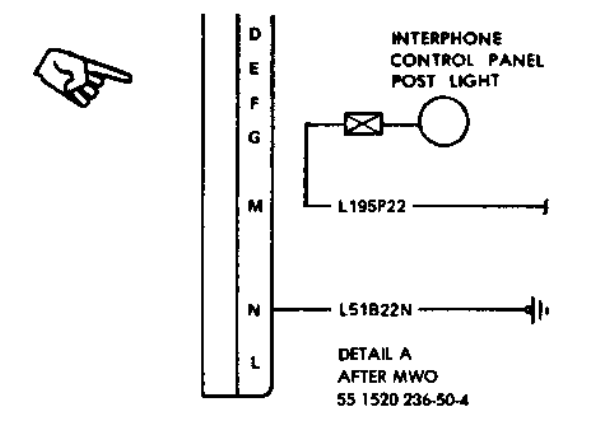


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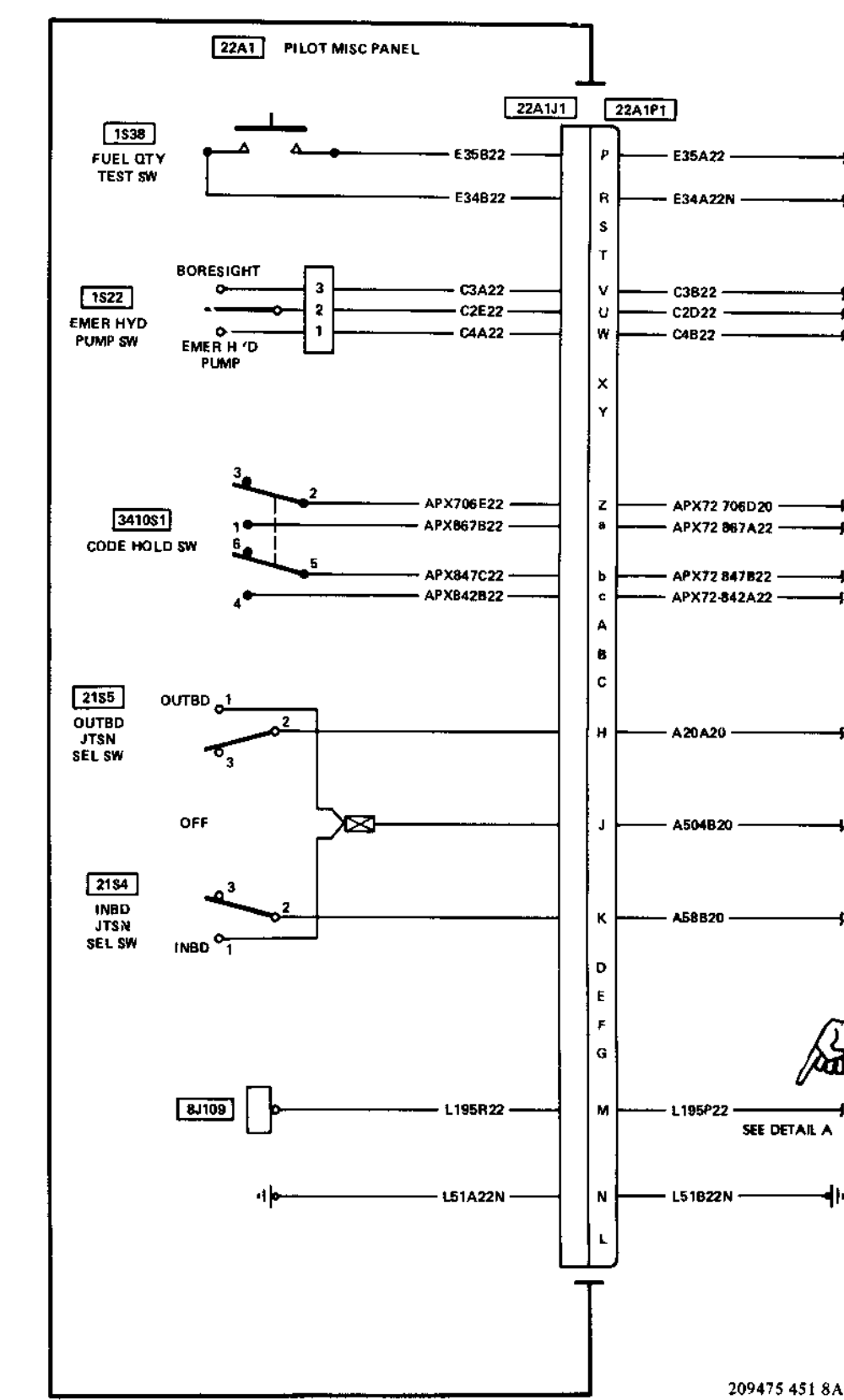
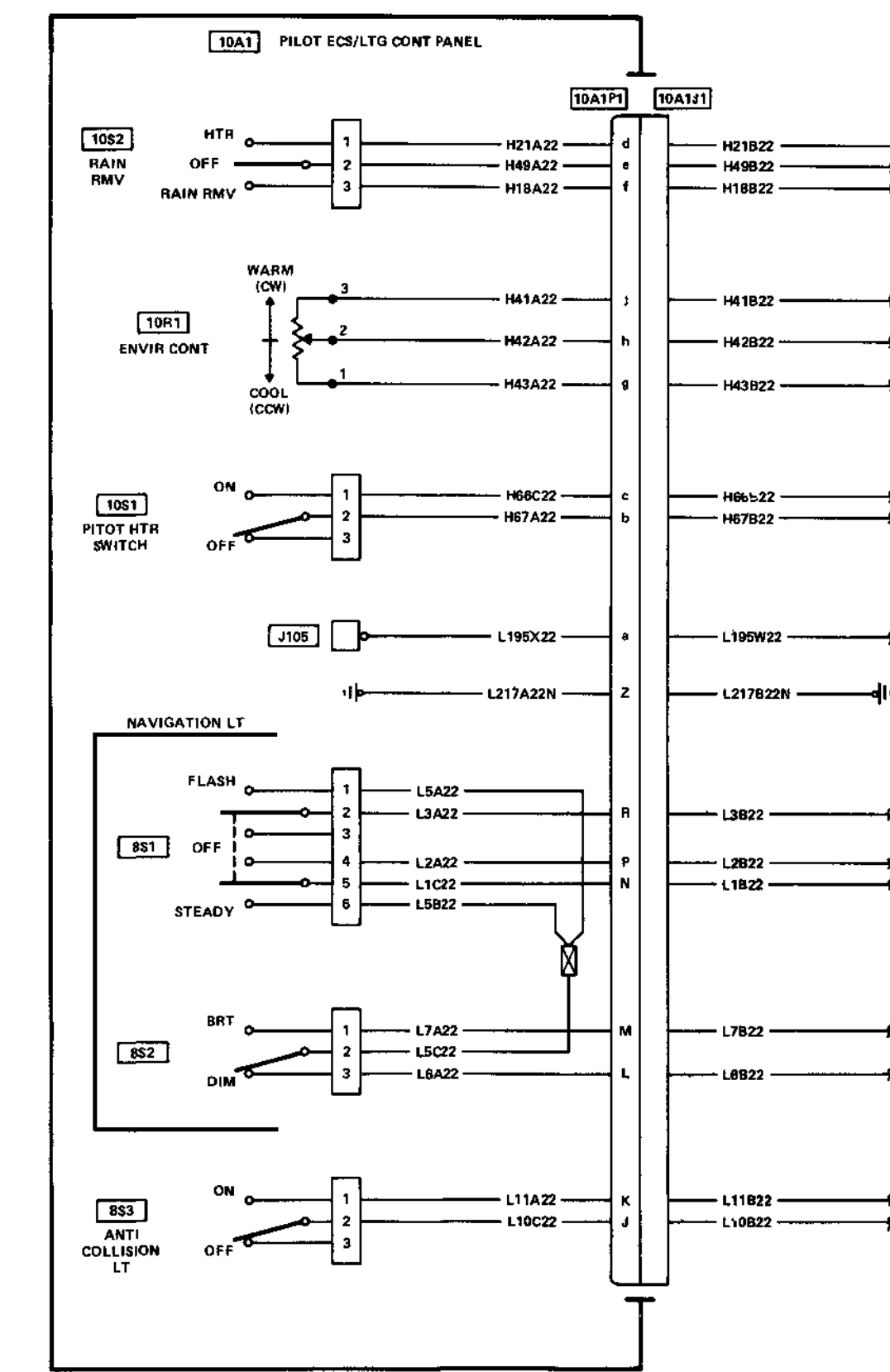
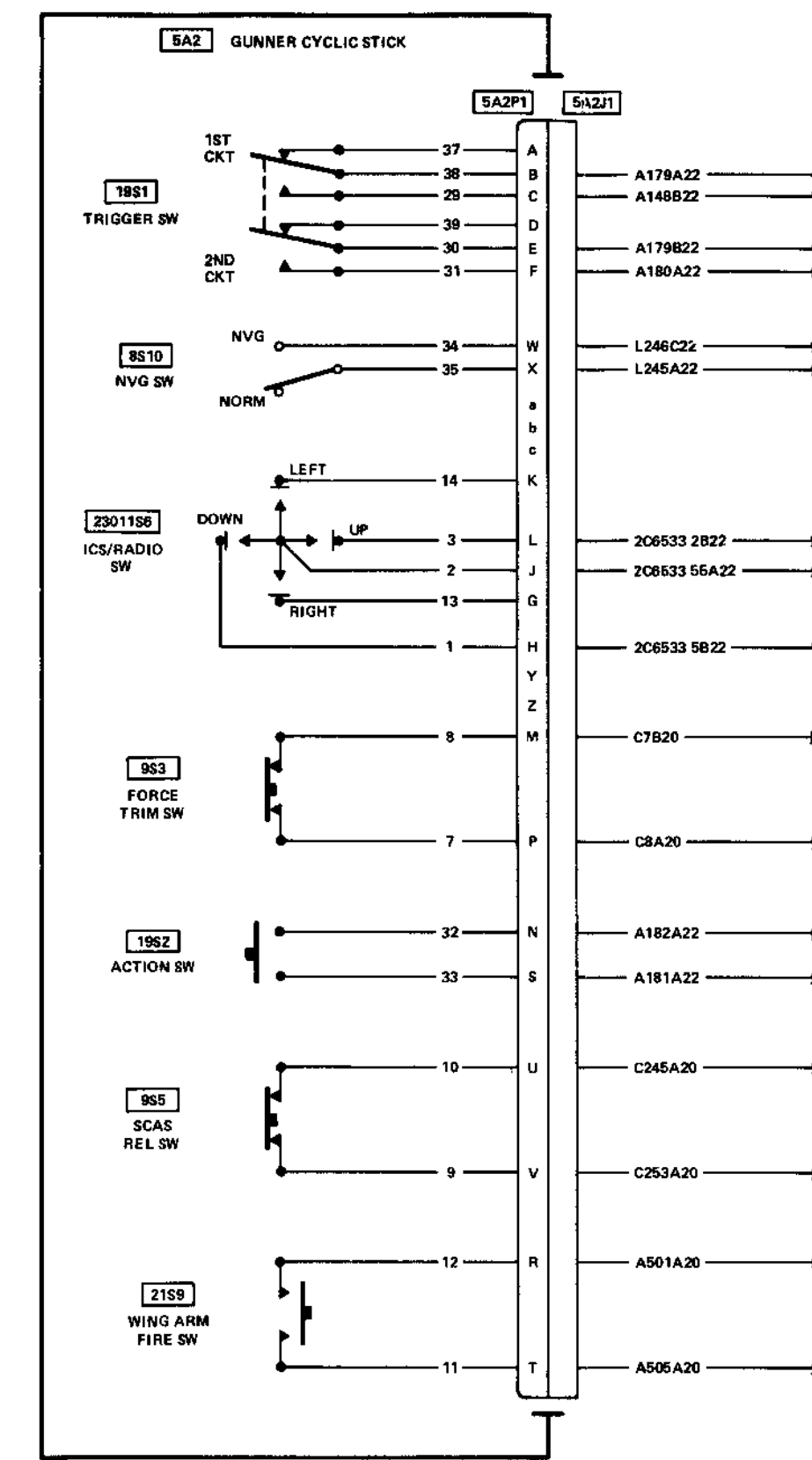
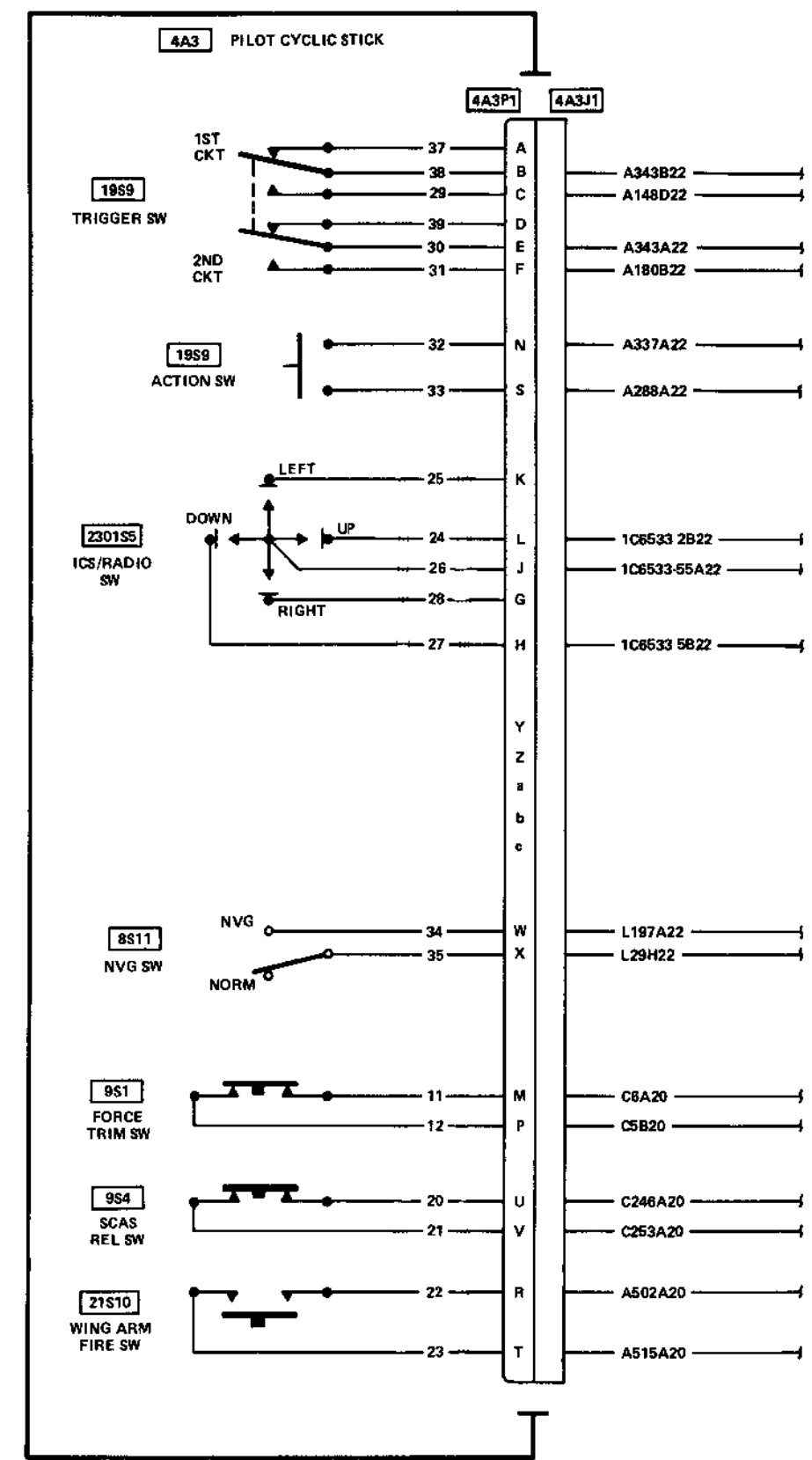
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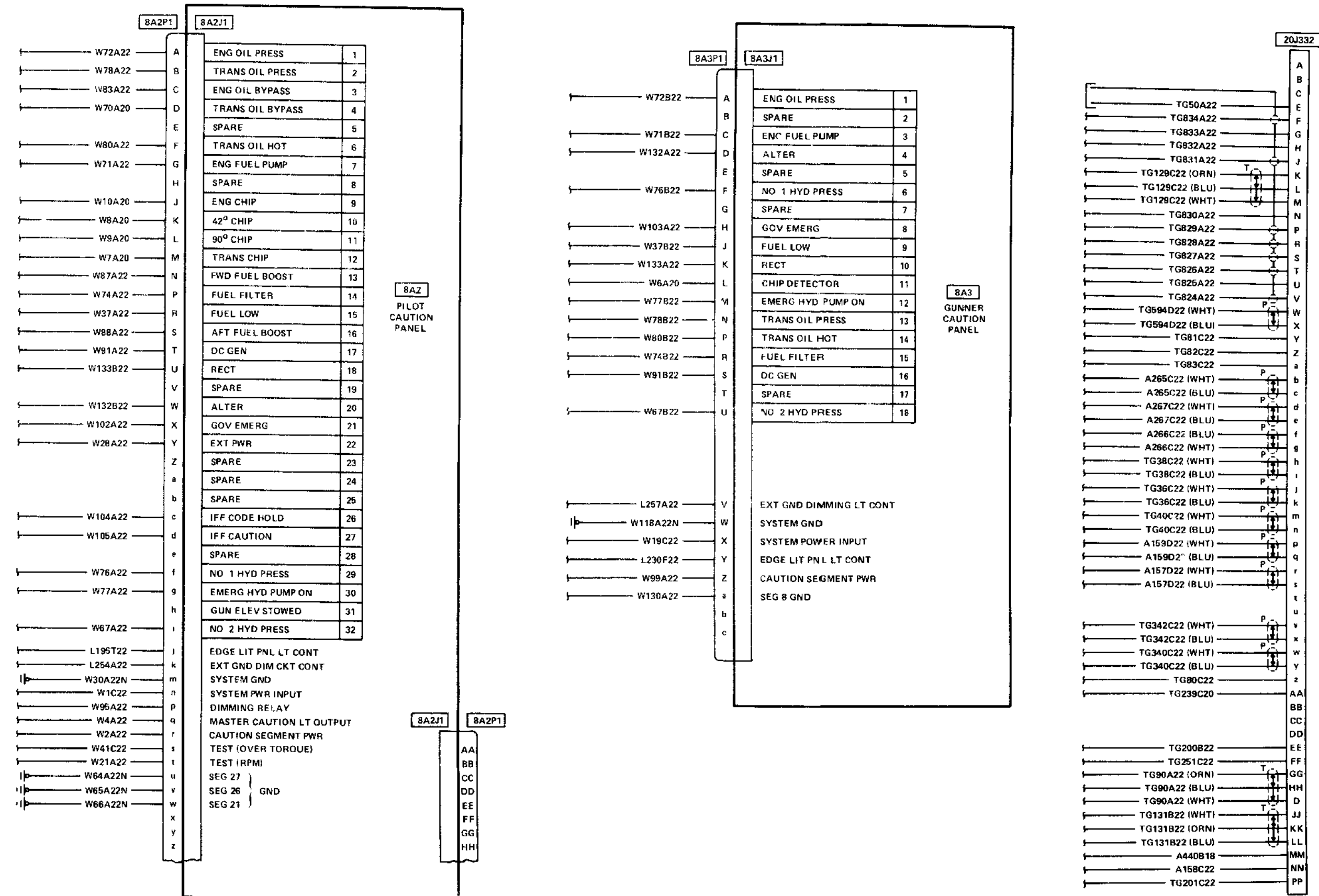
NOTE

CIRCUIT BREAKER IS SWITCH TYPE WITH OFF (OPEN) IN DOWN POSITION



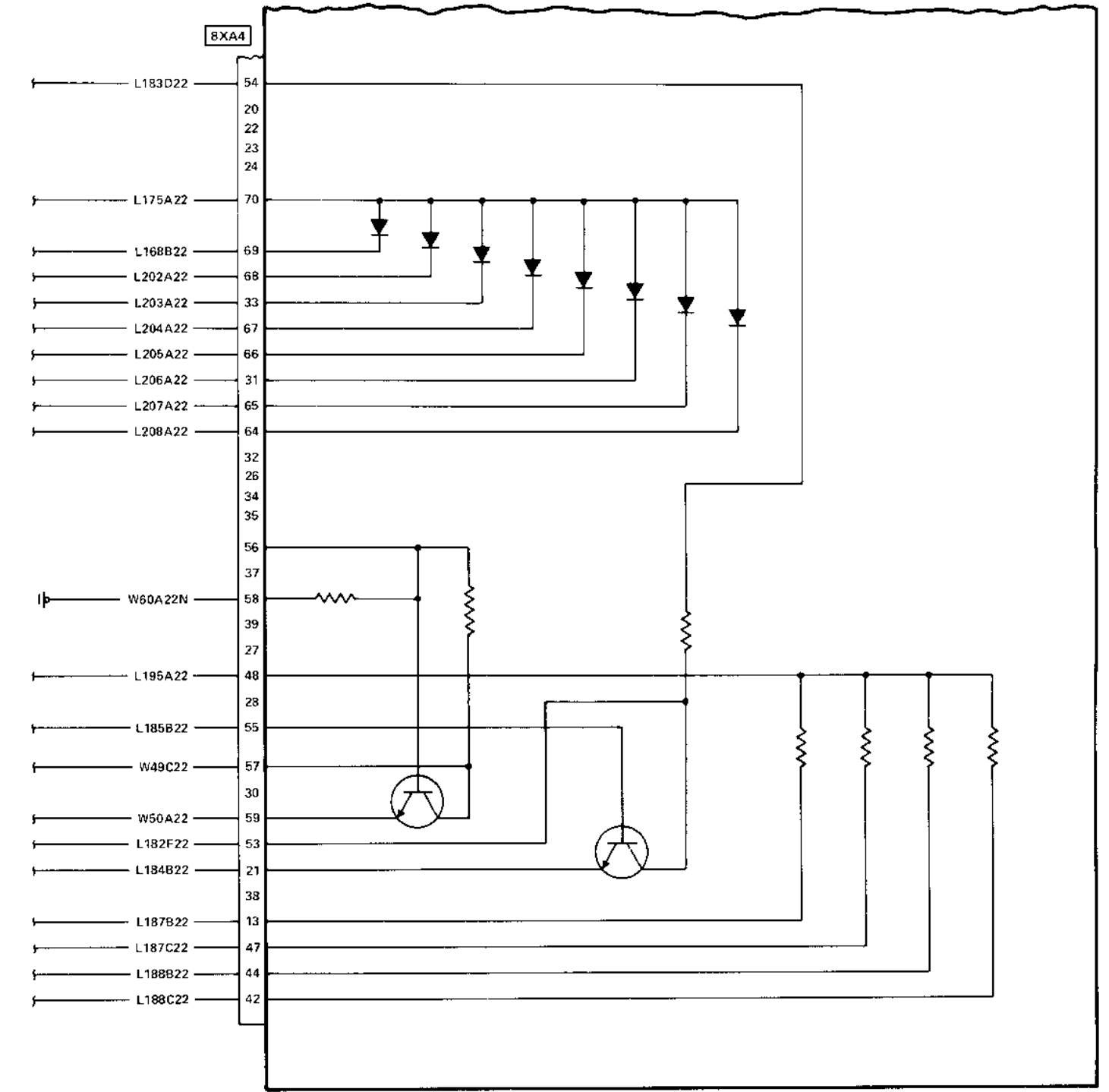
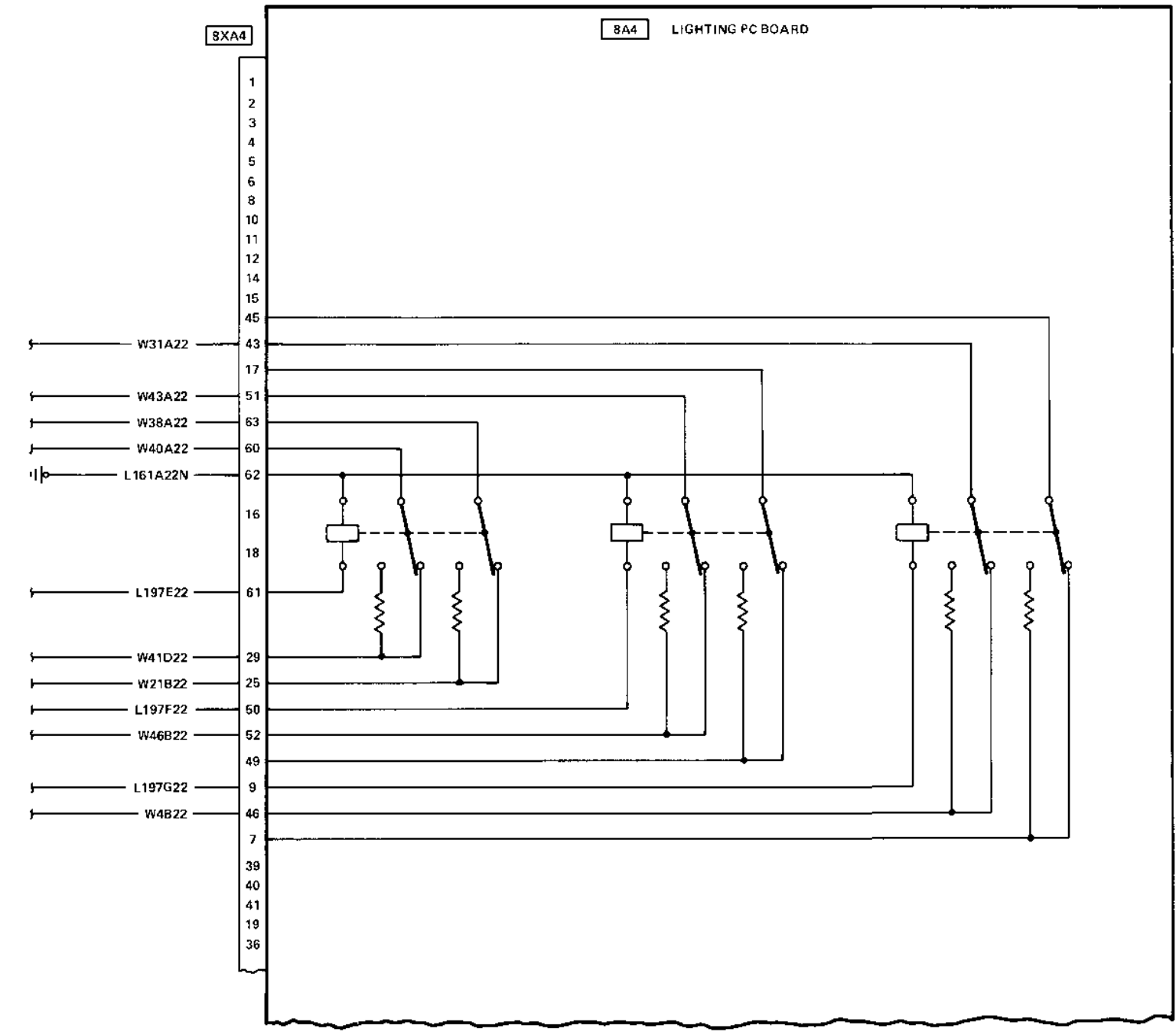
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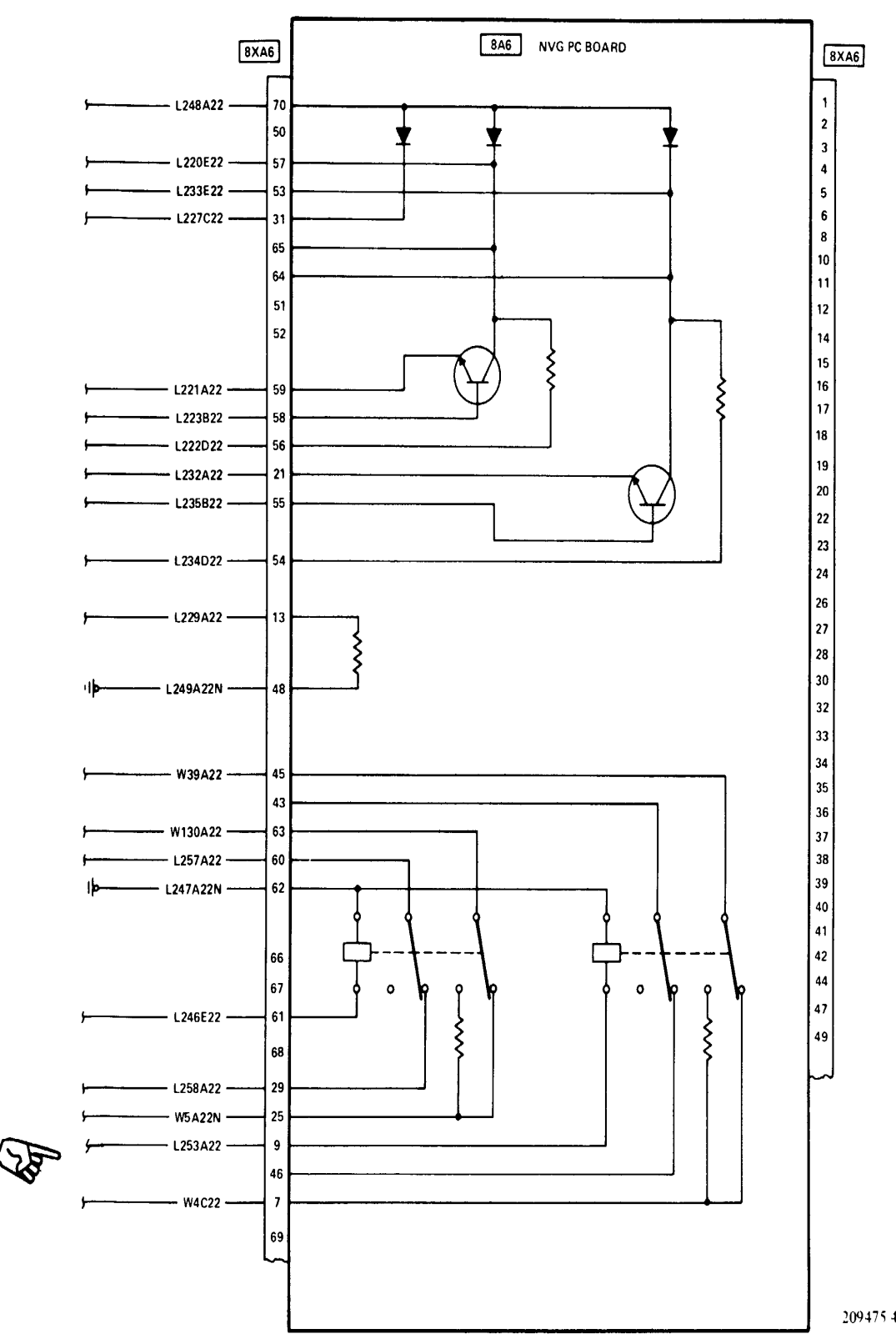
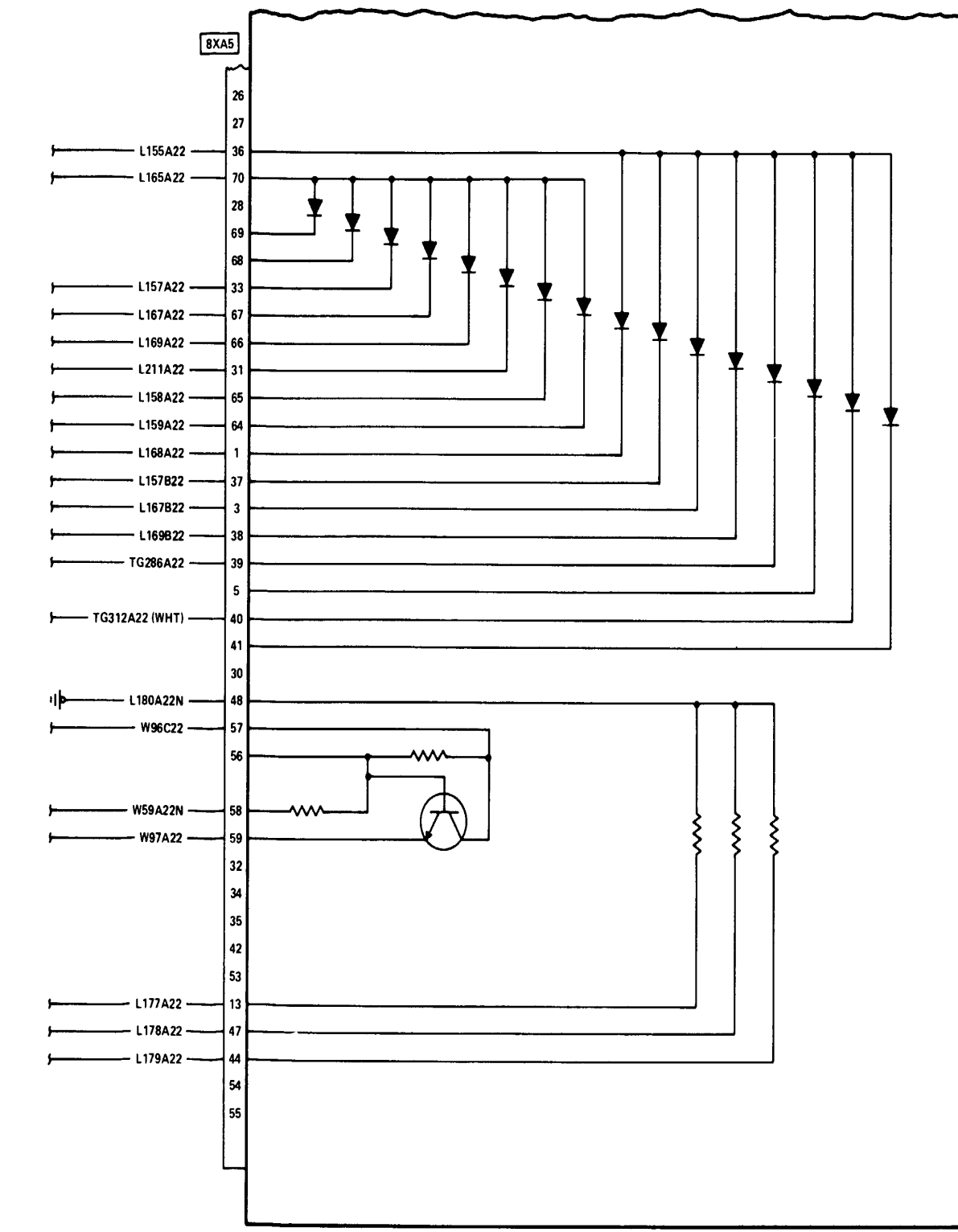
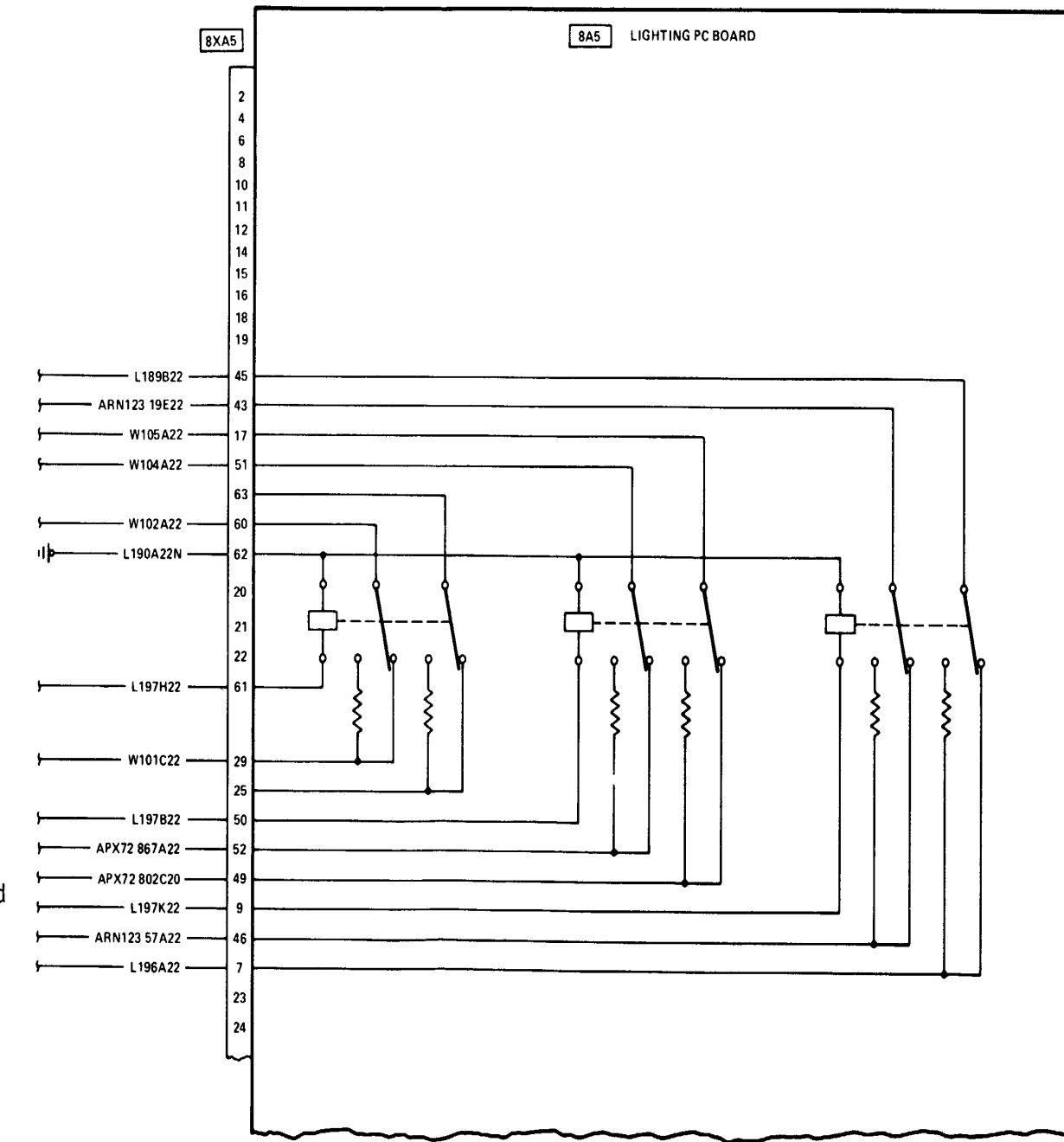


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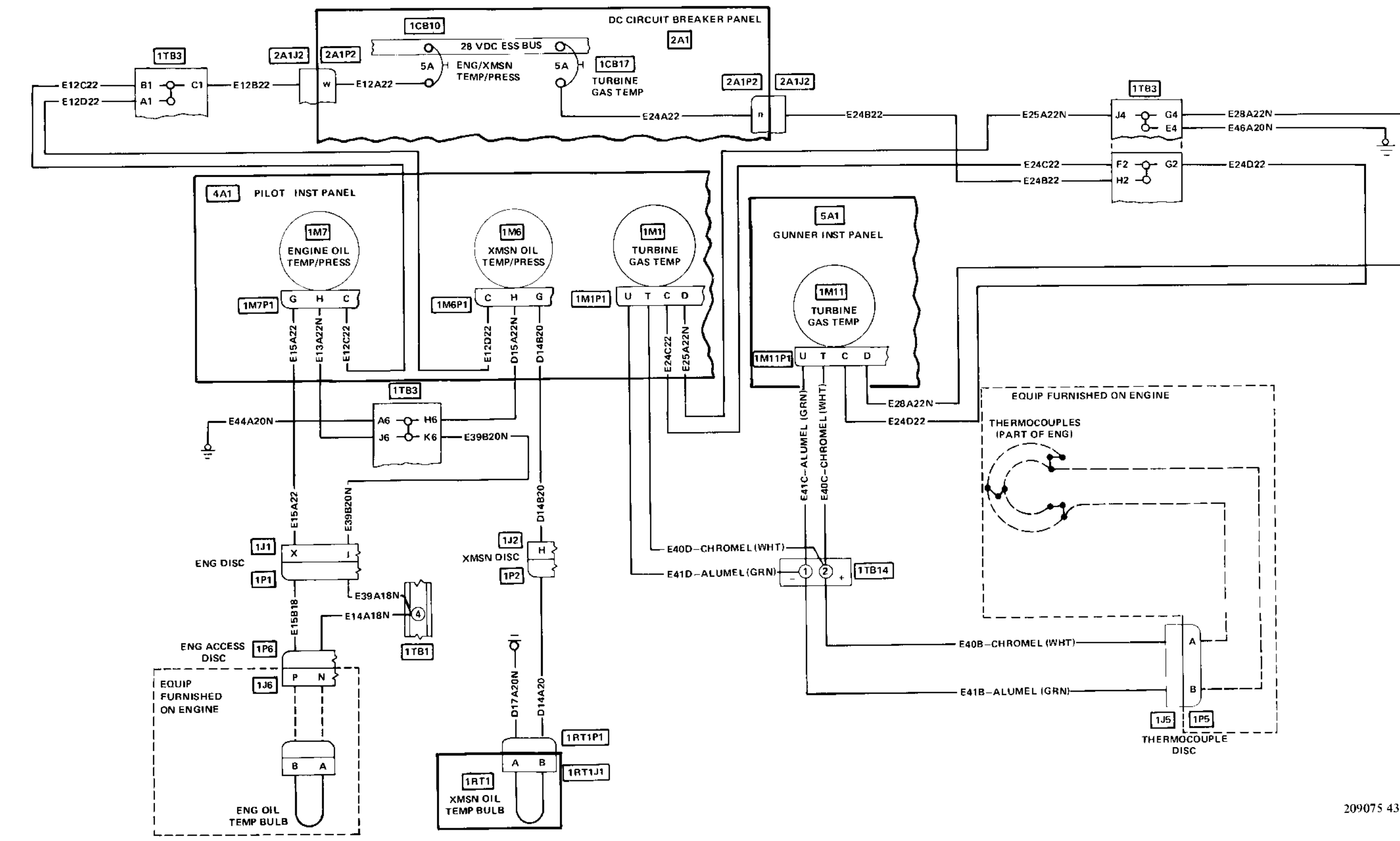
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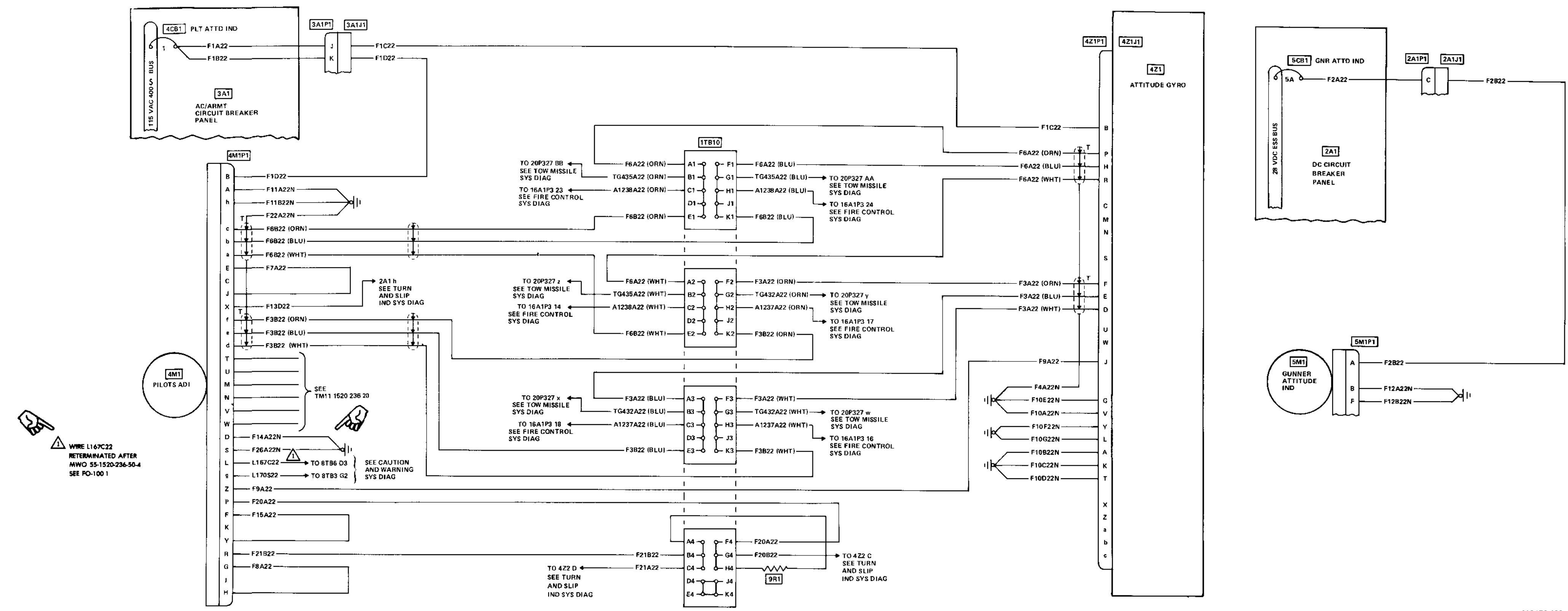


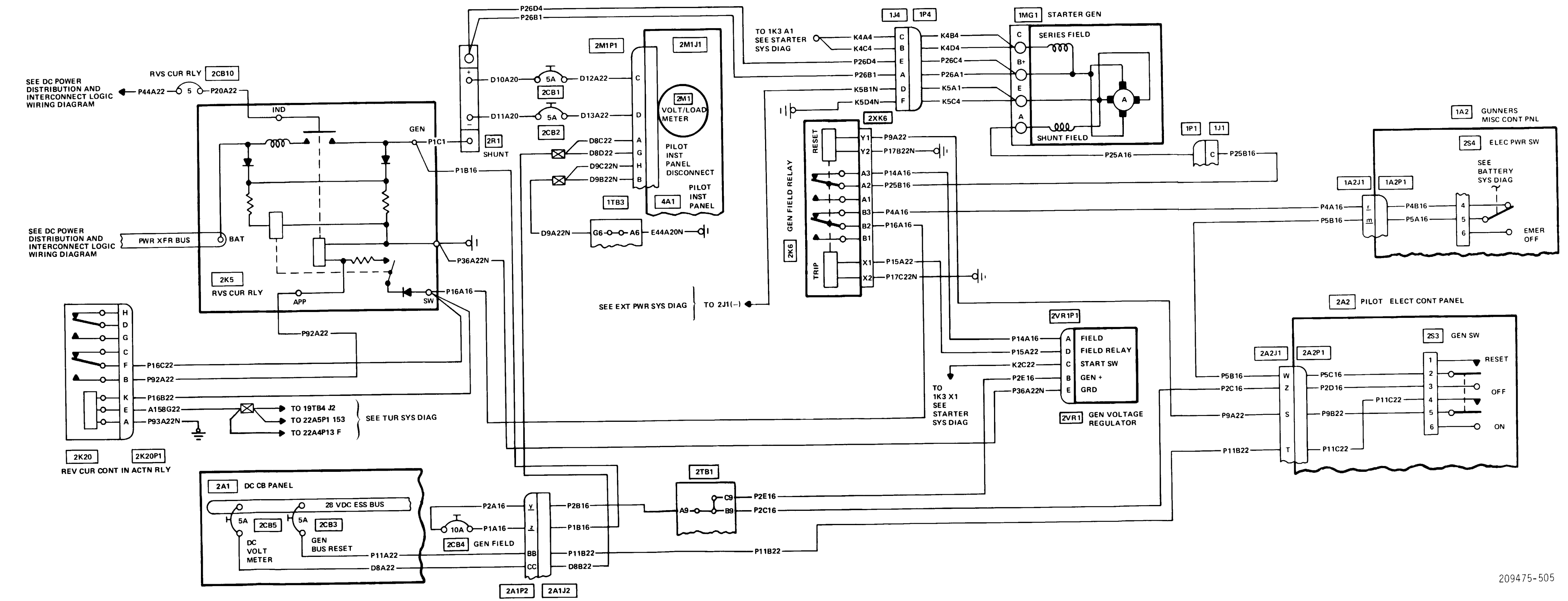
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 Where Sheet 10 is referenced see F0-89



F0-90 Electrical Equipment Component Replacement







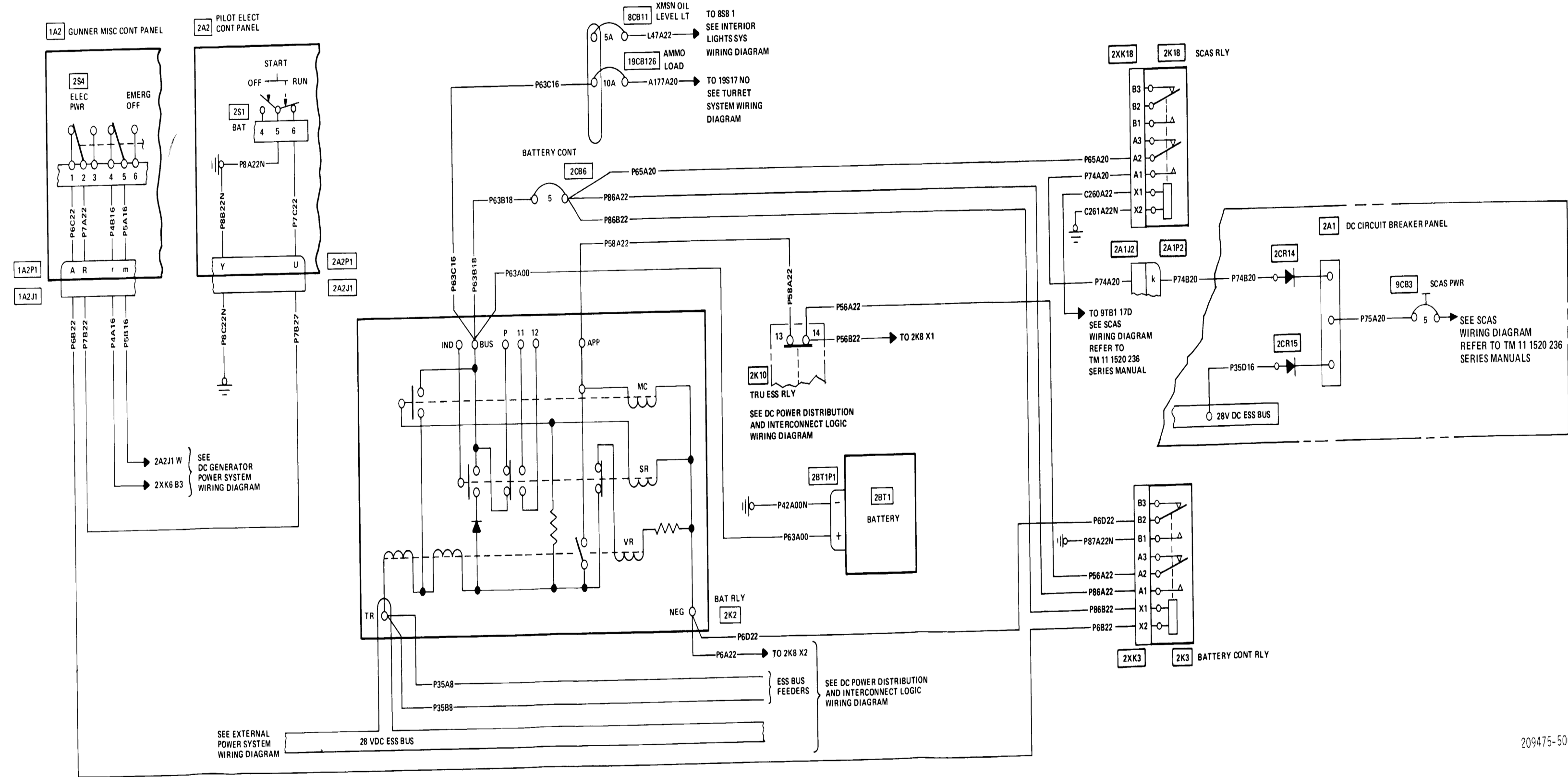
SEE DC POWER DISTRIBUTION AND INTERCONNECT LOGIC WIRING DIAGRAM

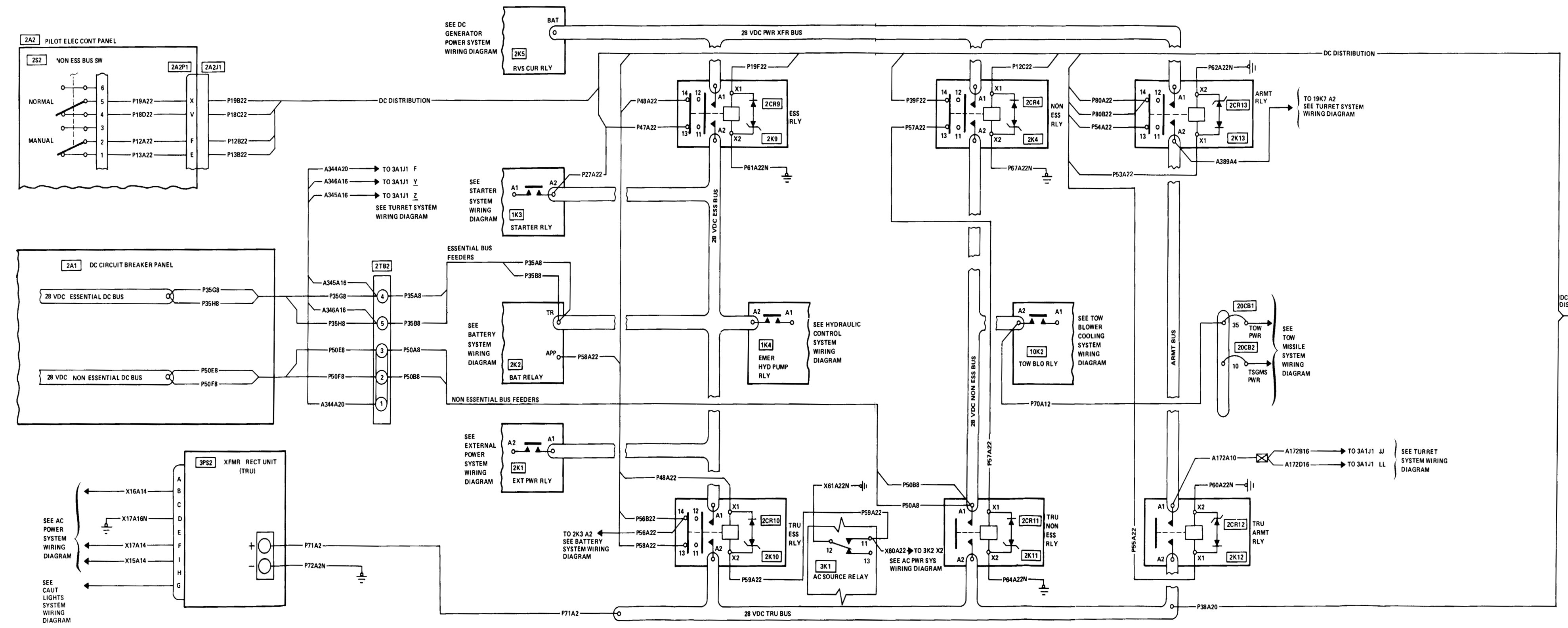
SEE DC POWER DISTRIBUTION AND INTERCONNECT LOGIC WIRING DIAGRAM

REV CUR CONT IN ACTN RLY

SEE EXT PWR SYS DIAG

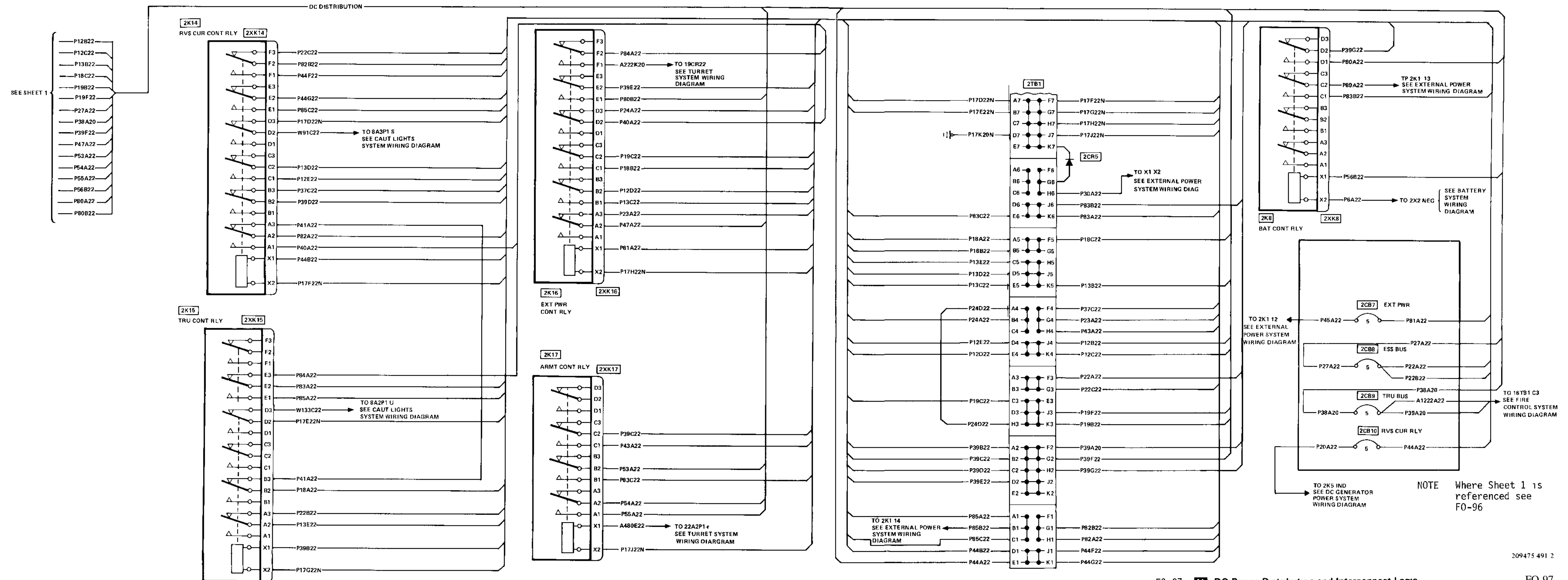
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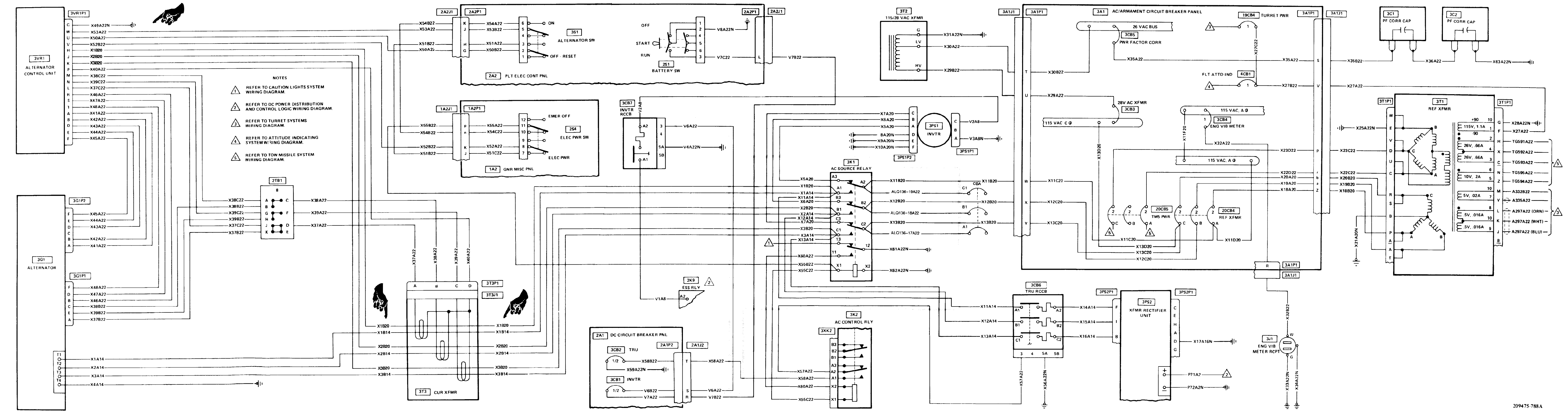




NOTE Where Sheet 2 is referenced see FO-97

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- P12C22
- P13B22
- P13C22
- P18C22
- P19F22
- P19G22
- P27A22
- P38A20
- P39F22
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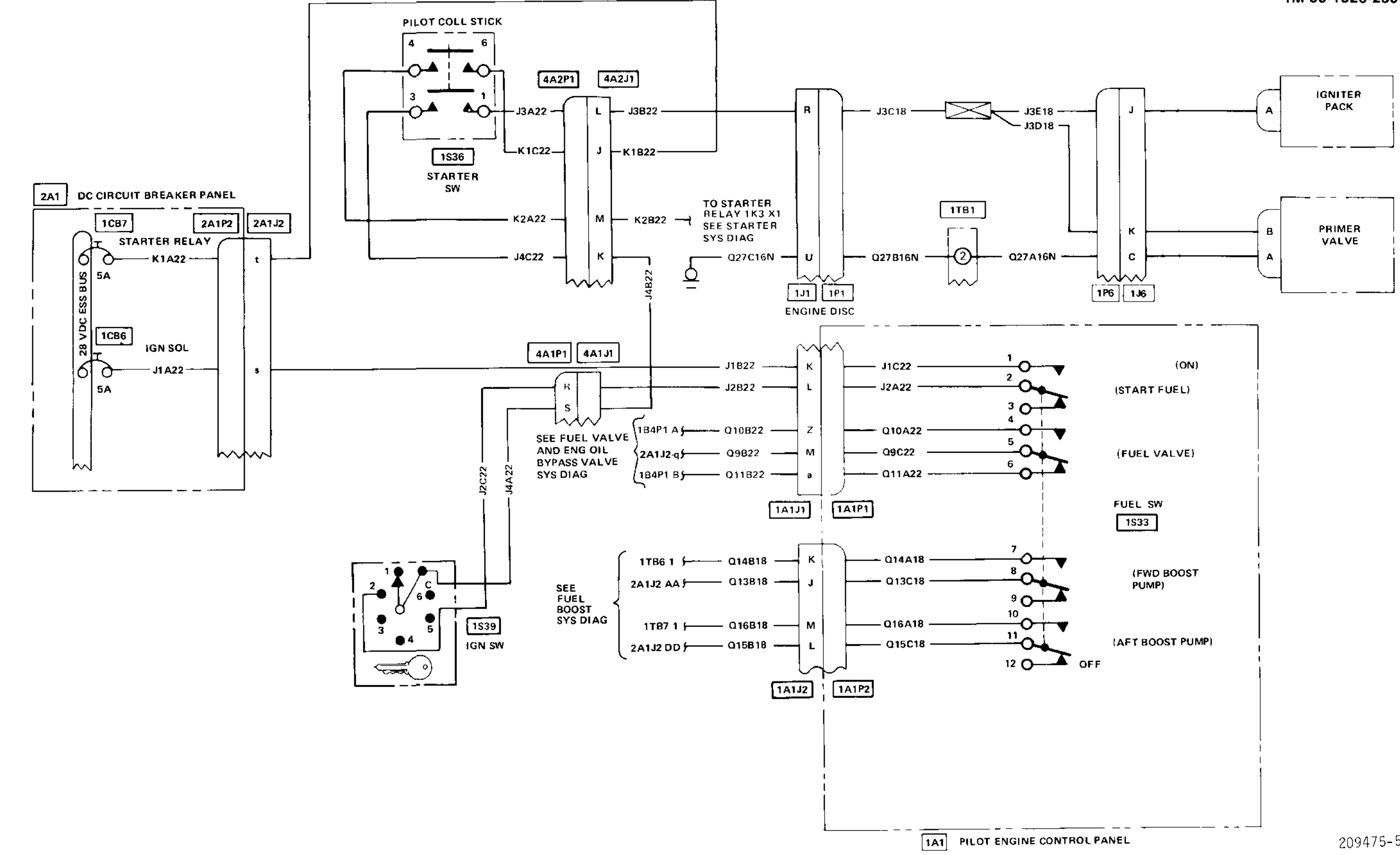


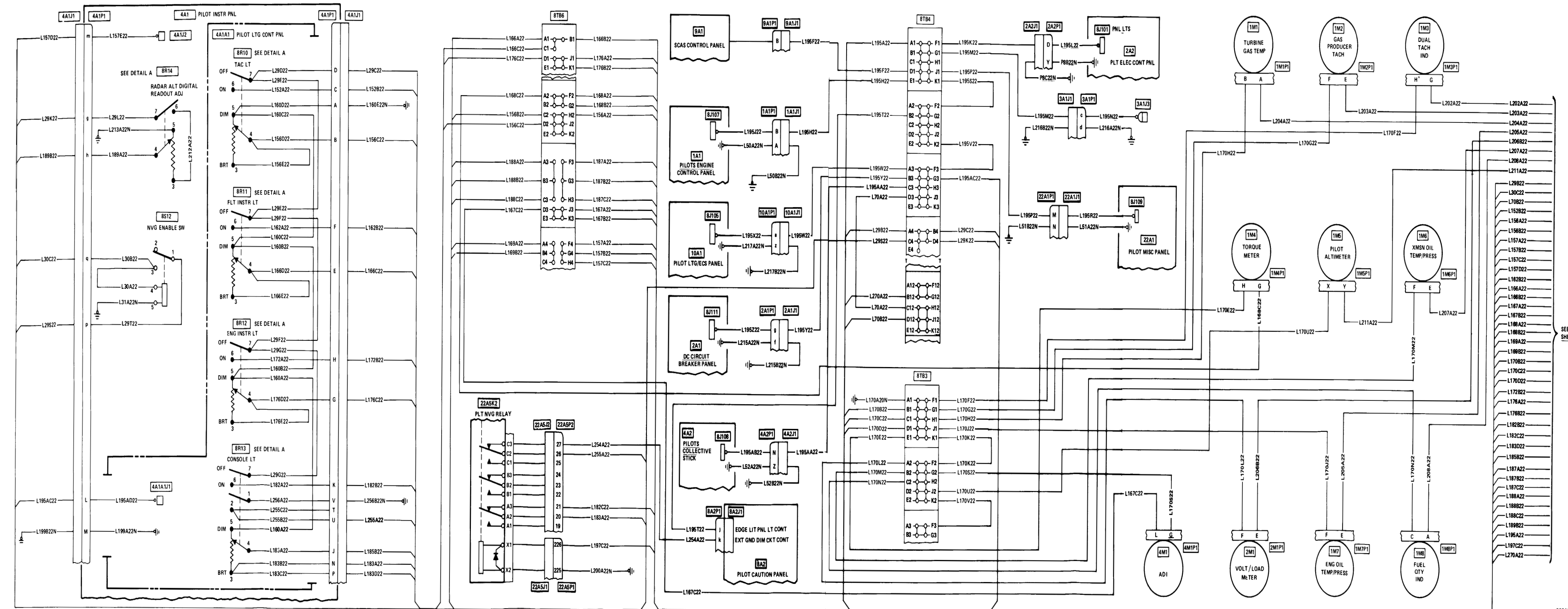


- NOTES
- 1 REFER TO CAUTION LIGHTS SYSTEM WIRING DIAGRAM
 - 2 REFER TO DC POWER DISTRIBUTION AND CONTROL LOGIC WIRING DIAGRAM
 - 3 REFER TO TURRET SYSTEMS WIRING DIAGRAM
 - 4 REFER TO ATTITUDE INDICATING SYSTEM WIRING DIAGRAM
 - 5 REFER TO TOW MISSILE SYSTEM WIRING DIAGRAM

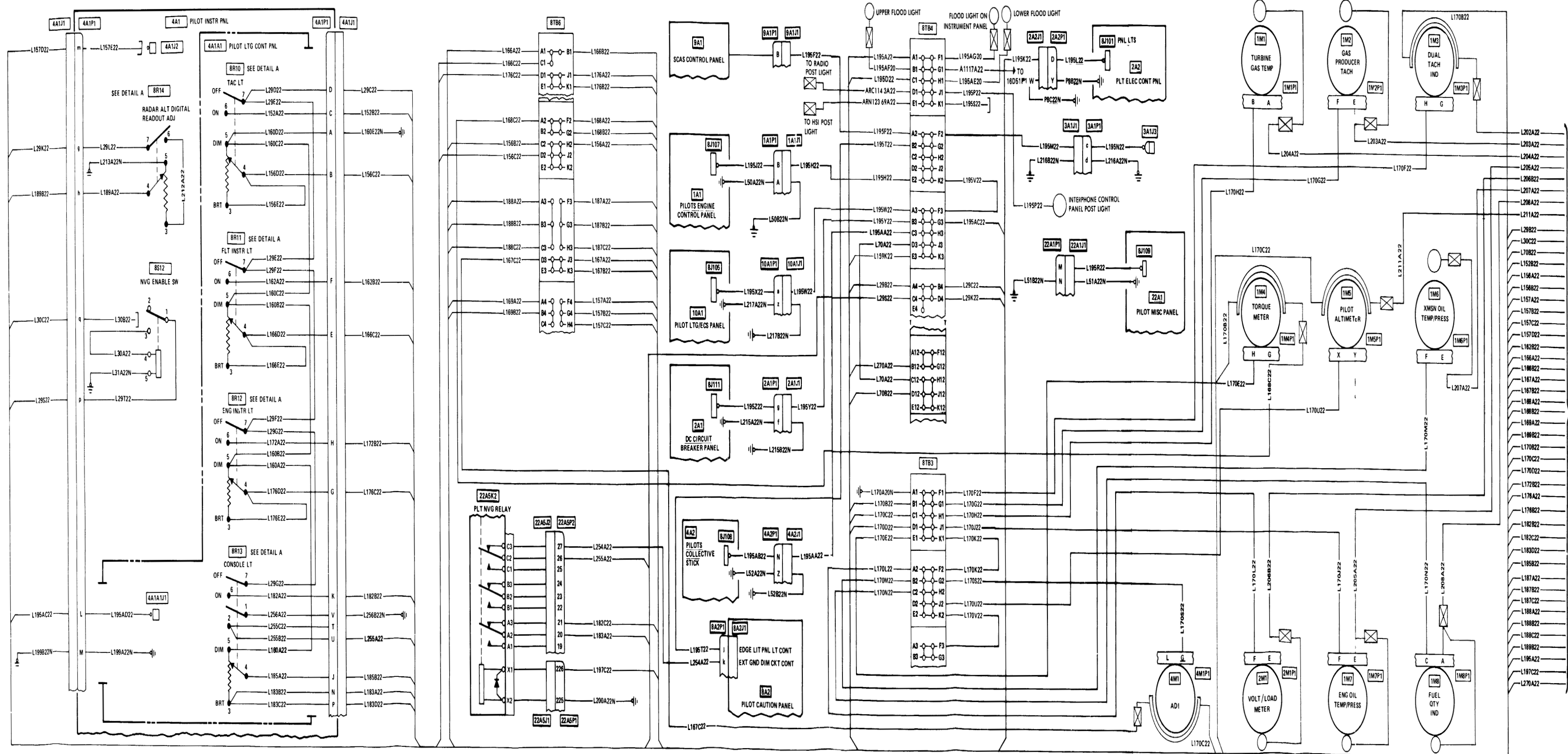
FO-98 AC Power system

209475-788A

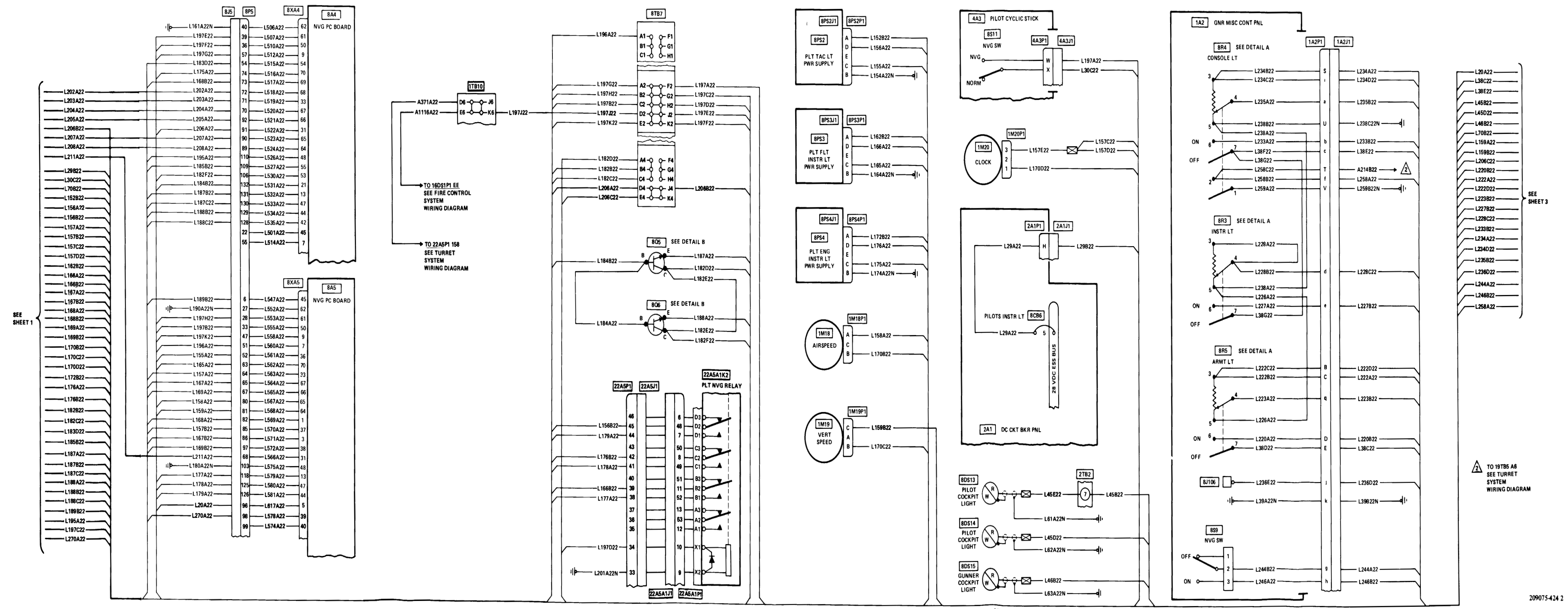




NOTE Where Sheet 2 is referenced see FO-101
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NOTE Where Sheet 2 is referenced see FO-101 1
 Where Sheet 3 is referenced see FO-102 1.
 Where Sheet 4 is referenced see FO-103

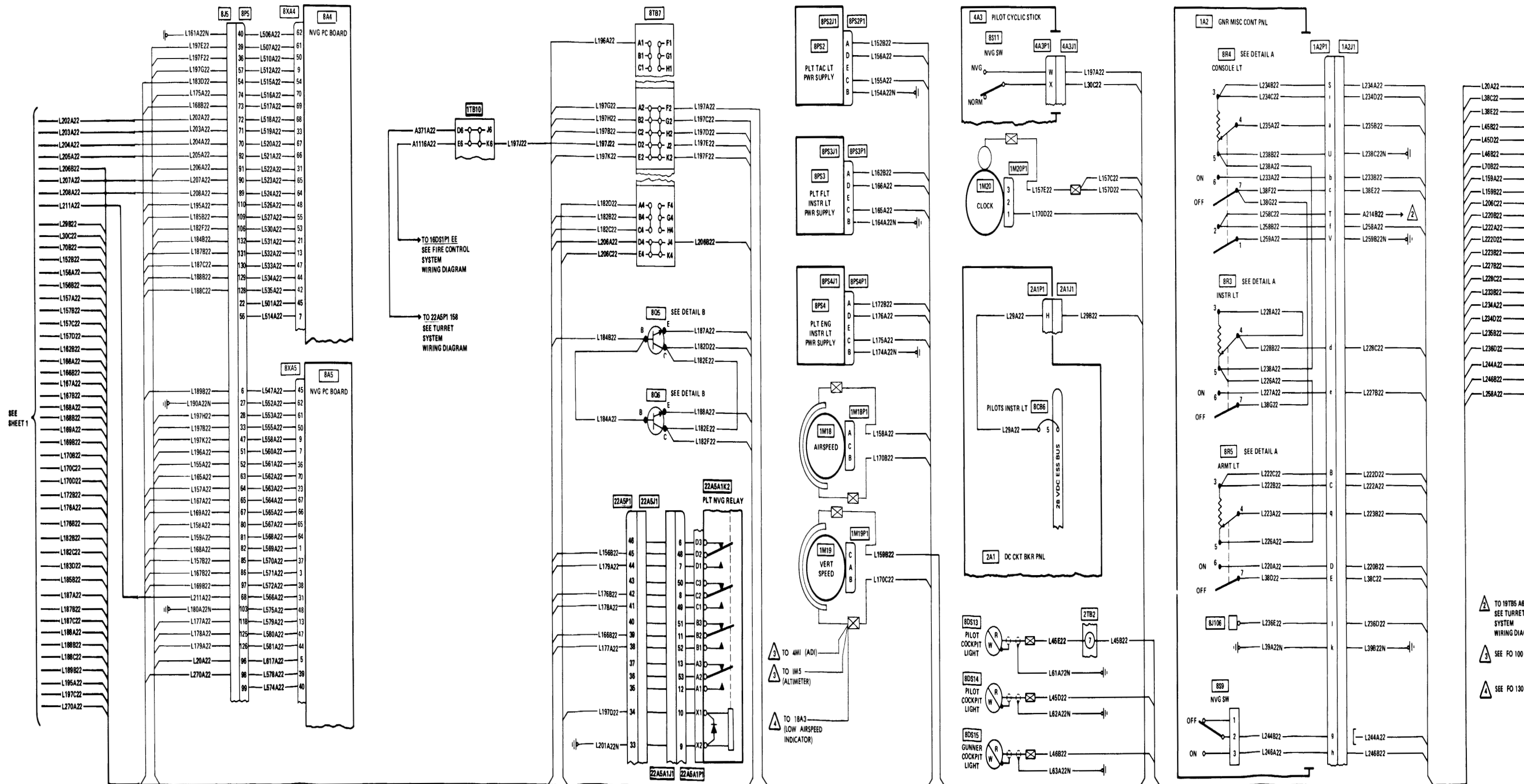


SEE SHEET 1

TO 16D51P1 EE
SEE FIRE CONTROL
SYSTEM
WIRING DIAGRAM

TO 22AS1P1 158
SEE TURRET
SYSTEM
WIRING DIAGRAM

NOTE Where Sheet 1 is referenced see FO-100
Where Sheet 3 is referenced see FO-102
Where Sheet 4 is referenced see FO-103.



SEE SHEET 1

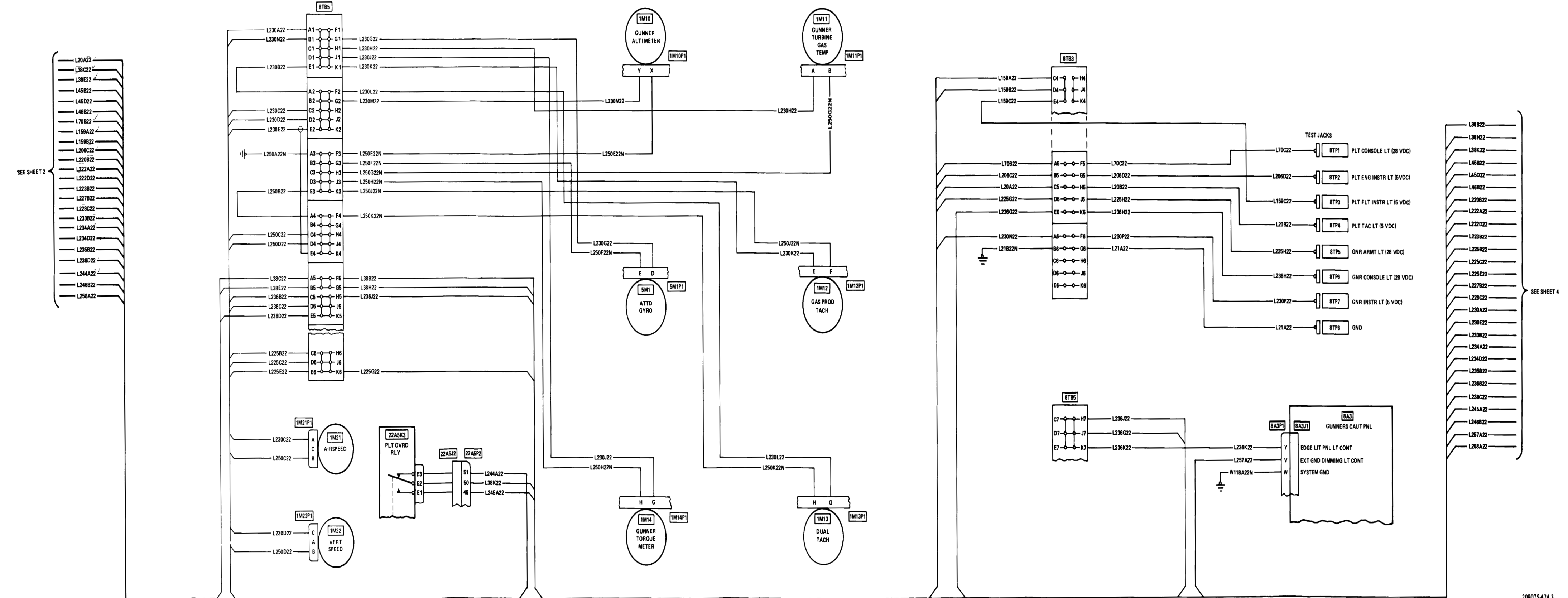
SEE SHEET 3

NOTE Where Sheet 1 is referenced see FO-100 1
 Where Sheet 3 is referenced see FO-102 1
 Where Sheet 4 is referenced see FO-103.

FO-101 1 Interior Lights System (After WMO 55-1520-236-50-4)

Change 5 FO-101.1

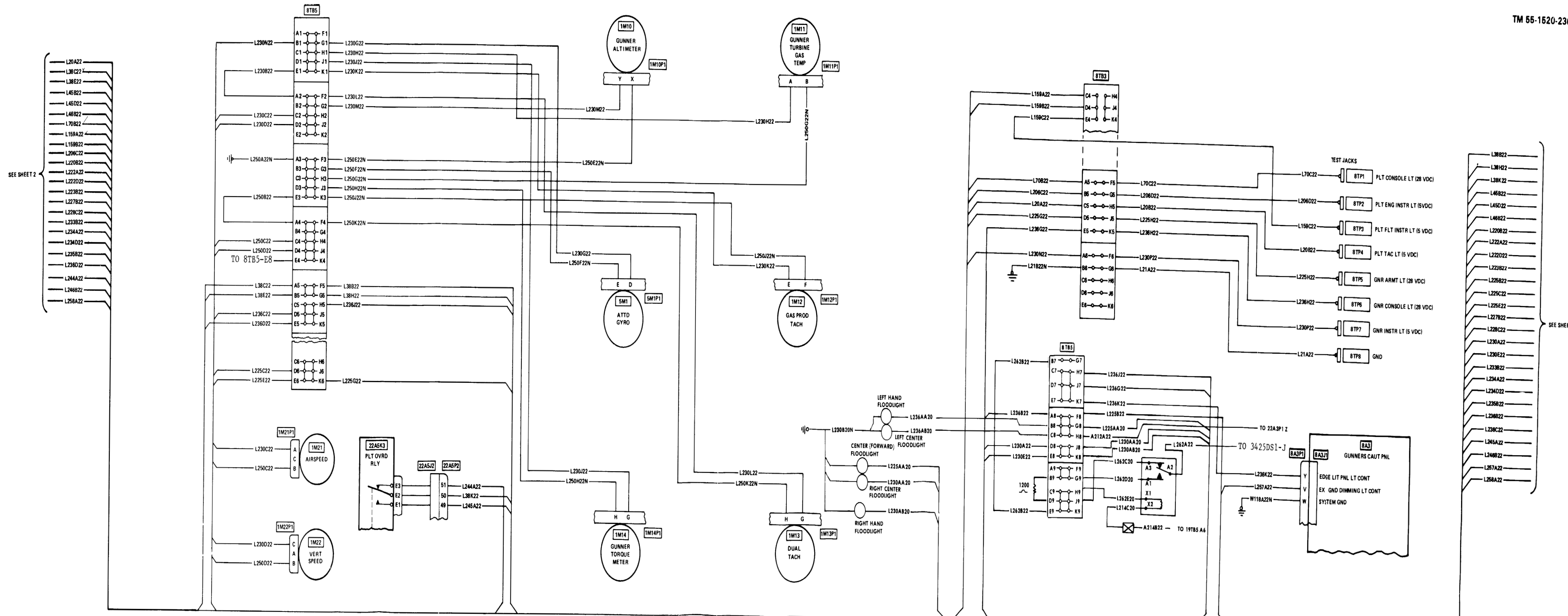
209075434 2



SEE SHEET 2

SEE SHEET 4

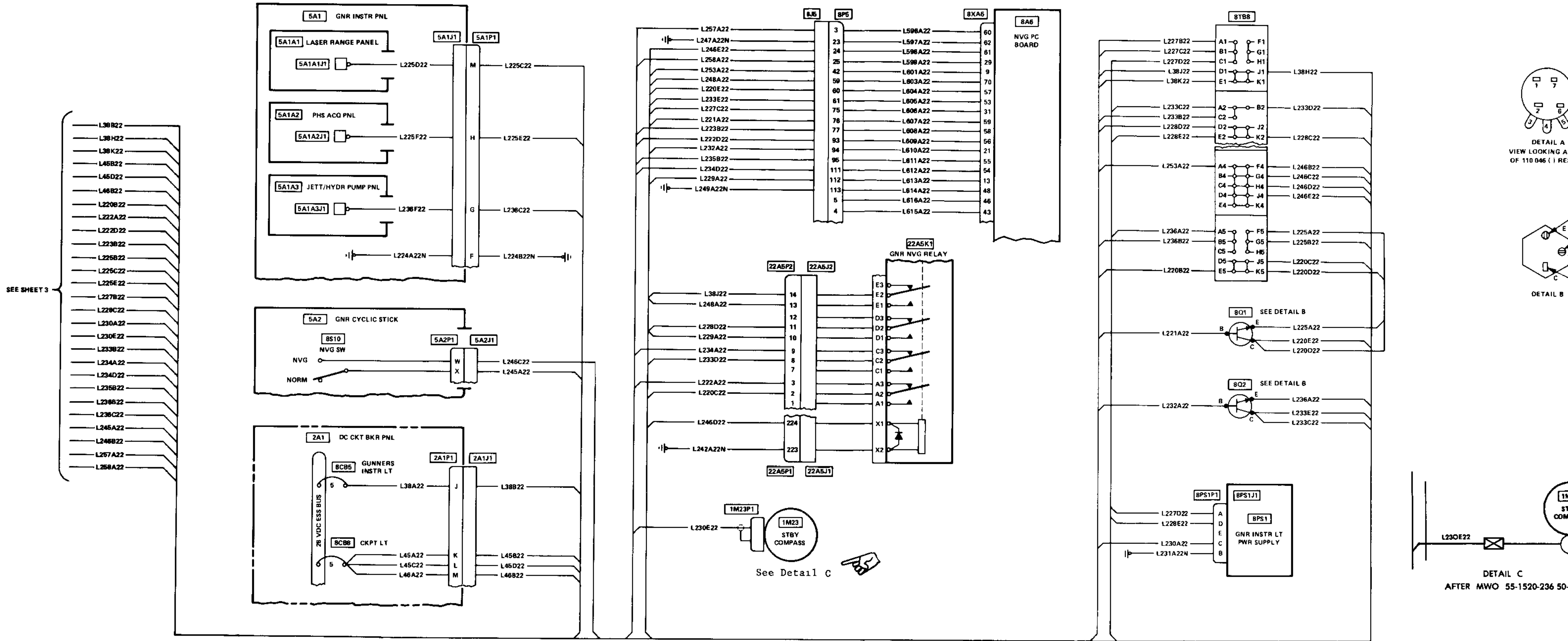
NOTE Where Sheet 1 is referenced see FO-100.
 Where Sheet 2 is referenced see FO-101
 Where Sheet 4 is referenced see FO-103



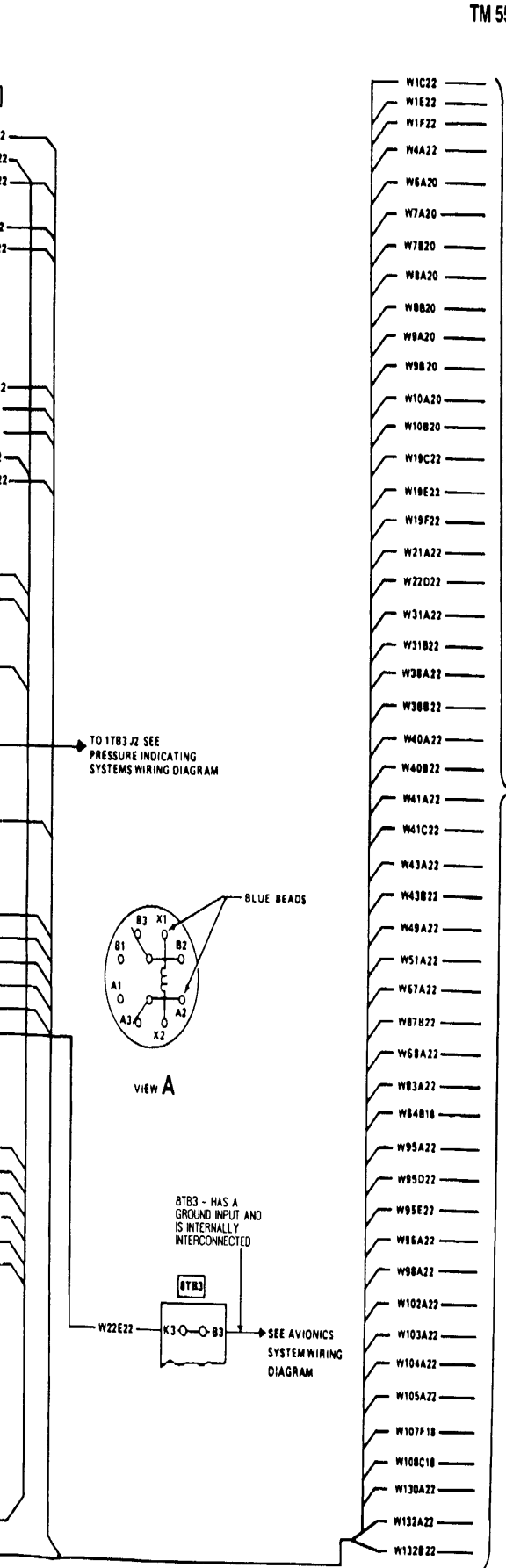
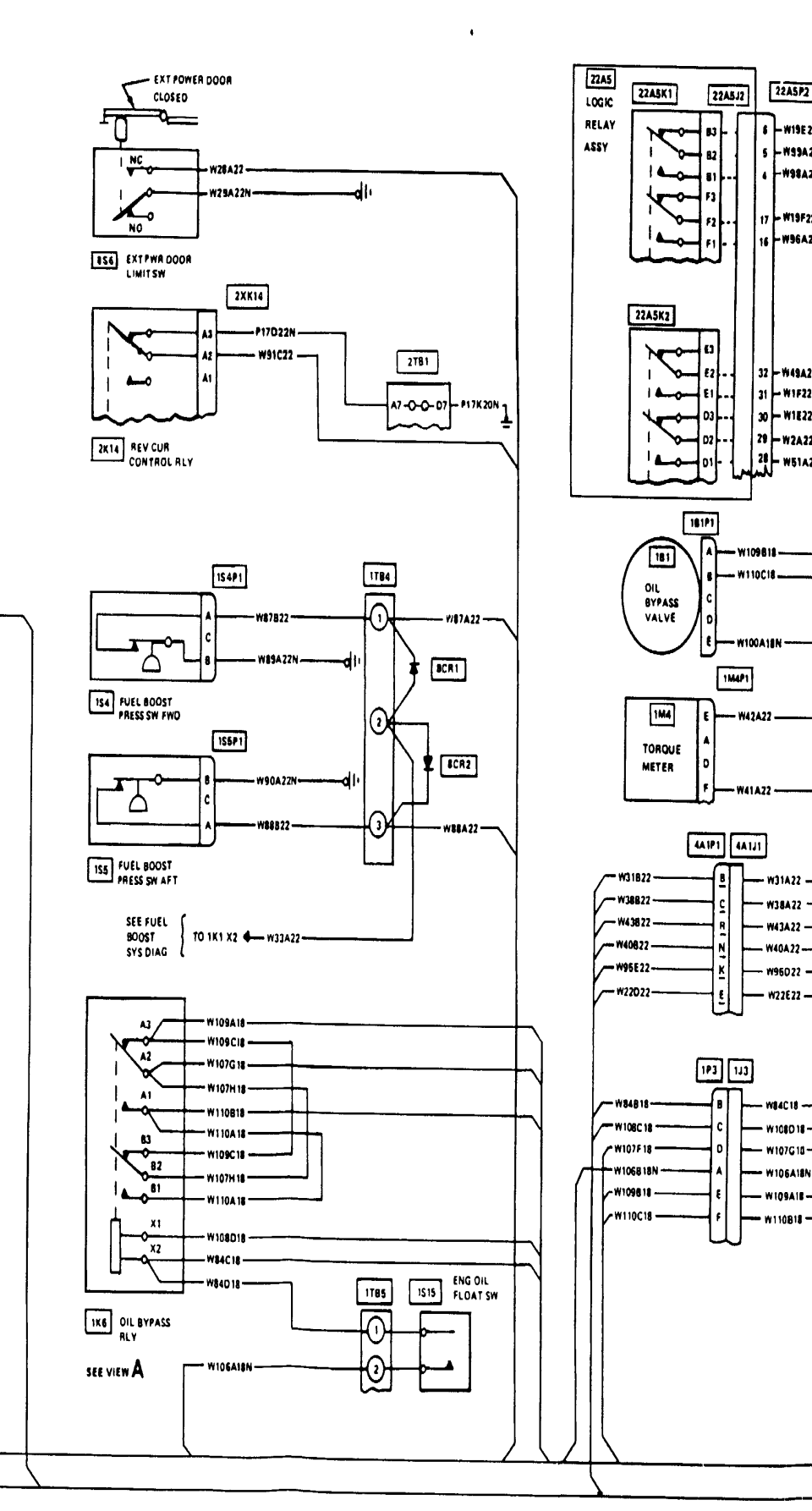
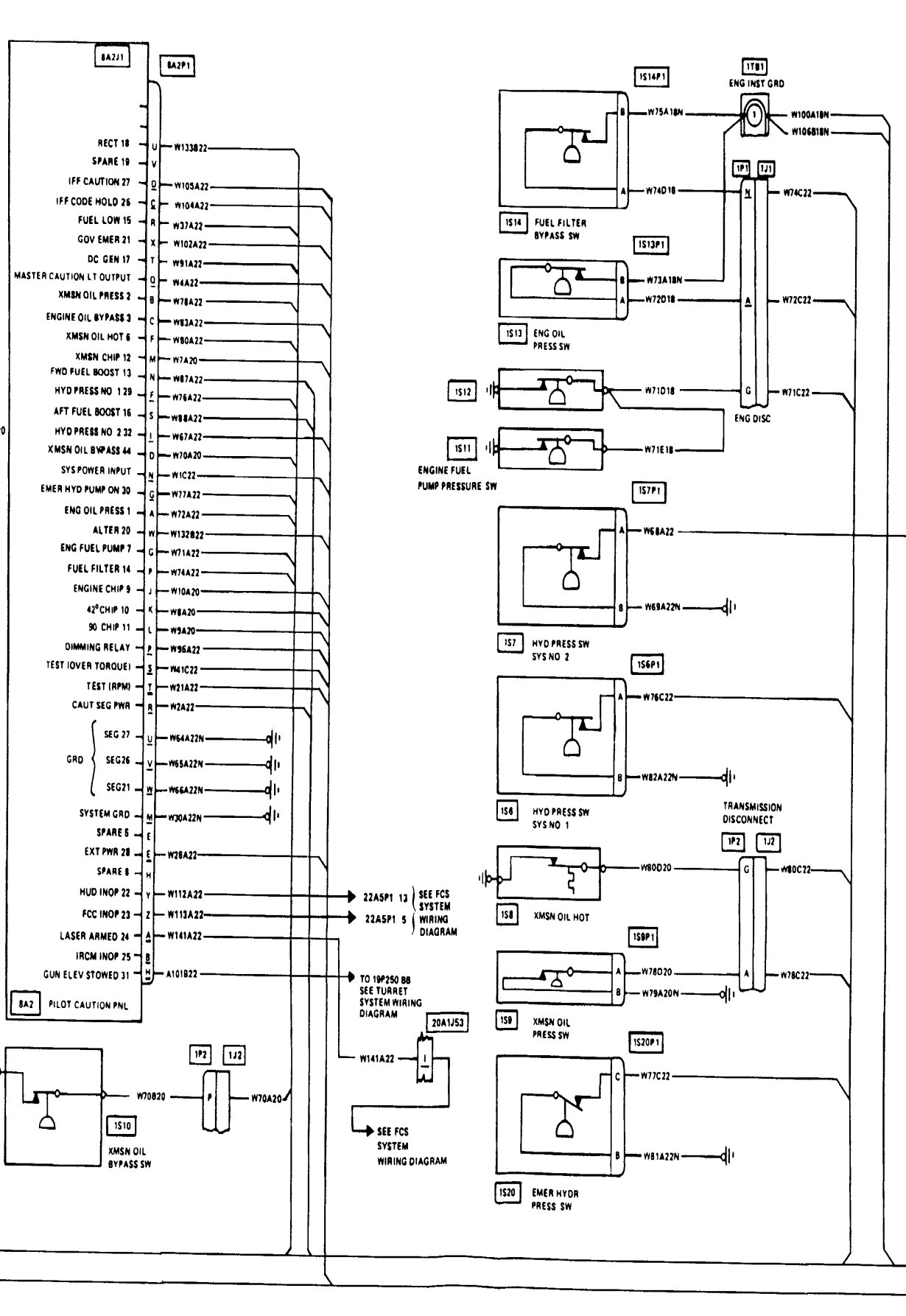
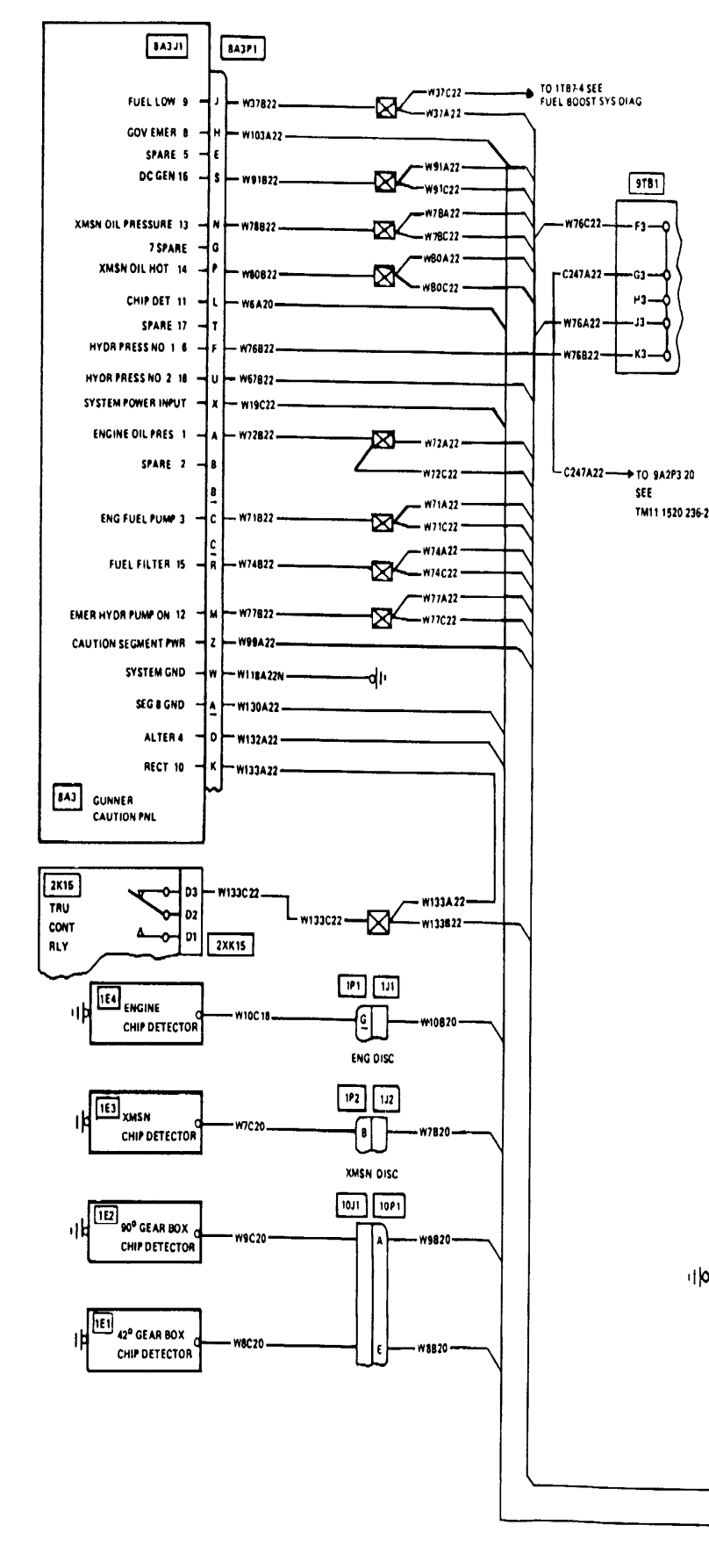
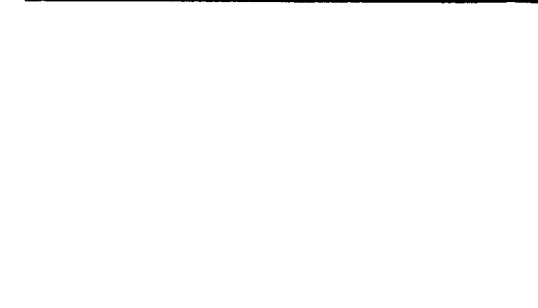
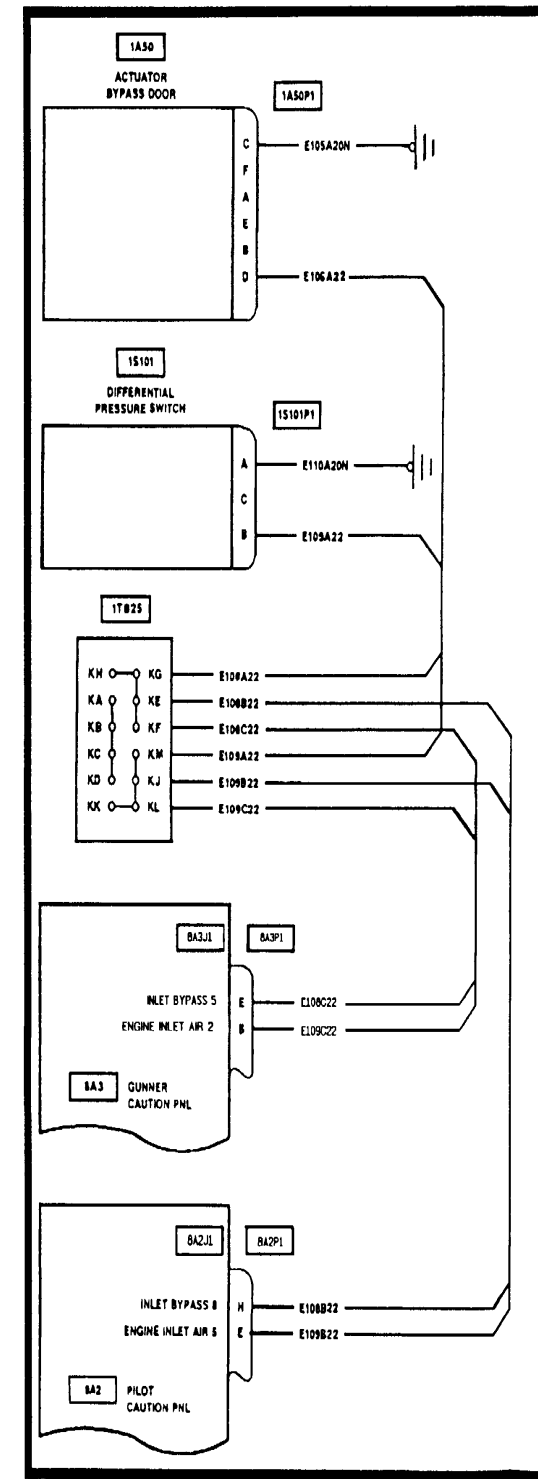
SEE SHEET 2

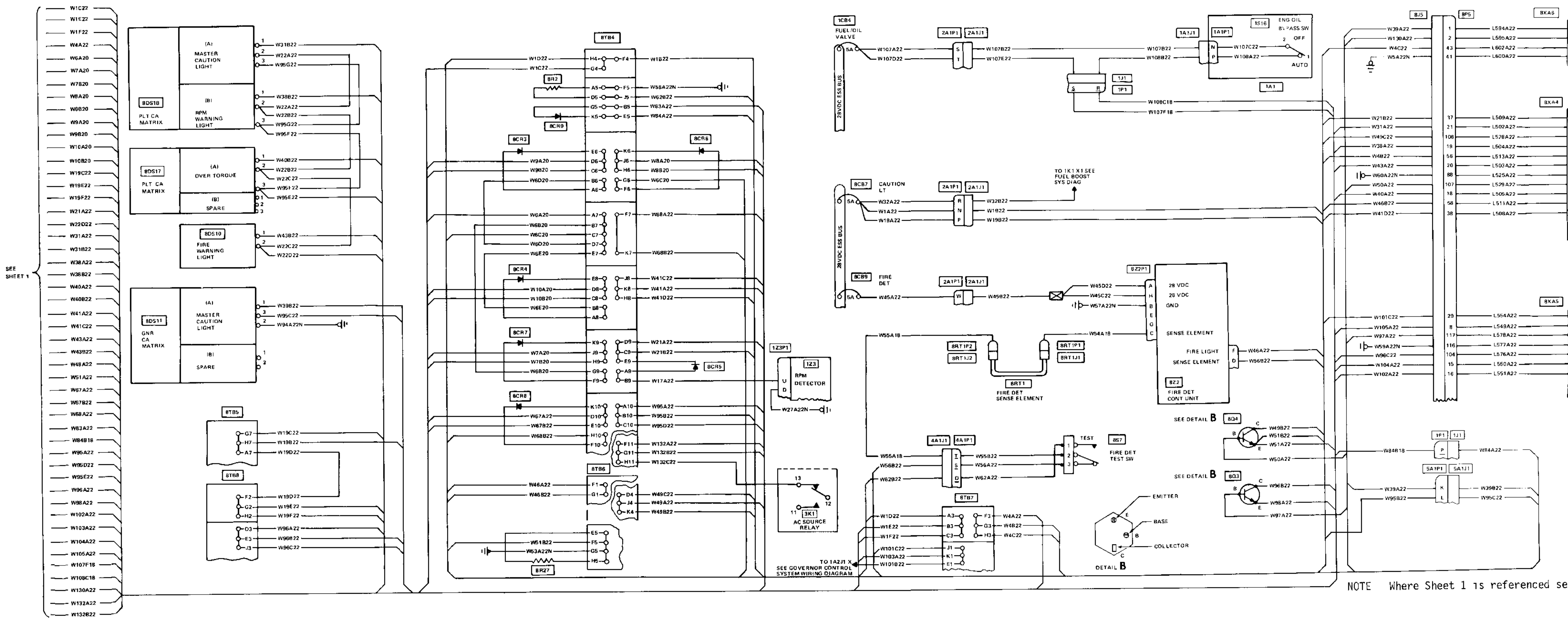
SEE SHEET 4

NOTE Where Sheet 1 is referenced see FO-100 1
 Where Sheet 2 is referenced see FO-101 1
 Where Sheet 4 is referenced see FO-103



NOTE Where Sheet 1 is referenced see FO-100
 Where Sheet 2 is referenced see FO-101
 Where Sheet 3 is referenced see FO-102

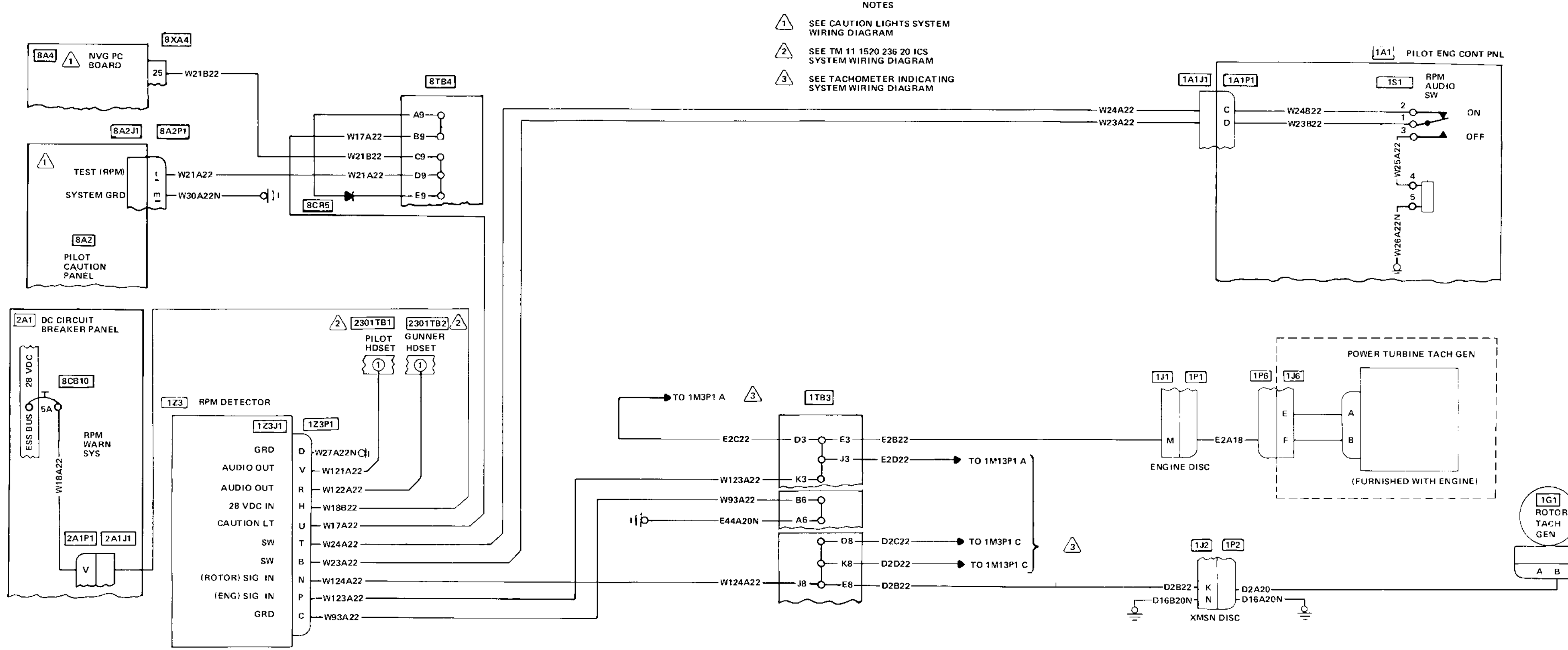




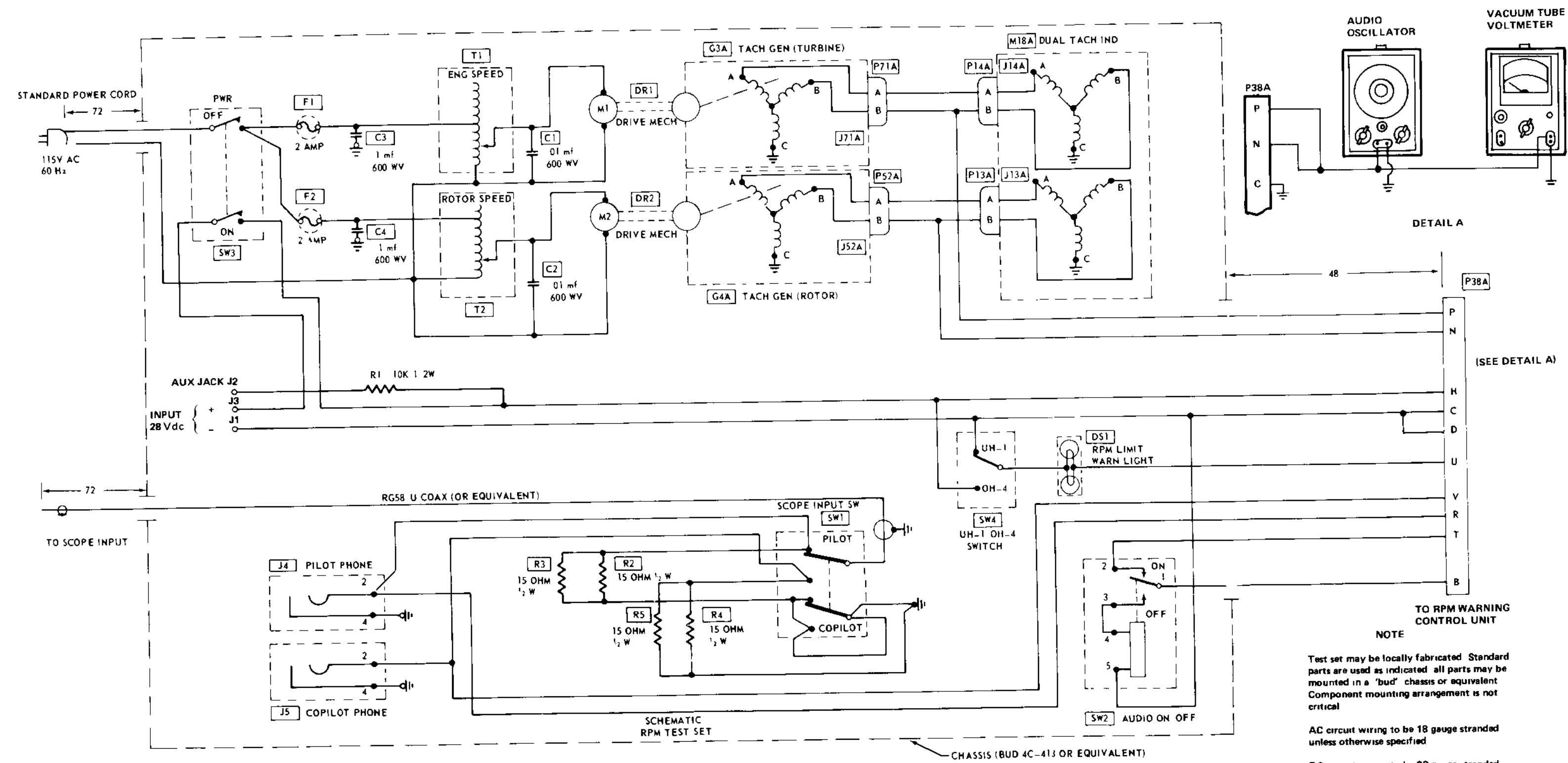
SEE SHEET 1

TO 1A2J1 X
SEE GOVERNOR CONTROL
SYSTEM WIRING DIAGRAM

NOTE Where Sheet 1 is referenced see

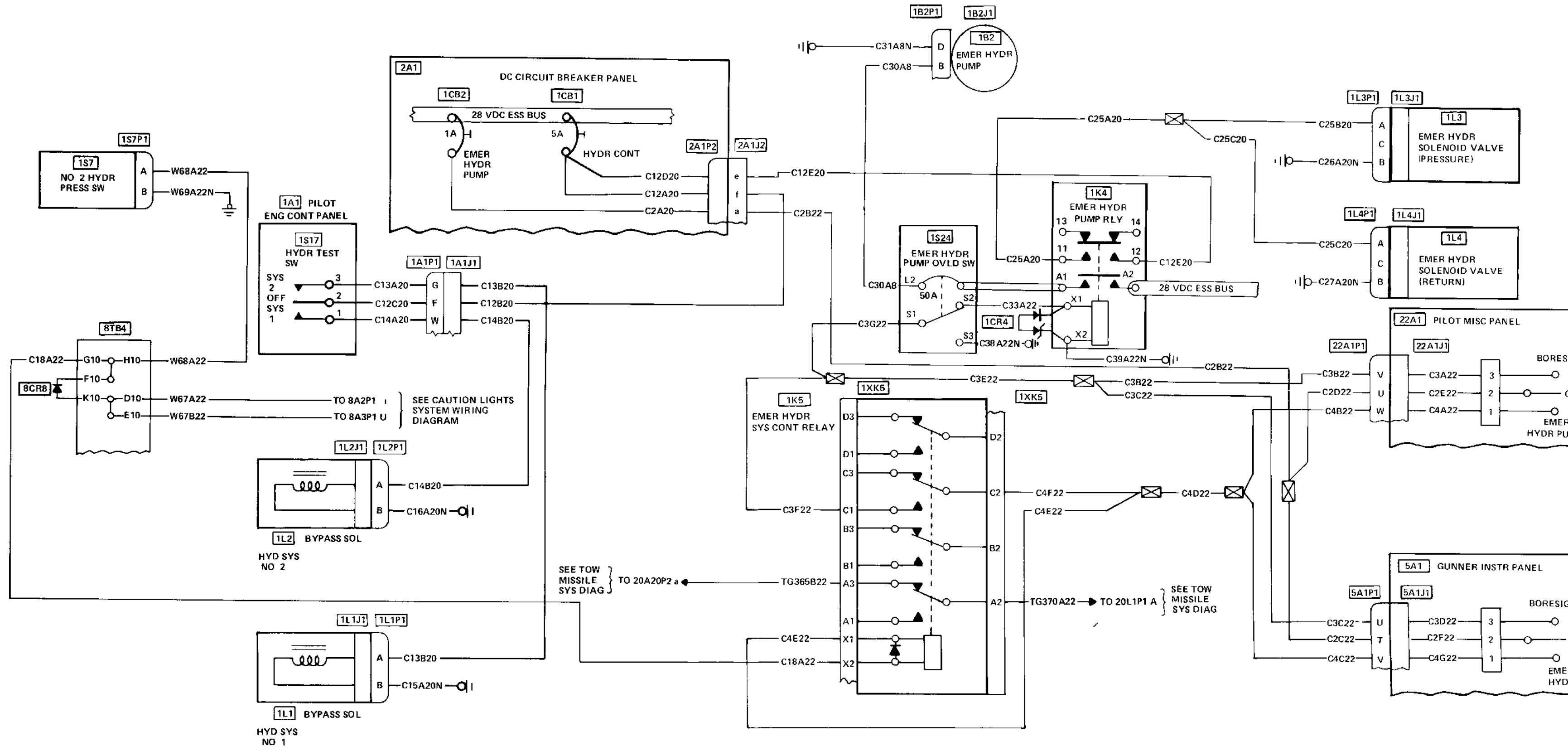


- NOTES
- ① SEE CAUTION LIGHTS SYSTEM WIRING DIAGRAM
 - ② SEE TM 11 1520 236 20 ICS SYSTEM WIRING DIAGRAM
 - ③ SEE TACHOMETER INDICATING SYSTEM WIRING DIAGRAM

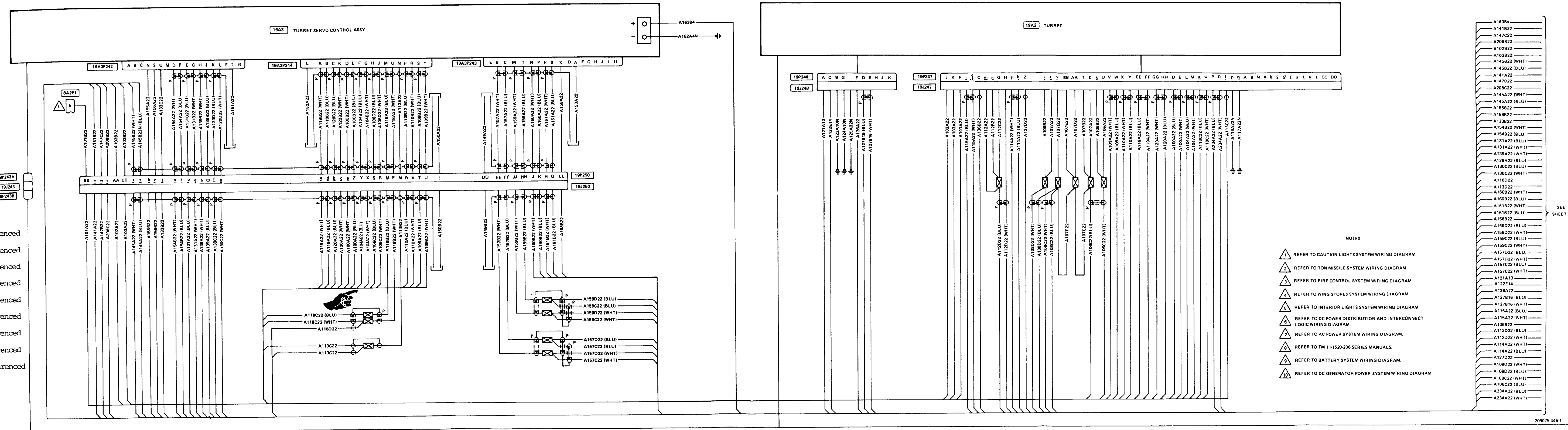


FREQ HZ	VRMS	ENG RPM	RO
66.5	19.5	6200	
69.0	20.0	6400	
73.5	22.0	6800	
76.0	22.5	7000	

ID CODE	NOMENCLATURE	
C1 C2	Line Filter 01 mf 600 WV	(
C3 C4	Line Filter 1 mf 600 WV	(
DR1 DR2	Rubber Flex Tube	R
DS1	Korry Light (033 0861 001)	(
F1 F2	Fuse Holder	H
G3A	Tach Generator (MIL G26611)	T
G4A	Tach Generator (MIL G26611)	T
J1 J2 J3	Banana Jack	S
J4 J5	Phone Jack	O
M1 M2	Tach Gen Drive Motor - Dayton Mod 2M037 - Ball Bearing 1/4 Shaft 1/10 HP 8000 RPM 115Vac 60 Hz	
M18A	Dual Tach Indicator - GE 8DJ67FBC Sub 1	(
P13A	Plug Dual Tach Indicator	M
P14A	Plug Dual Tach Indicator	M
P38A	Plug Eng RPM Warning Control	M
P52A	Plug Tach Generator	M
P71A	Plug Tach Generator	M
R1	Resistor 10K OHM 1/2W Carbon	(
R2 R3	Resistor 15 OHM 1/2W Carbon	(
R4 R5	Resistor 15 OHM 1/2W Carbon	(
SW1	Switch Scope Input	M
SW2	Switch Audio On/Off (Micro)	S
SW3	Switch Power On/Off	M
T1 T2	Speed Control - Power Stat Superior Electric Co (0 140Vac 60 Hz)	T



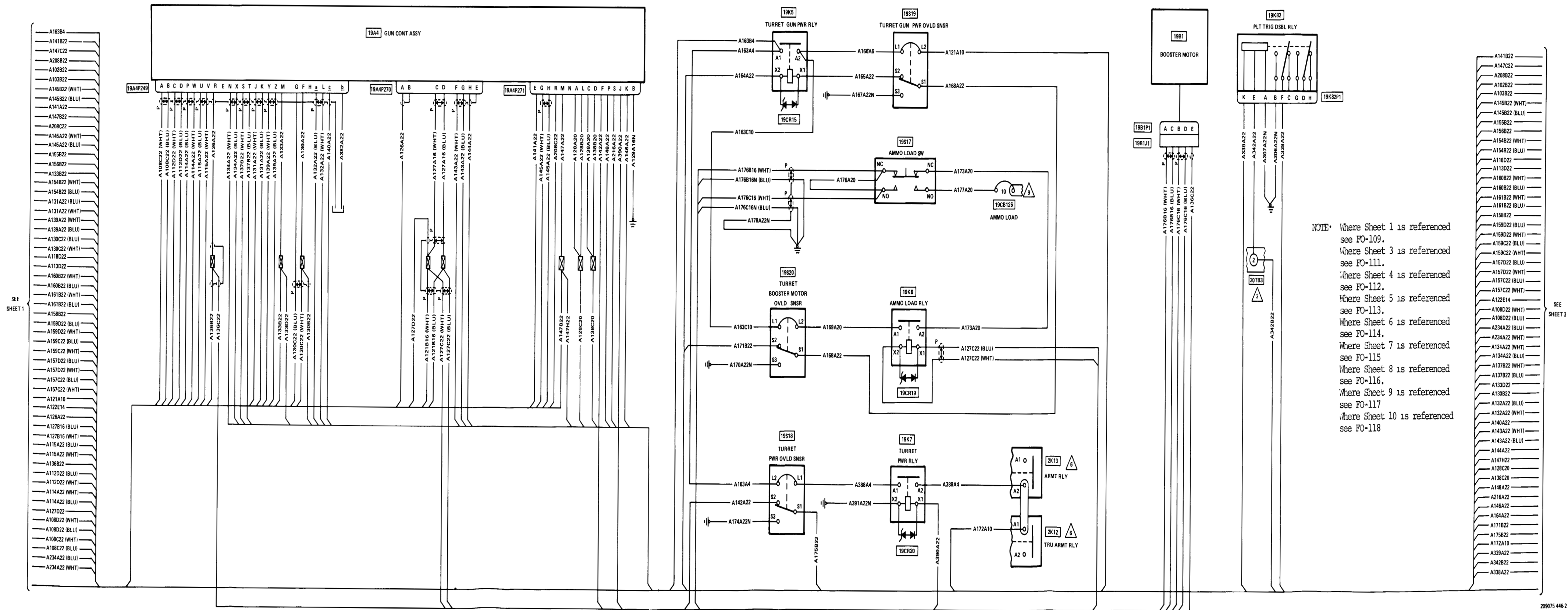
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Where Sheet 3 is referenced see FO-111.
Where Sheet 4 is referenced see FO-112.
Where Sheet 5 is referenced see FO-113.
Where Sheet 6 is referenced see FO-114.
Where Sheet 7 is referenced see FO-115.
Where Sheet 8 is referenced see FO-116.
Where Sheet 9 is referenced see FO-117.
Where Sheet 10 is referenced see FO-118.



- NOTES
- REFER TO CAUTION LIGHTS SYSTEM WIRING DIAGRAM.
 - REFER TO TON MISSILE SYSTEM WIRING DIAGRAM.
 - REFER TO FIRE CONTROL SYSTEM WIRING DIAGRAM.
 - REFER TO WING STORES SYSTEM WIRING DIAGRAM.
 - REFER TO INTERIOR LIGHTS SYSTEM WIRING DIAGRAM.
 - REFER TO DC POWER DISTRIBUTION AND INTERCONNECT LOGIC WIRING DIAGRAM.
 - REFER TO AC POWER SYSTEM WIRING DIAGRAM.
 - REFER TO TM 11-1520 236 SERIES MANUALS.
 - REFER TO BATTERY SYSTEM WIRING DIAGRAM.
 - REFER TO DC GENERATOR POWER SYSTEM WIRING DIAGRAM.

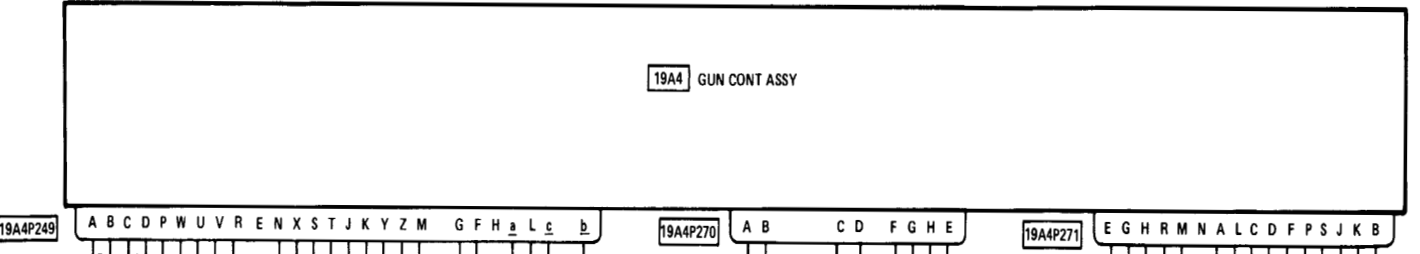
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A147C22
A208B22
A102B22
A145B22 (WHT)
A103B22
A145B22 (BLU)
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A208C22
A15A22 (WHT)
A15A22 (BLU)
A156B22
A156B22
A133B22
A154B22 (WHT)
A154B22 (BLU)
A131A22 (BLU)
A131A22 (WHT)
A139A22 (WHT)
A139A22 (BLU)
A130C22 (BLU)
A130C22 (WHT)
A118D22
A113D22
A160B22 (WHT)
A160B22 (BLU)
A161B22 (WHT)
A161B22 (BLU)
A158B22
A159D22 (BLU)
A159D22 (WHT)
A159C22 (BLU)
A159C22 (WHT)
A157D22 (BLU)
A157D22 (WHT)
A157C22 (BLU)
A157C22 (WHT)
A157B22 (BLU)
A157B22 (WHT)
A121A10
A122E14
A126A22
A127B16 (BLU)
A127B16 (WHT)
A117A22N
A234A22 (WHT)
A234A22 (BLU)
A108D22 (WHT)
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A108C22 (WHT)
A108C22 (BLU)
A234A22 (WHT)
A234A22 (BLU)

209075 446 1



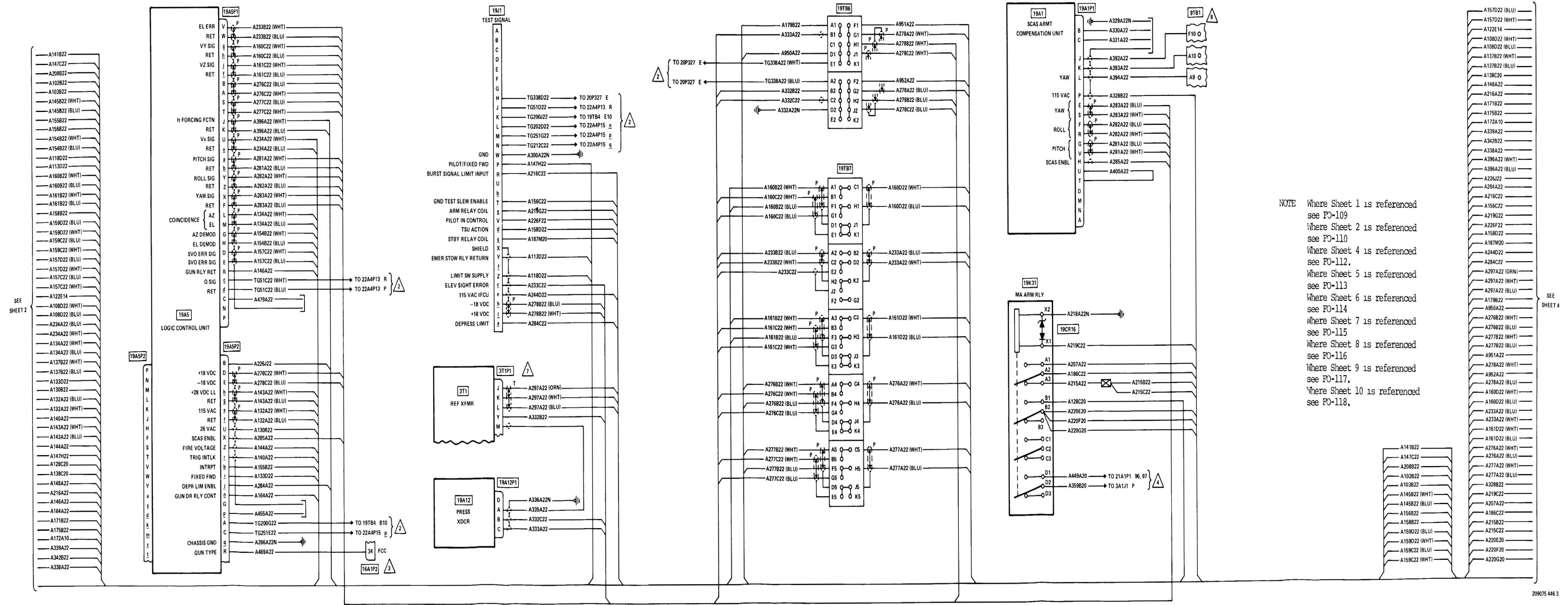
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- A20882Z
- A10282Z
- A10382Z
- A14582Z (WHT)
- A141A2Z
- A14782Z
- A208C2Z
- A145A2Z (WHT)
- A145A2Z (BLU)
- A15882Z
- A13382Z
- A15482Z (WHT)
- A15482Z (BLU)
- A131A2Z (WHT)
- A138A2Z (BLU)
- A130C2Z (BLU)
- A11802Z
- A11802Z
- A19382Z (WHT)
- A16982Z (BLU)
- A16182Z (WHT)
- A16182Z (BLU)
- A15882Z
- A15902Z (BLU)
- A15902Z (WHT)
- A159C2Z (BLU)
- A159C2Z (WHT)
- A15702Z (BLU)
- A15702Z (WHT)
- A157C2Z (BLU)
- A157C2Z (WHT)
- A171A10
- A122E14
- A126A2Z
- A127816 (BLU)
- A127816 (WHT)
- A115A2Z (BLU)
- A13682Z
- A112202Z (BLU)
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- A114A2Z (BLU)
- A12702Z
- A10802Z (WHT)
- A10802Z (BLU)
- A108C2Z (WHT)
- A108C2Z (BLU)
- A234A2Z (BLU)
- A234A2Z (WHT)

SEE SHEET 1



- A14182Z
- A147C2Z
- A20882Z
- A10282Z
- A10382Z
- A14582Z (WHT)
- A14582Z (BLU)
- A15882Z
- A15882Z
- A15482Z (WHT)
- A15482Z (BLU)
- A11802Z
- A11302Z
- A16082Z (WHT)
- A16082Z (BLU)
- A16182Z (WHT)
- A16182Z (BLU)
- A15882Z
- A15902Z (BLU)
- A15902Z (WHT)
- A159C2Z (BLU)
- A159C2Z (WHT)
- A15702Z (BLU)
- A15702Z (WHT)
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- A13302Z
- A132A2Z (BLU)
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- A140A2Z
- A143A2Z (WHT)
- A143A2Z (BLU)
- A144A2Z
- A147H2Z
- A128C20
- A138C20
- A148A2Z
- A216A2Z
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- A1782Z
- A172A10
- A339A2Z
- A34282Z
- A338A2Z

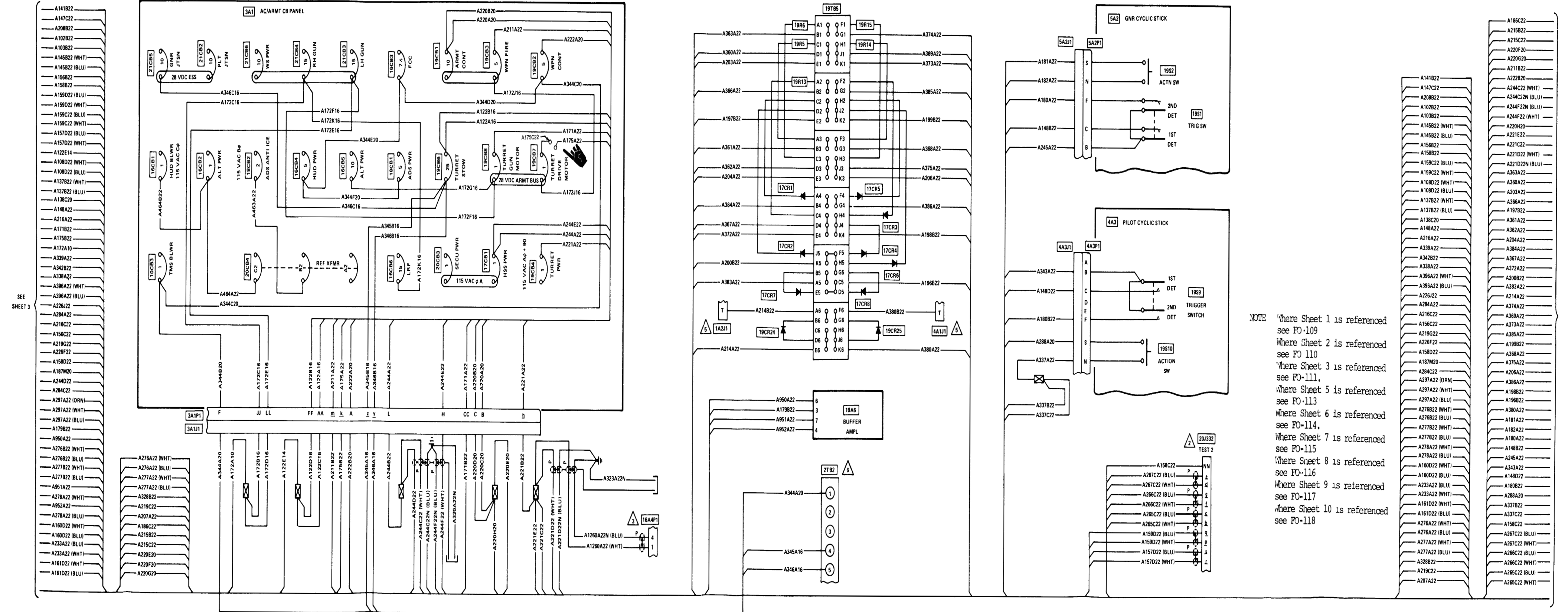
SEE SHEET 3



NOTE Where Sheet 1 is referenced see FO-109
 Where Sheet 2 is referenced see FO-110
 Where Sheet 4 is referenced see FO-112.
 Where Sheet 5 is referenced see FO-113
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 Where Sheet 7 is referenced see FO-115
 Where Sheet 8 is referenced see FO-116
 Where Sheet 9 is referenced see FO-117.
 Where Sheet 10 is referenced see FO-118.

SEE SHEET 2

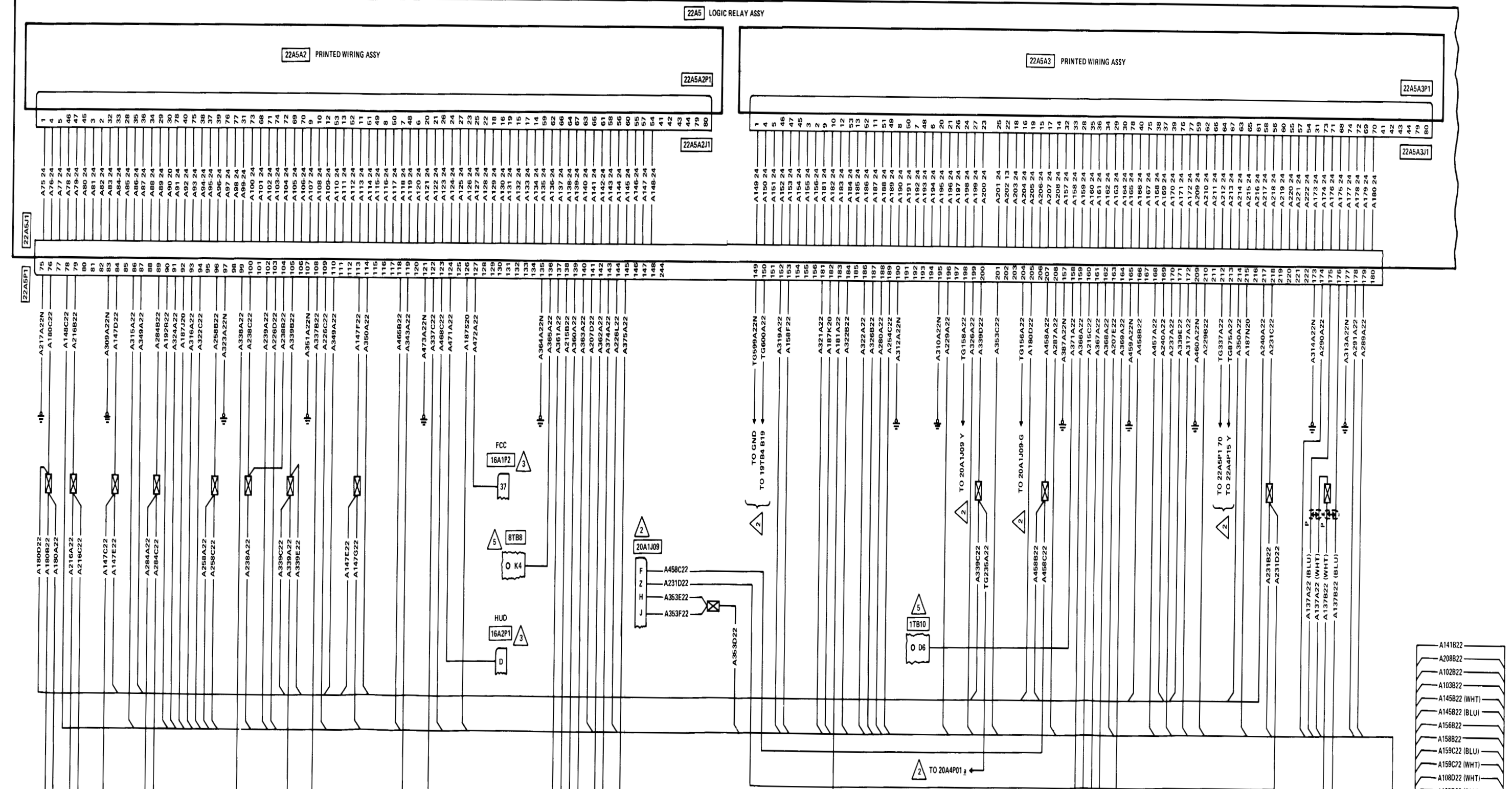
SEE SHEET 4



SEE SHEET 4

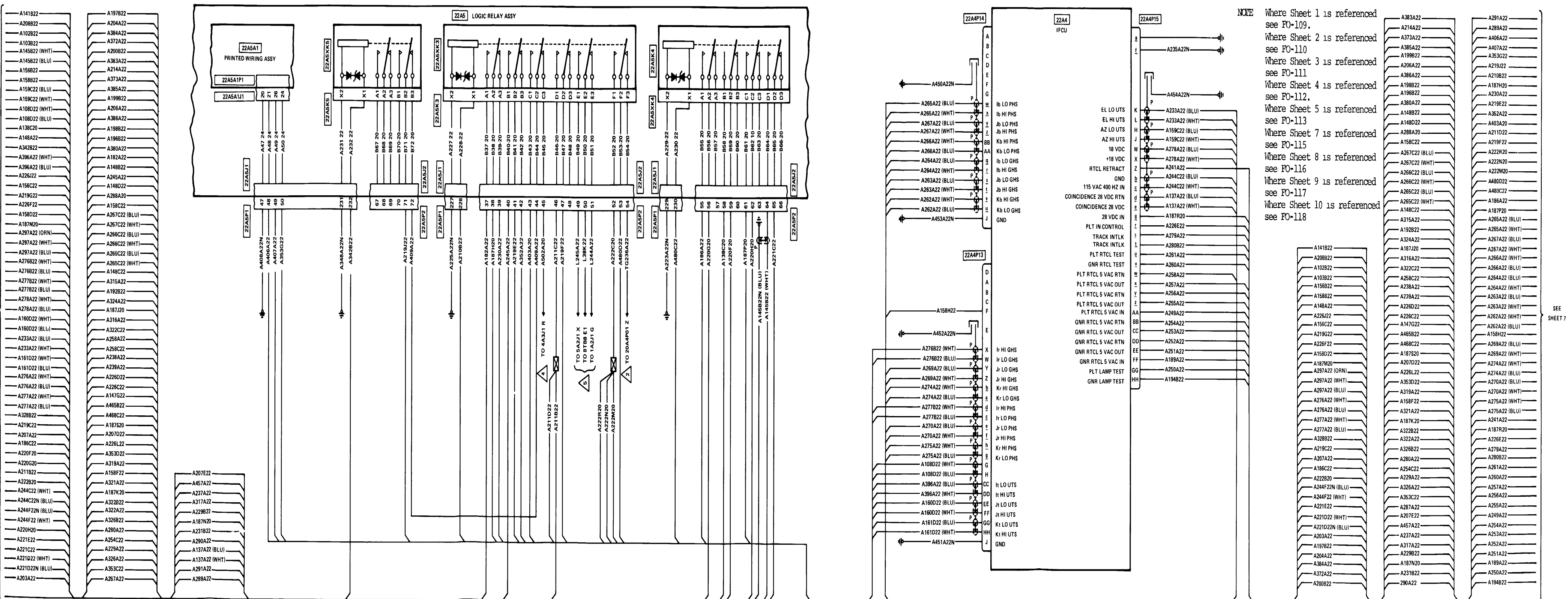
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A102B22	A244F22N (WHIT)
A145B22 (WHIT)	A244F22 (WHIT)
A145B22 (BLU)	A228H20
A155B22	A231E22
A234C22N (BLU)	A221C22
A159C22 (BLU)	A221D22 (WHIT)
A159C22 (WHIT)	A221D22N (BLU)
A108D22 (WHIT)	A197B22
A108D22 (BLU)	A211E22
A137B22 (WHIT)	A212C22
A137B22 (BLU)	A221D22 (WHIT)
A138C20	A221D22N (BLU)
A148A22	A333A22
A216A22	A330A22
A339A22	A203A22
A342B22	A366A22
A338A22	A197B22
A398A22 (WHIT)	A381A22
A398A22 (BLU)	A382A22
A226J22	A204A22
A226K22	A298A22
A216A22	A334A22
A155C22	A372A22
A219G22	A200B22
A226F22	A383A22
A158D22	A214A22
A187M20	A314A22
A284C22	A369A22
A297A22 (ORNI)	A373A22
A297A22 (WHIT)	A385A22
A199B22	A297A22 (BLU)
A276B22 (WHIT)	A368A22
A276B22 (BLU)	A375A22
A277B22 (WHIT)	A206A22
A277B22 (BLU)	A386A22
A278A22 (WHIT)	A198B22
A278A22 (BLU)	A196B22
A160D22 (WHIT)	A380A22
A160D22 (BLU)	A181A22
A233A22 (WHIT)	A182A22
A180A22	A180A22
A148B22	A245A22
A245A22	A343A22
A276A22 (WHIT)	A148D22
A276A22 (BLU)	A180B22
A277A22 (WHIT)	A288A20
A277A22 (BLU)	A180B22
A328B22	A337B22
A186C22	A337C22
A207A22	A158C22
A158C22	A267C22 (BLU)
A215C22	A267C22 (WHIT)
A215B22	A266C22 (BLU)
A220C20	A266C22 (WHIT)
A211B22	A265C22 (BLU)
	A265C22 (WHIT)

NOTE Where Sheet 1 is referenced see FO-109
 Where Sheet 2 is referenced see FO-110
 Where Sheet 3 is referenced see FO-111.
 Where Sheet 4 is referenced see FO-112
 Where Sheet 6 is referenced see FO-114
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 Where Sheet 9 is referenced see FO-117
 Where Sheet 10 is referenced see FO-118.



SEE SHEET 6

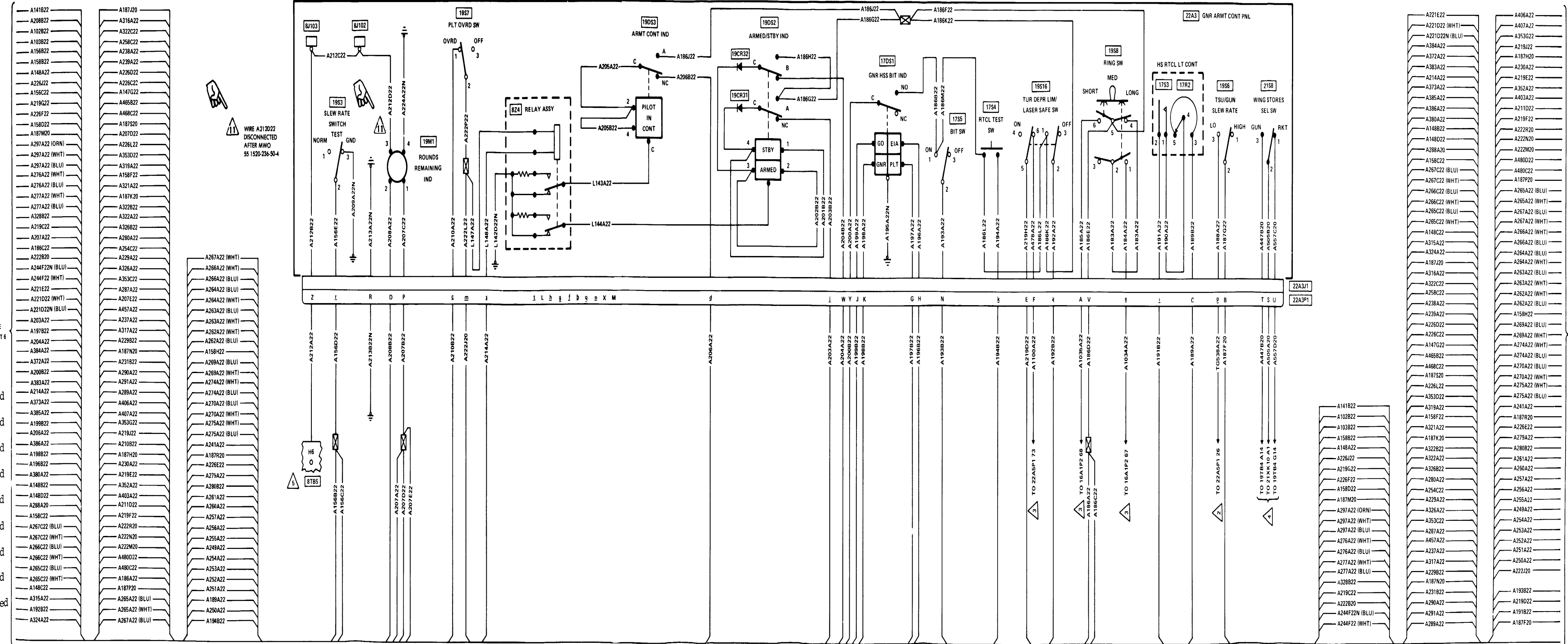
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A145B22 (BLU)	A148B22
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A234C22N (BLU)	A148D22
A159C22 (BLU)	A276B22
A159C22 (WHIT)	A158D22
A108D22 (WHIT)	A375C22 (BLU)
A108D22 (BLU)	A375C22 (WHIT)
A137B22 (WHIT)	A297A22 (ORNI)
A137B22 (BLU)	A297A22 (WHIT)
A138C20	A297A22 (BLU)
A148A22	A297A22 (WHIT)
A216A22	A297A22 (BLU)
A339A22	A297A22 (WHIT)
A342B22	A297A22 (BLU)
A338A22	A297A22 (WHIT)
A398A22 (WHIT)	A383C22 (WHIT)
A398A22 (BLU)	A383C22 (BLU)
A226J22	A383C22 (WHIT)
A226K22	A383C22 (BLU)
A216A22	A383C22 (WHIT)
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A219G22	A383C22 (WHIT)
A226F22	A383C22 (BLU)
A158D22	A383C22 (WHIT)
A187M20	A383C22 (BLU)
A284C22	A383C22 (WHIT)
A297A22 (ORNI)	A383C22 (BLU)
A297A22 (WHIT)	A383C22 (WHIT)
A199B22	A383C22 (BLU)
A276B22 (WHIT)	A383C22 (WHIT)
A276B22 (BLU)	A383C22 (BLU)
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A278A22 (BLU)	A383C22 (BLU)
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A160D22 (BLU)	A383C22 (BLU)
A233A22 (WHIT)	A383C22 (WHIT)
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A343A22	A383C22 (WHIT)
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A337C22	A383C22 (WHIT)
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A267C22 (WHIT)	A383C22 (BLU)
A266C22 (BLU)	A383C22 (WHIT)
A266C22 (WHIT)	A383C22 (BLU)
A265C22 (BLU)	A383C22 (WHIT)
A265C22 (WHIT)	A383C22 (BLU)
A211B22	A383C22 (WHIT)
	A383C22 (BLU)



NOTE
 Where Sheet 1 is referenced see FO-109,
 Where Sheet 2 is referenced see FO-110,
 Where Sheet 3 is referenced see FO-111,
 Where Sheet 4 is referenced see FO-112,
 Where Sheet 5 is referenced see FO-113,
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 Where Sheet 10 is referenced see FO-118

SEE SHEET 5

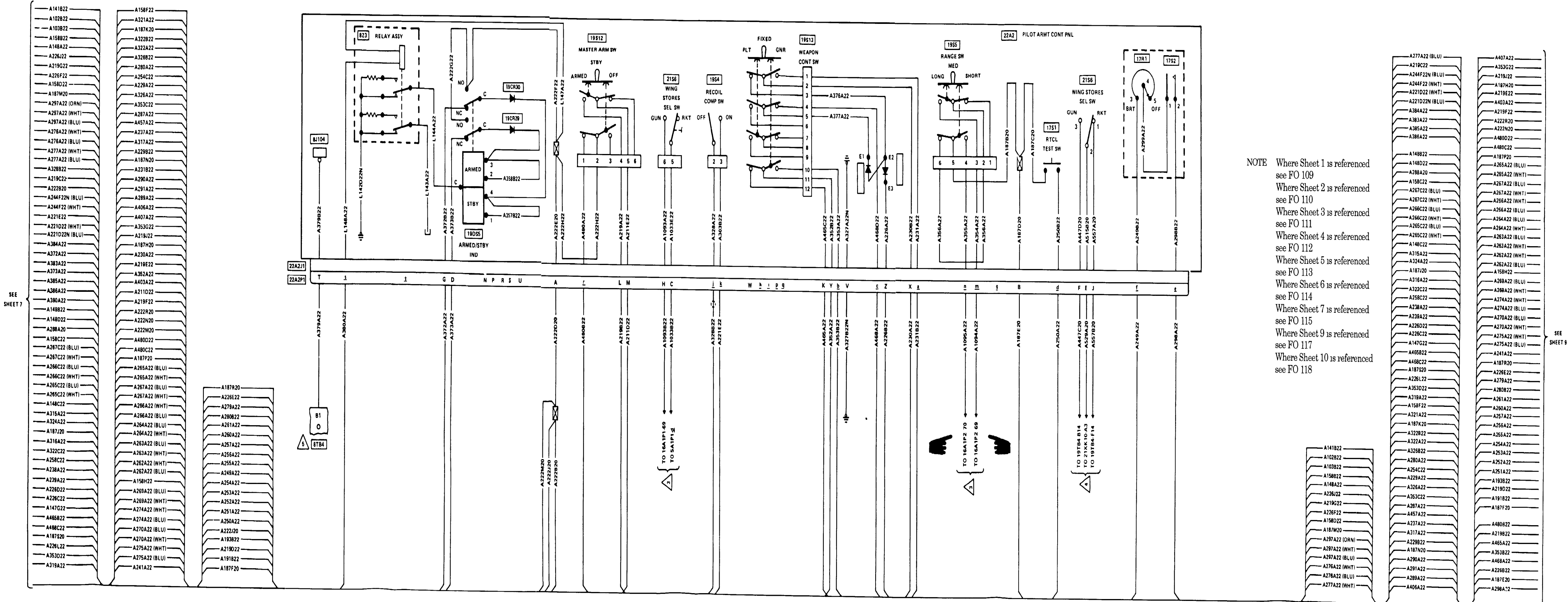
SEE SHEET 7



NOTE Where Sheet 1 is referenced see P0-109, Where Sheet 2 is referenced see P0-110, Where Sheet 3 is referenced see P0-111, Where Sheet 4 is referenced see P0-112, Where Sheet 5 is referenced see P0-113, Where Sheet 6 is referenced see P0-114, Where Sheet 8 is referenced see P0-116, Where Sheet 9 is referenced see P0-117, Where Sheet 10 is referenced see P0-118,

SEE SHEET 6

SEE SHEET 8

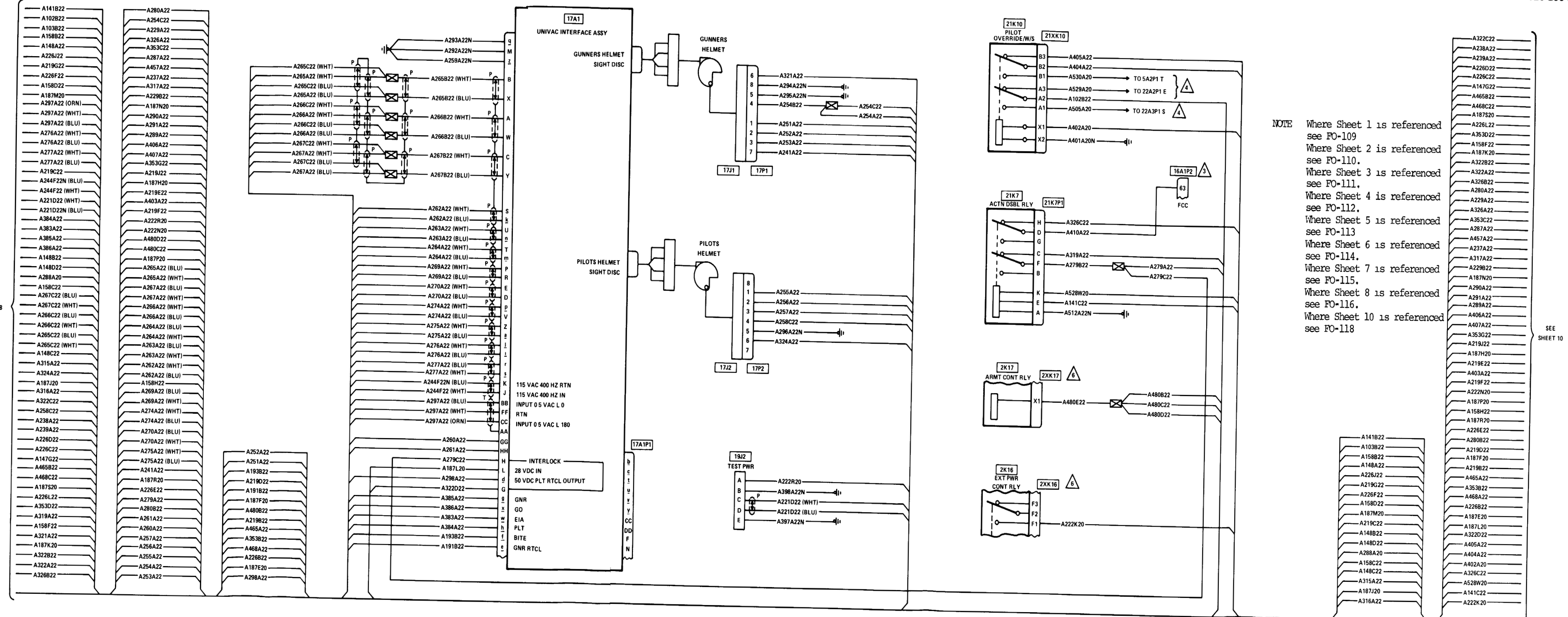


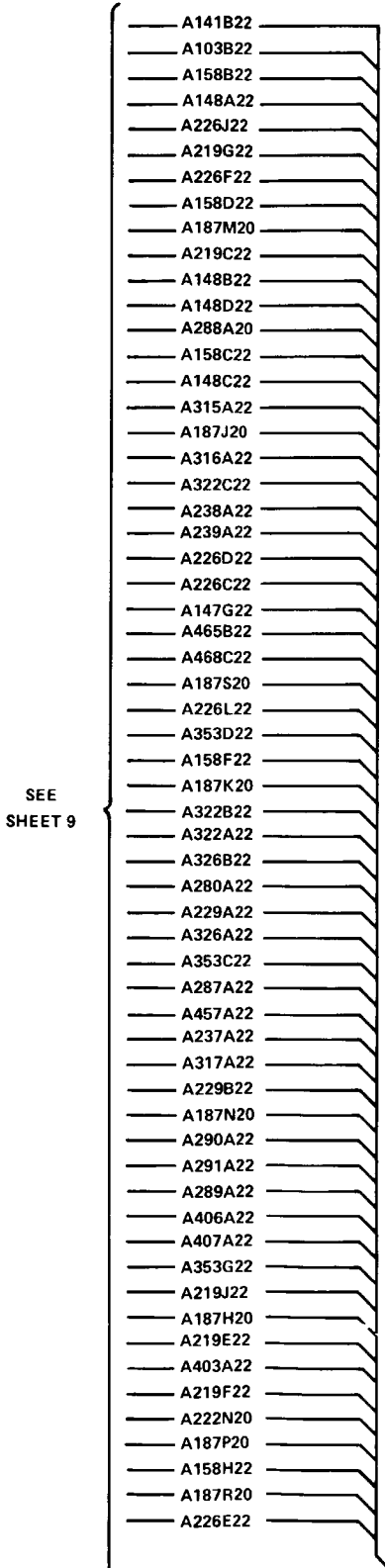
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| A1028Z | A21A2Z |
| A1038Z | A187K20 |
| A158B2Z | A3228Z |
| A148A2Z | A327A2Z |
| A226Z2Z | A328B2Z |
| A219G2Z | A280A2Z |
| A226F2Z | A254C2Z |
| A158C2Z | A229A2Z |
| A187M20 | A326A2Z |
| A297A2Z (ORNI) | A353C2Z |
| A297A2Z (WHT) | A287A2Z |
| A297A2Z (BLU) | A457A2Z |
| A276A2Z (WHT) | A237A2Z |
| A276A2Z (BLU) | A317A2Z |
| A277A2Z (WHT) | A229B2Z |
| A277A2Z (BLU) | A218Z2Z |
| A328B2Z | A187N20 |
| A219C2Z | A290A2Z |
| A2228Z0 | A291A2Z |
| A244F2Z (BLU) | A289A2Z |
| A244F2Z (WHT) | A406A2Z |
| A221E2Z | A407A2Z |
| A2210Z2Z (WHT) | A353J2Z |
| A2210Z2Z (BLU) | A218Z2Z |
| A38A2Z | A187H20 |
| A377A2Z | A230A2Z |
| A38A2Z | A219E2Z |
| A373A2Z | A158H2Z |
| A385A2Z | A362A2Z |
| A386A2Z | A403A2Z |
| A38A2Z | A2110Z2Z |
| A148B2Z | A219F2Z |
| A148D2Z | A222R20 |
| A28A20 | A222N20 |
| A158C2Z | A480C2Z |
| A287C2Z (BLU) | A187P20 |
| A287C2Z (WHT) | A285A2Z (BLU) |
| A286C2Z (BLU) | A285A2Z (WHT) |
| A286C2Z (WHT) | A267A2Z (BLU) |
| A148C2Z | A267A2Z (WHT) |
| A315A2Z | A286A2Z (WHT) |
| A324A2Z | A286A2Z (BLU) |
| A187J20 | A284A2Z (BLU) |
| A316A2Z | A284A2Z (WHT) |
| A323C2Z | A283A2Z (BLU) |
| A258C2Z | A283A2Z (WHT) |
| A238A2Z | A282A2Z (WHT) |
| A239A2Z | A282A2Z (BLU) |
| A226D2Z | A158H2Z |
| A226C2Z | A289A2Z (BLU) |
| A465E2Z | A289A2Z (WHT) |
| A48C2Z | A274A2Z (WHT) |
| A187E20 | A274A2Z (BLU) |
| A226L2Z | A270A2Z (WHT) |
| A353D2Z | A270A2Z (BLU) |
| A319A2Z | A275A2Z (WHT) |
| | A275A2Z (BLU) |
| | A241A2Z |

- | |
|----------------|
| A1182Z |
| A1028Z |
| A1038Z |
| A158B2Z |
| A148A2Z |
| A226Z2Z |
| A219G2Z |
| A187M20 |
| A297A2Z (ORNI) |
| A297A2Z (WHT) |
| A297A2Z (BLU) |
| A276A2Z (WHT) |
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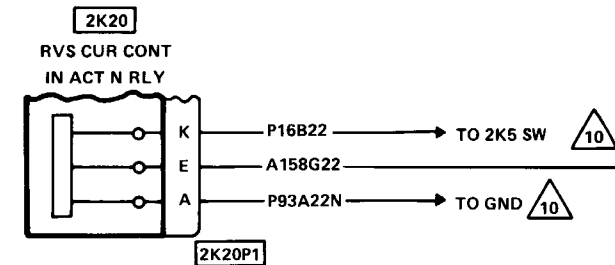
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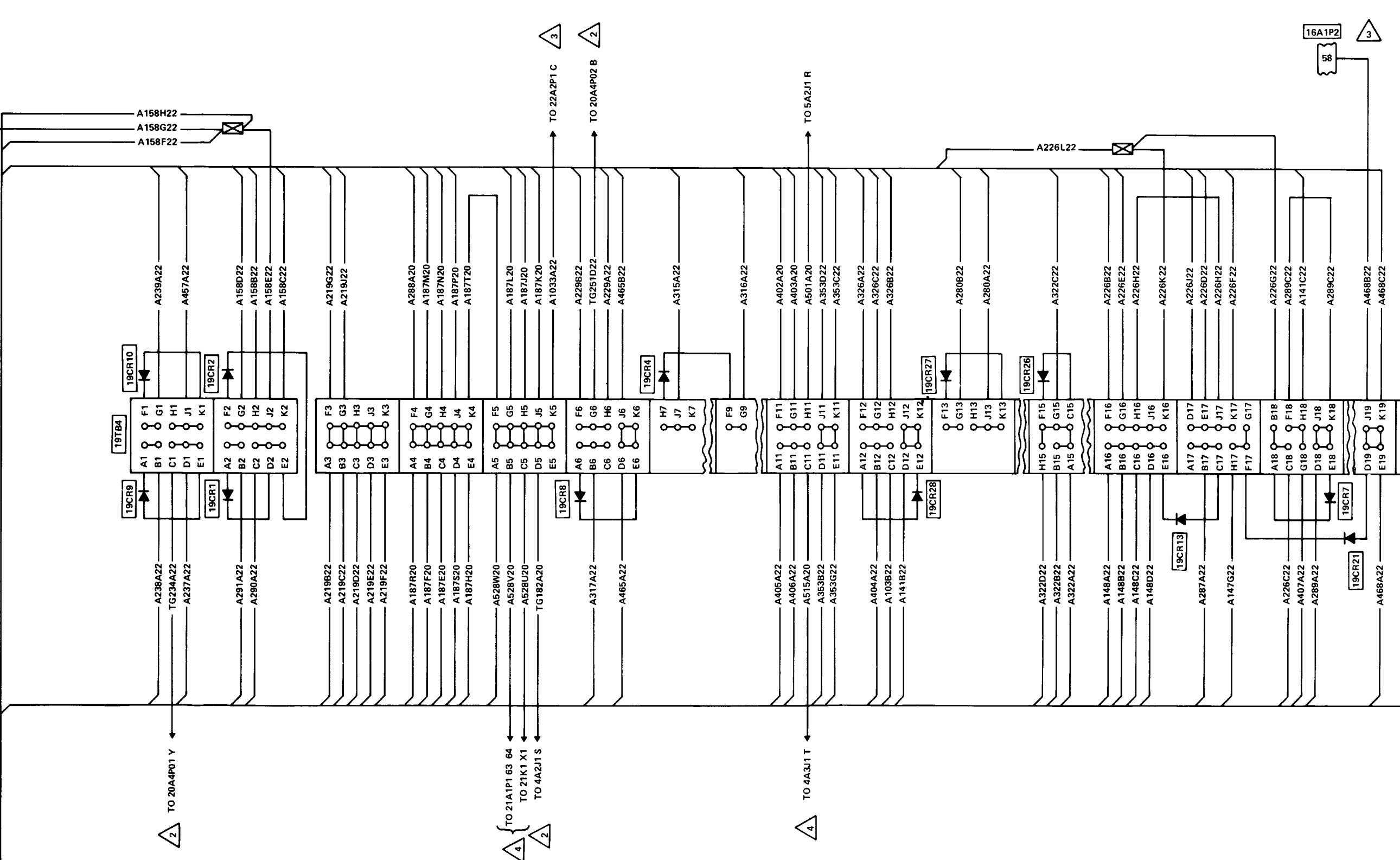
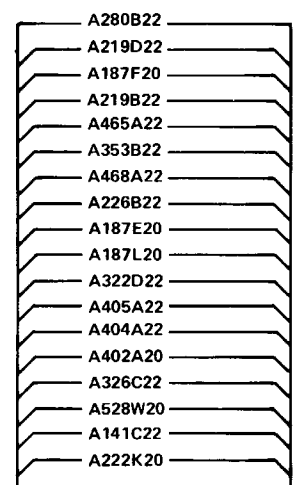


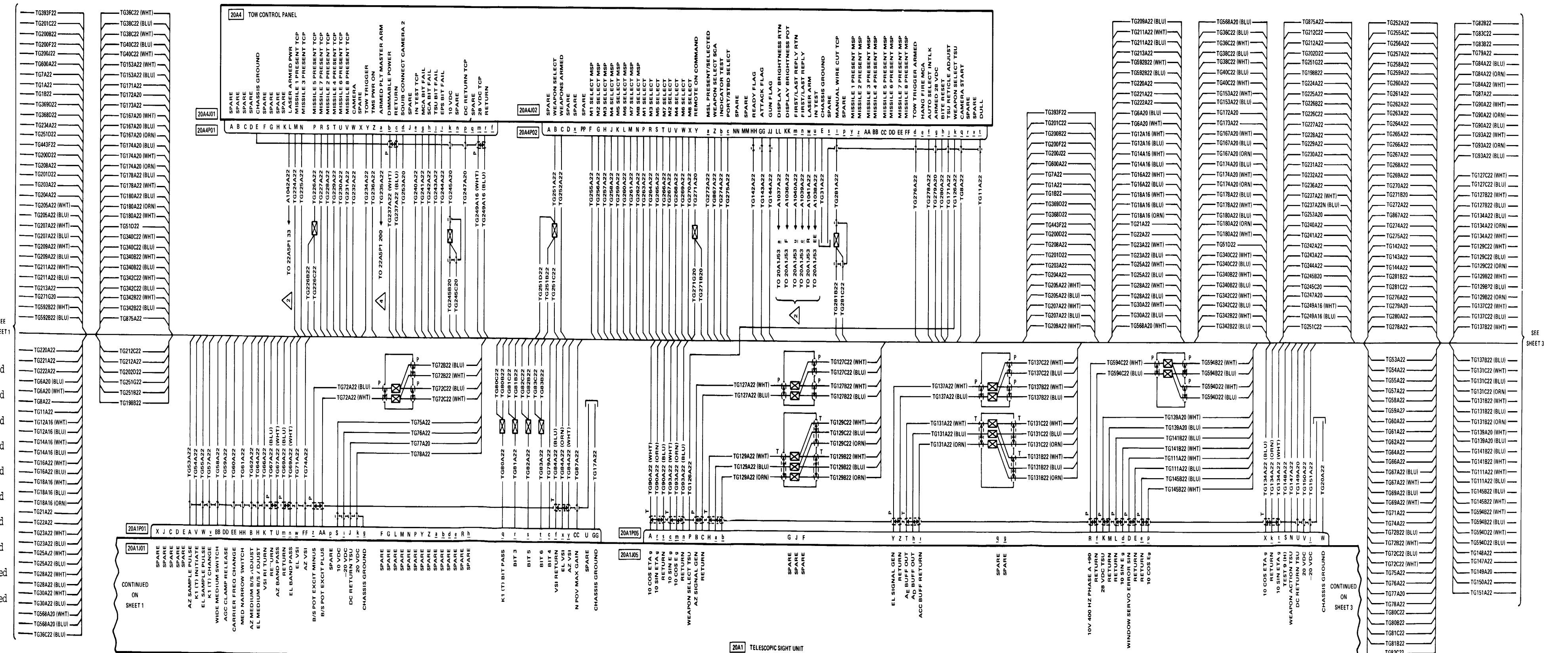


SEE SHEET 9



NOTE Where Sheet 1 is referenced see FO-109
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 Where Sheet 3 is referenced see FO-111
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 Where Sheet 9 is referenced see FO-117

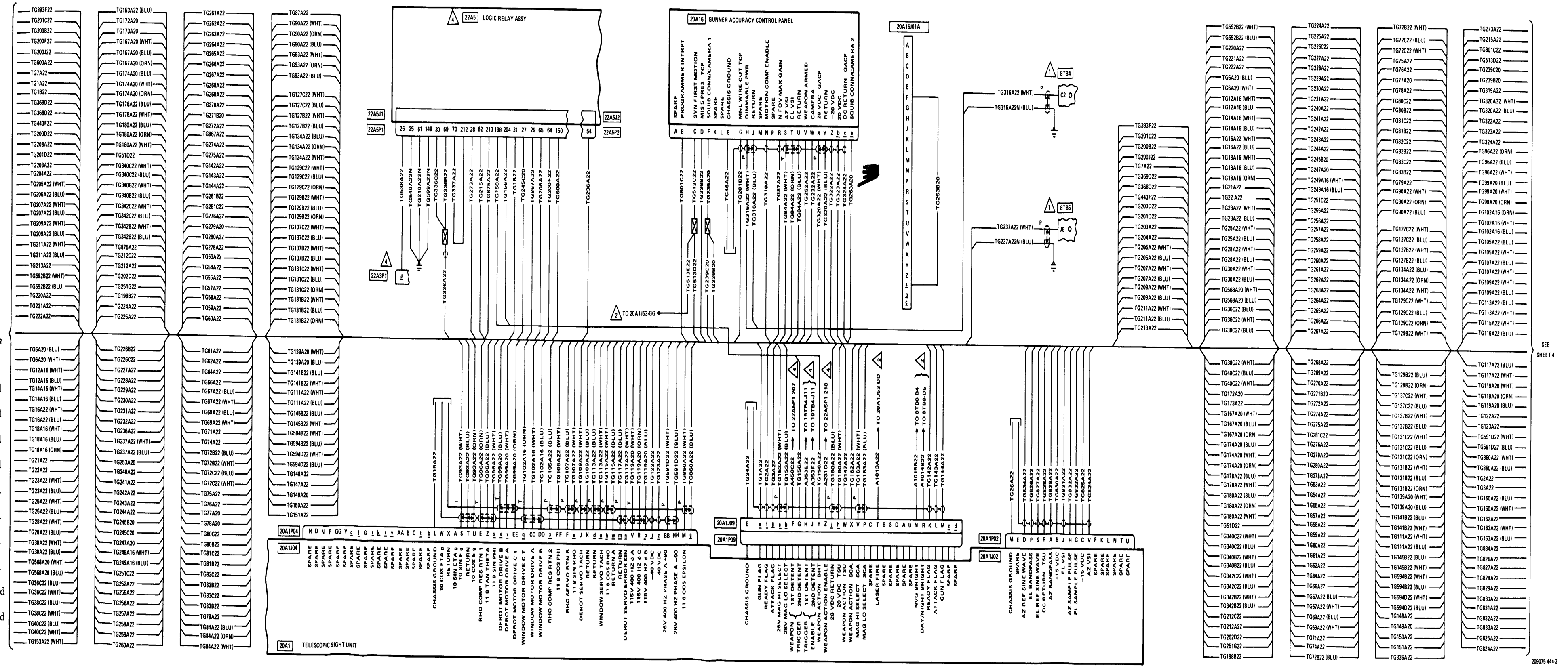




NOTE Where Sheet 1 is referenced see FO-119.
 Where Sheet 3 is referenced see FO-121.
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 Where Sheet 6 is referenced see FO-124.
 Where Sheet 7 is referenced see FO-125.
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 Where Sheet 9 is referenced see FO-127.
 Where Sheet 10 is referenced see FO-128.
 Where Sheet 11 is referenced see FO-129.

SEE SHEET 1

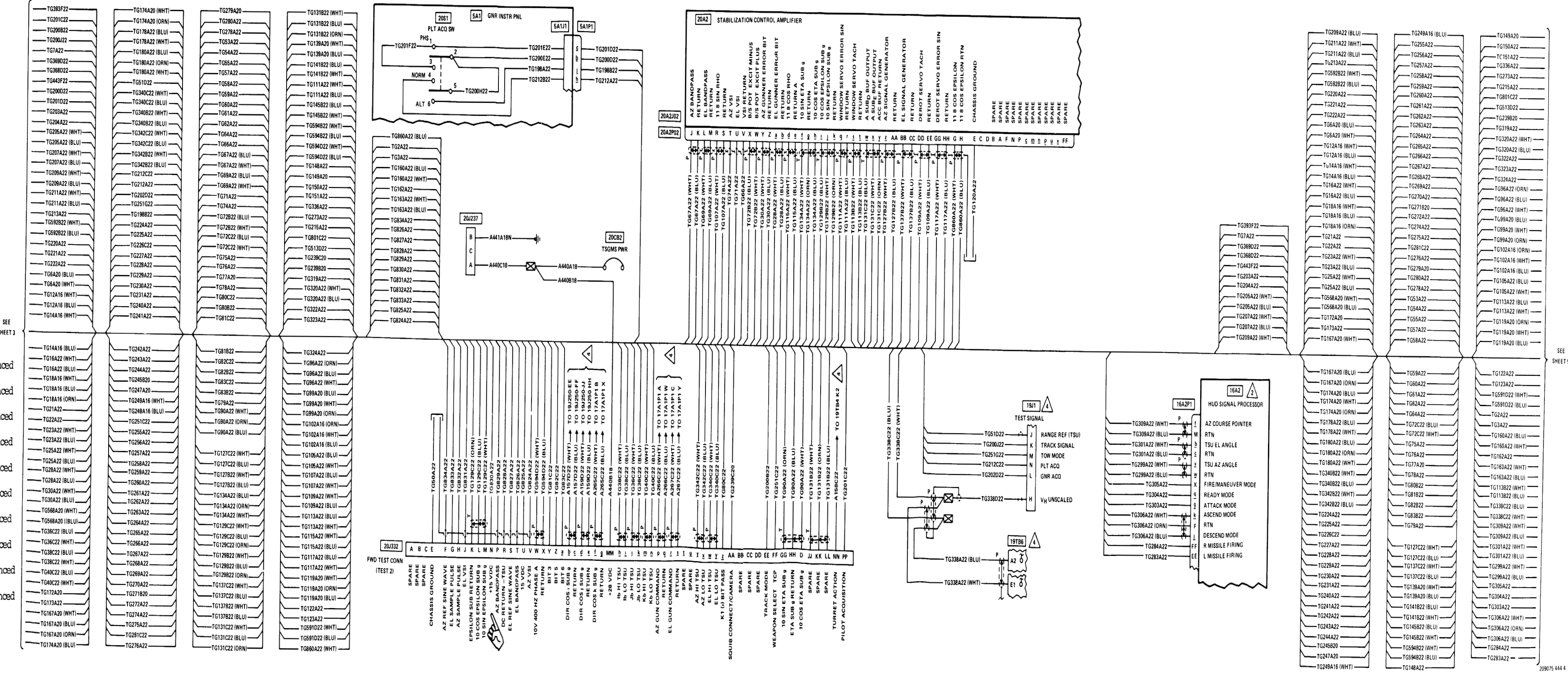
SEE SHEET 3



NOTE: where Sheet 1 is referenced see FO-119,
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 where Sheet 11 is referenced see FO-129

SEE SHEET 2

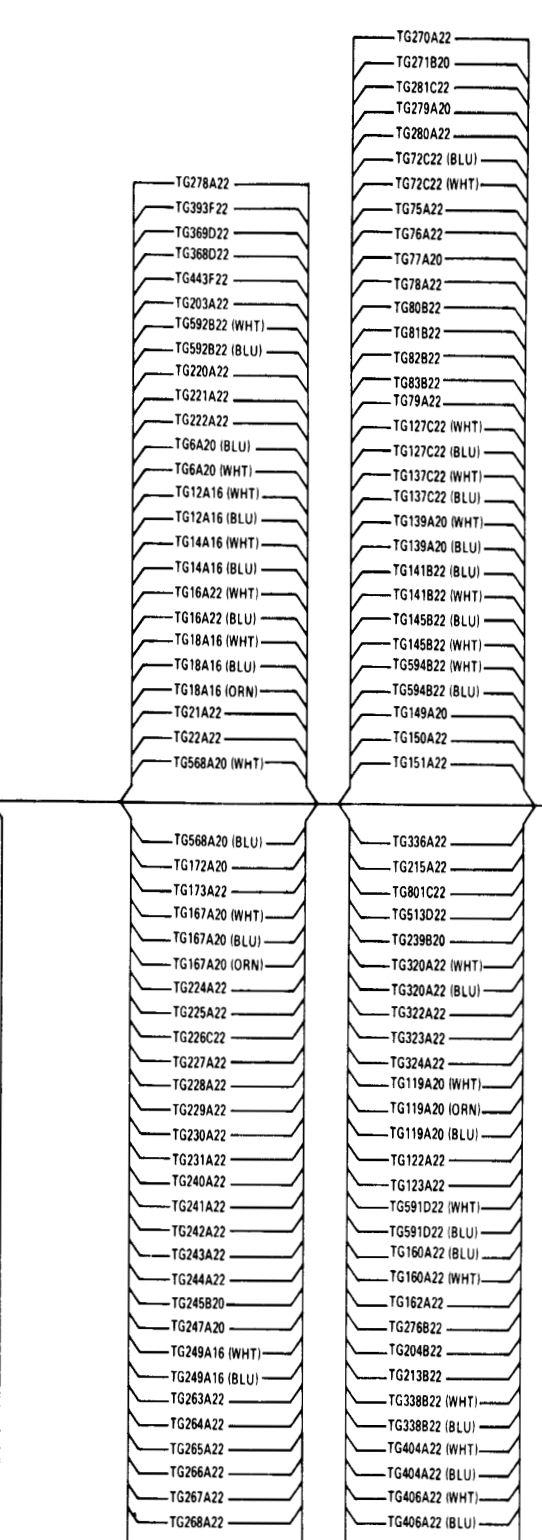
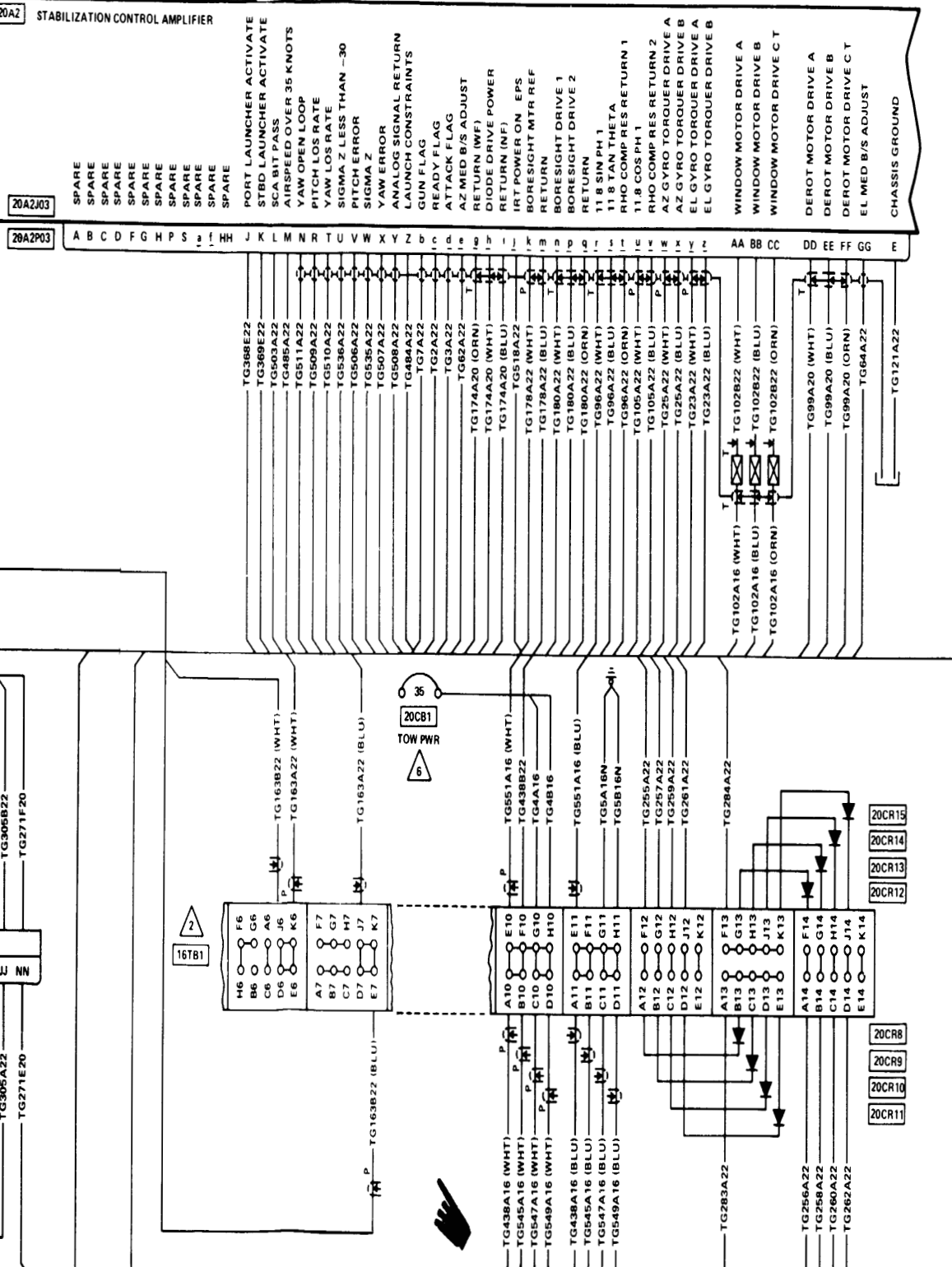
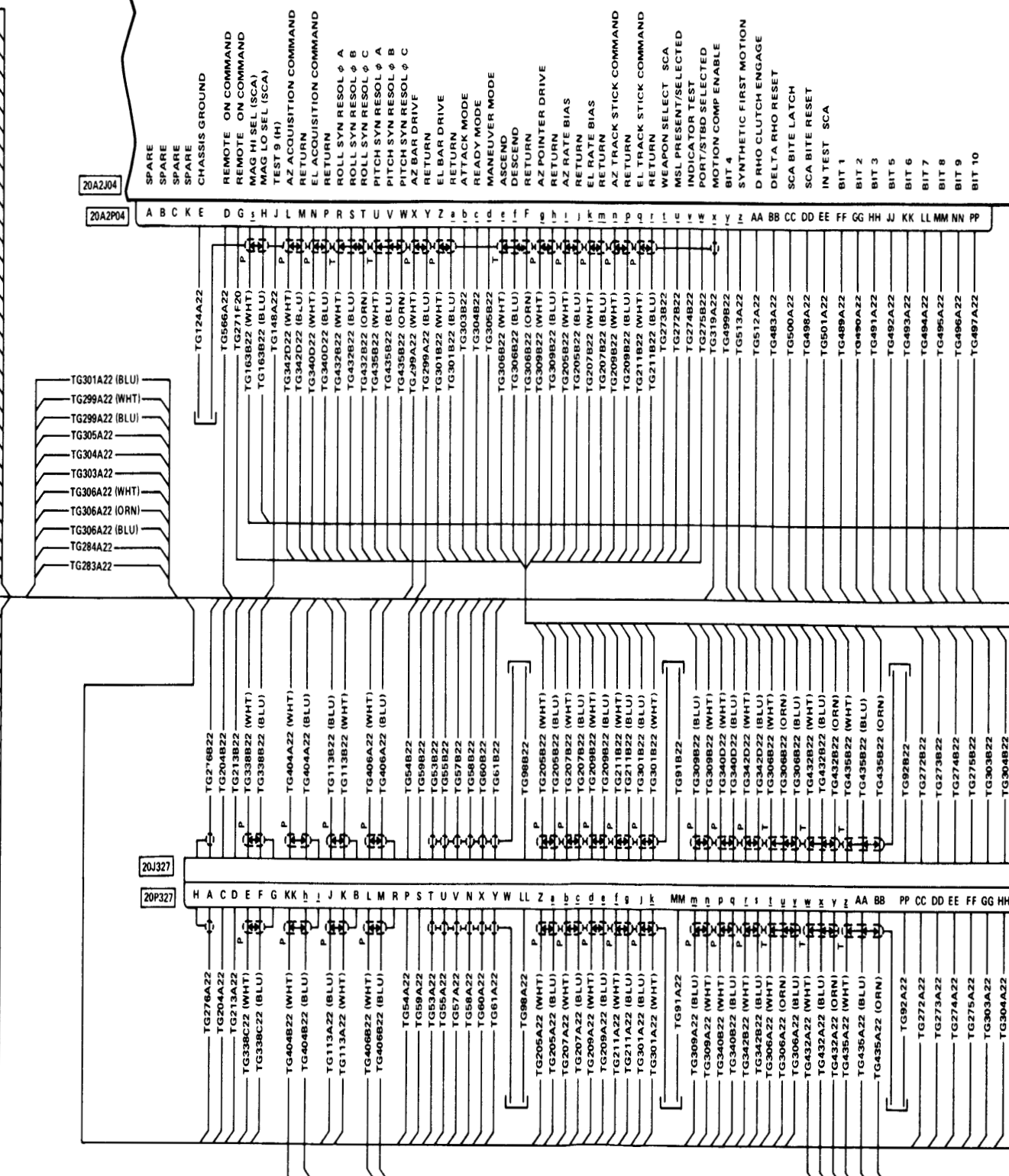
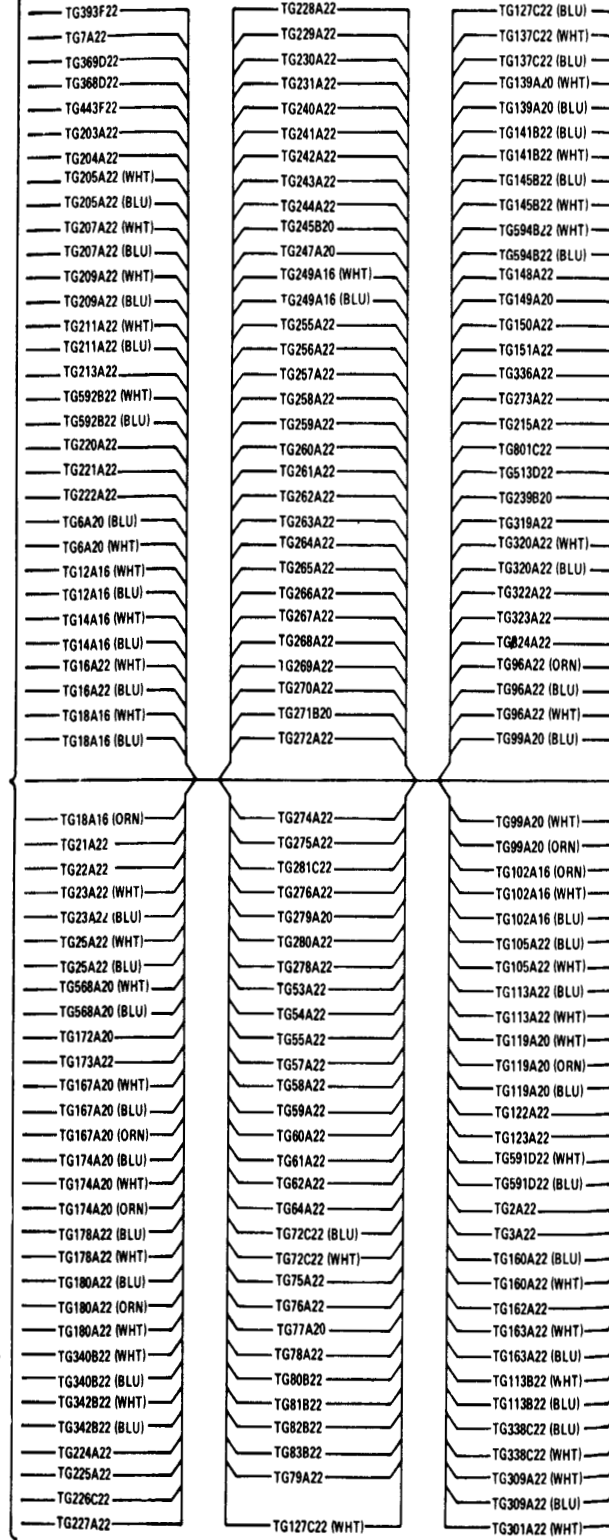
SEE SHEET 4

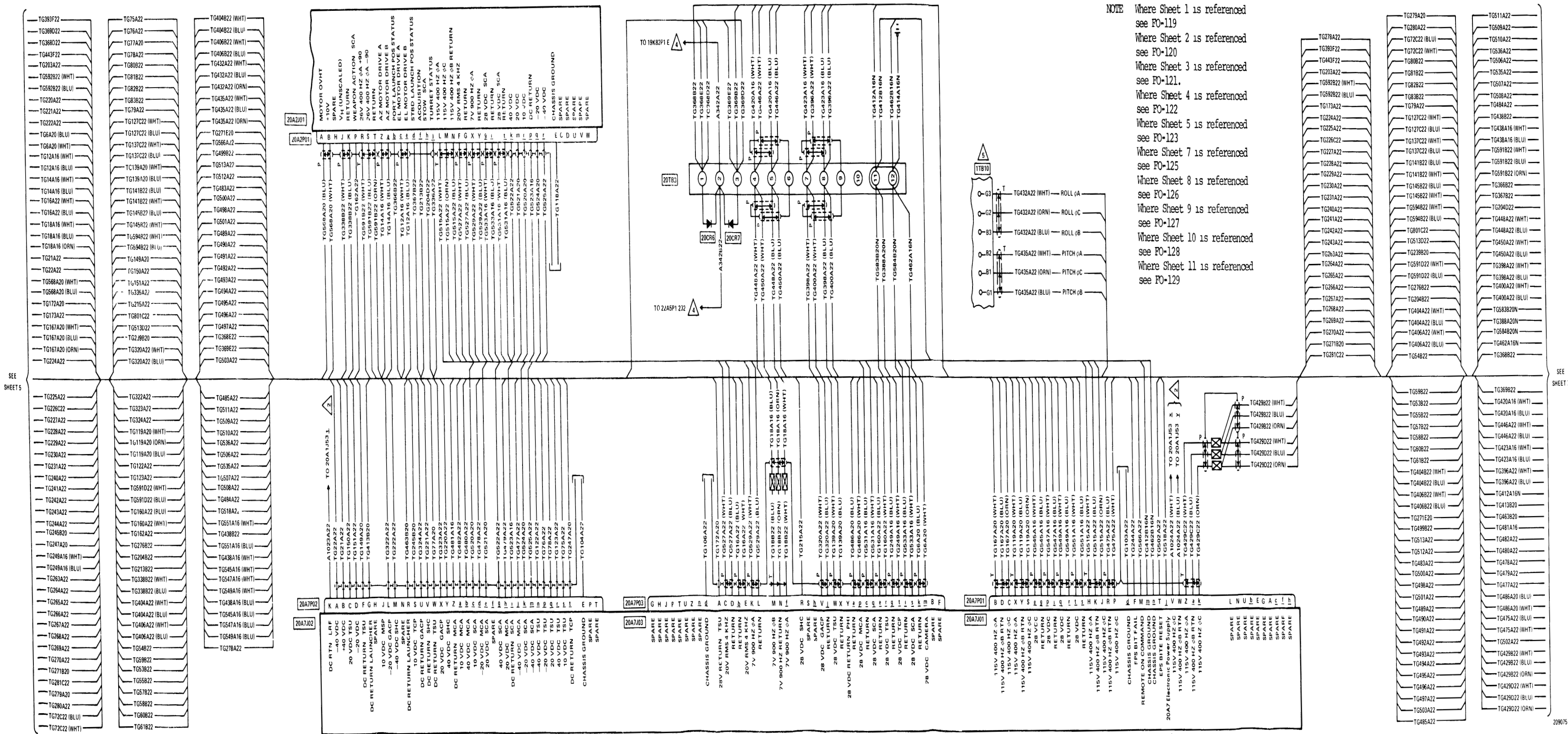


NOTE. Where Sheet 1 is referenced see FO-119, Where Sheet 2 is referenced see FO-120, Where Sheet 3 is referenced see FO-121, Where Sheet 5 is referenced see FO-123 Where Sheet 6 is referenced see FO-124 Where Sheet 7 is referenced see FO-125 Where Sheet 8 is referenced see FO-126 Where Sheet 9 is referenced see FO-127 Where Sheet 10 is referenced see FO-128 Where Sheet 11 is referenced see FO-129.

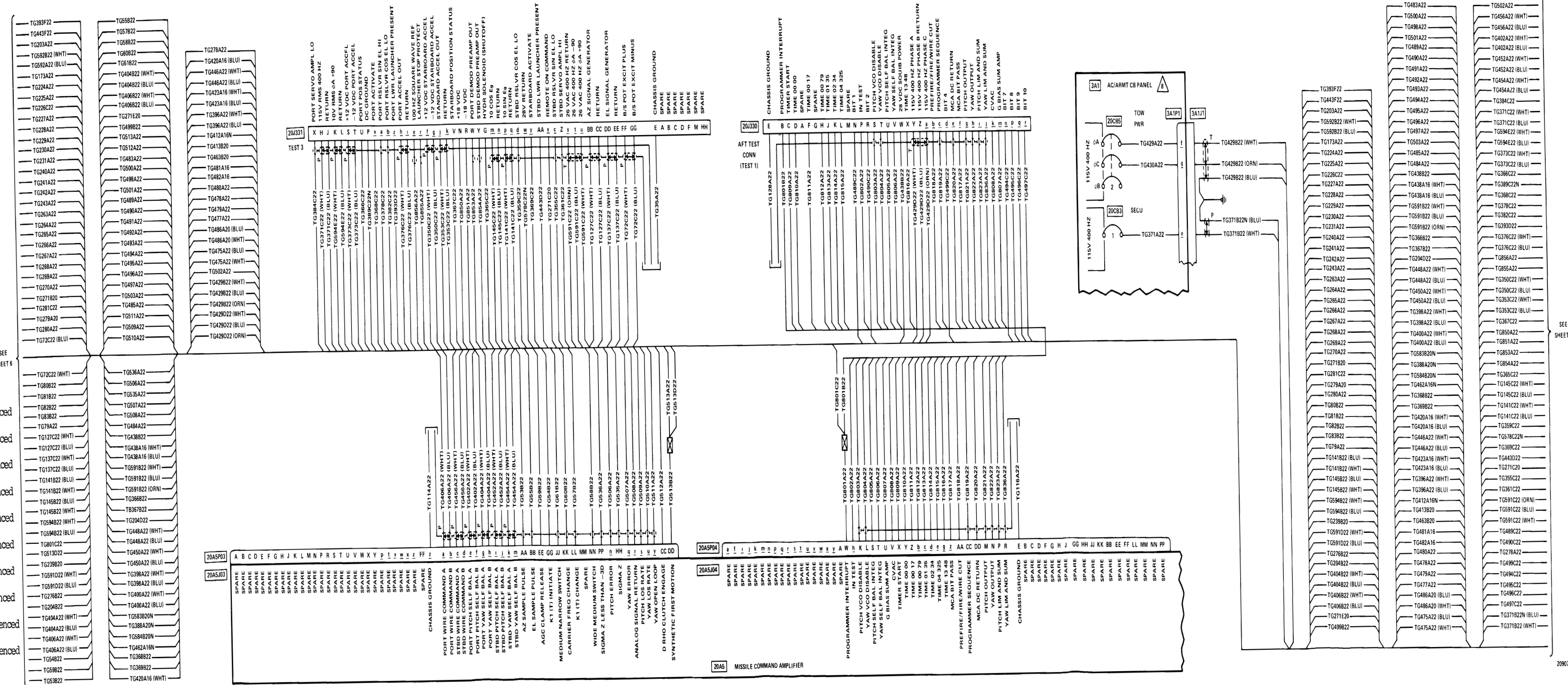
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SEE SHEET 4





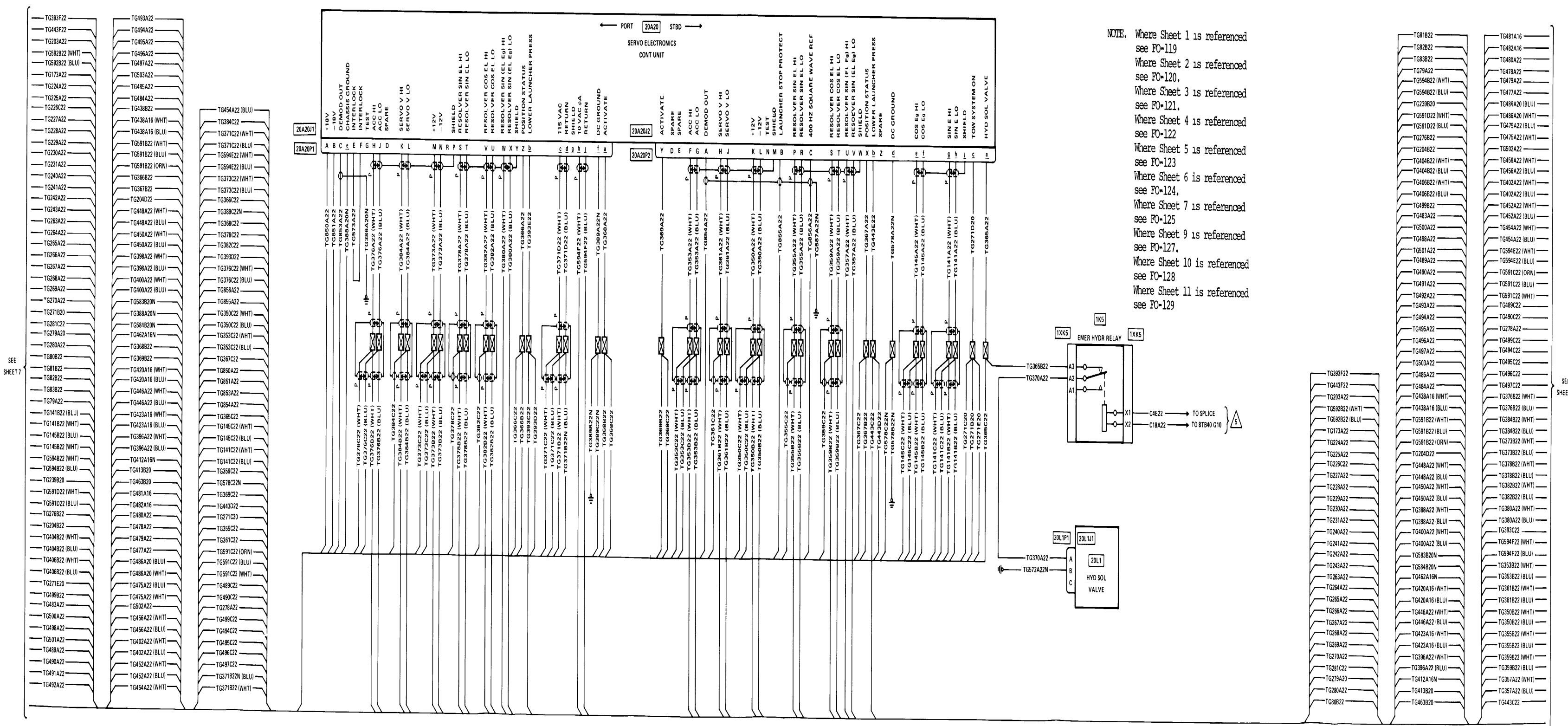
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 Where Sheet 11 is referenced see FO-129



NOTE: Where Sheet 1 is referenced see PO-119.
 Where Sheet 2 is referenced see PO-120.
 Where Sheet 3 is referenced see PO-121.
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 Where Sheet 11 is referenced see PO-129.

SEE SHEET 6

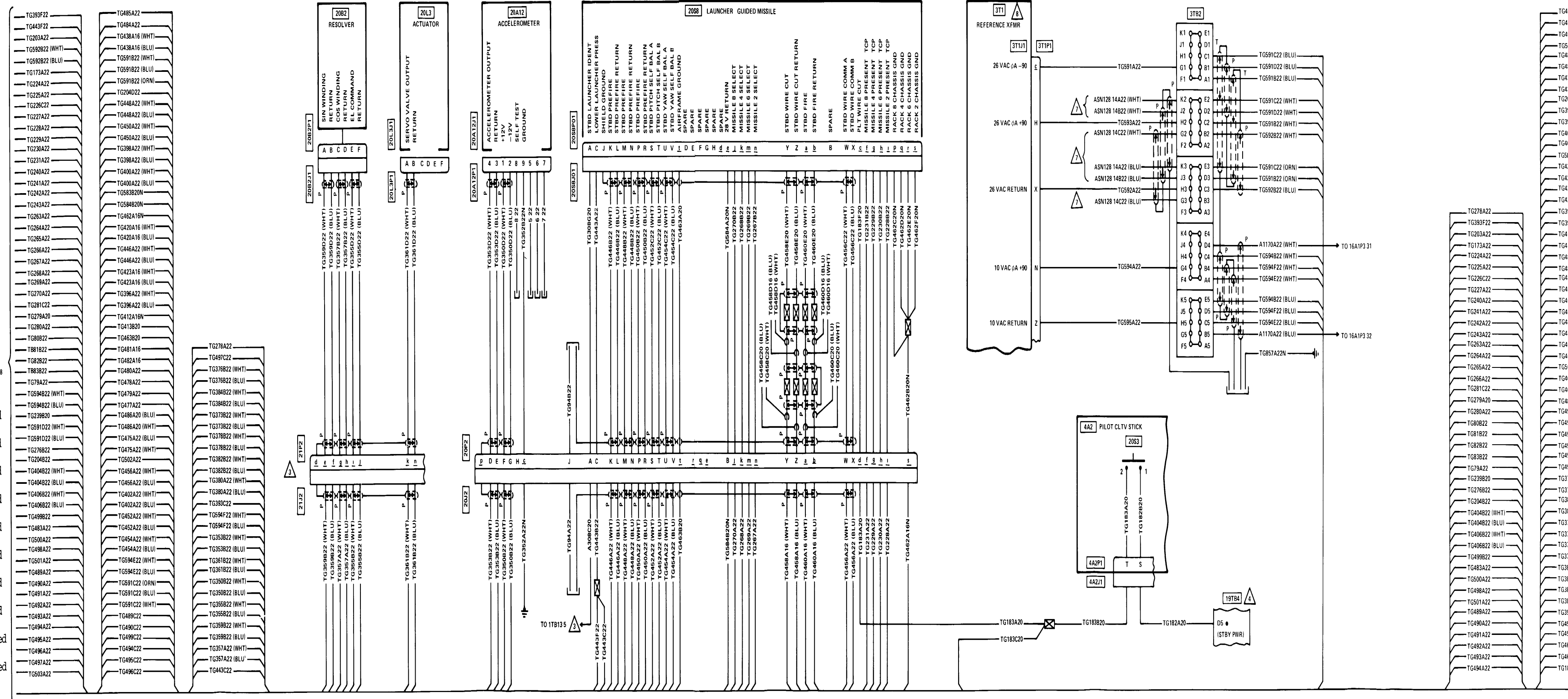
SEE SHEET 8



NOTE: Where Sheet 1 is referenced see FO-119
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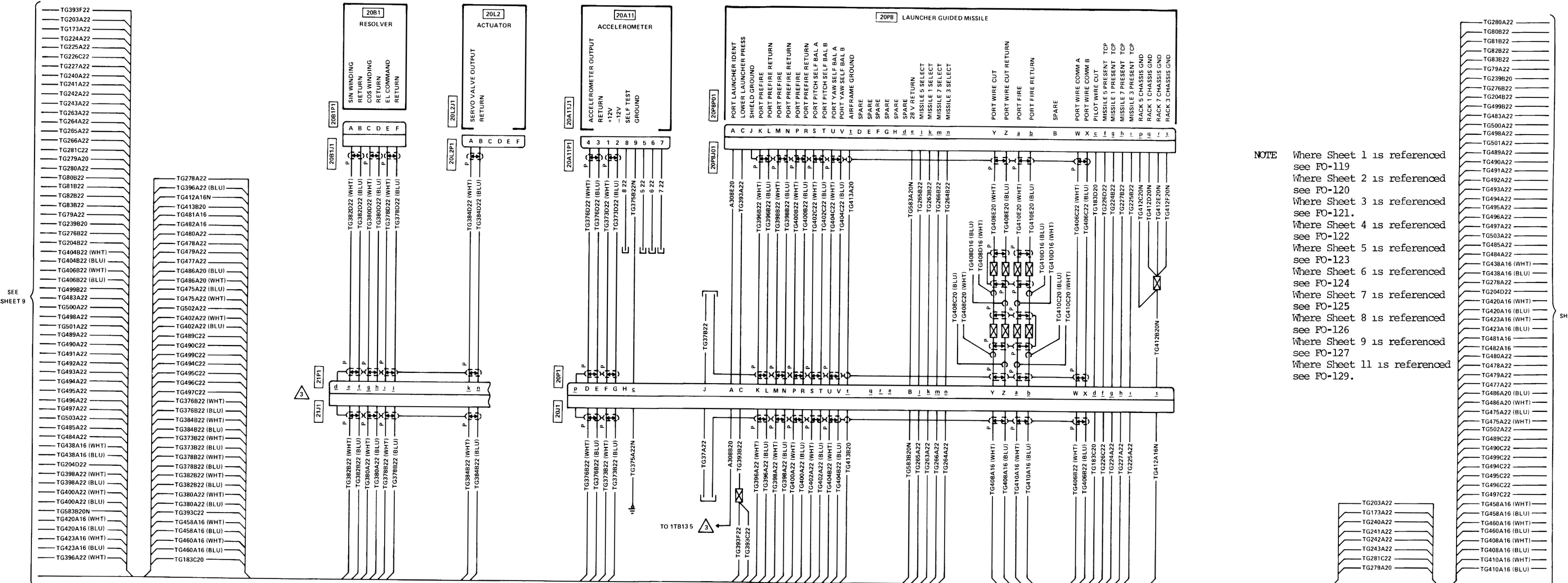
SEE SHEET 1

SEE SHEET 9

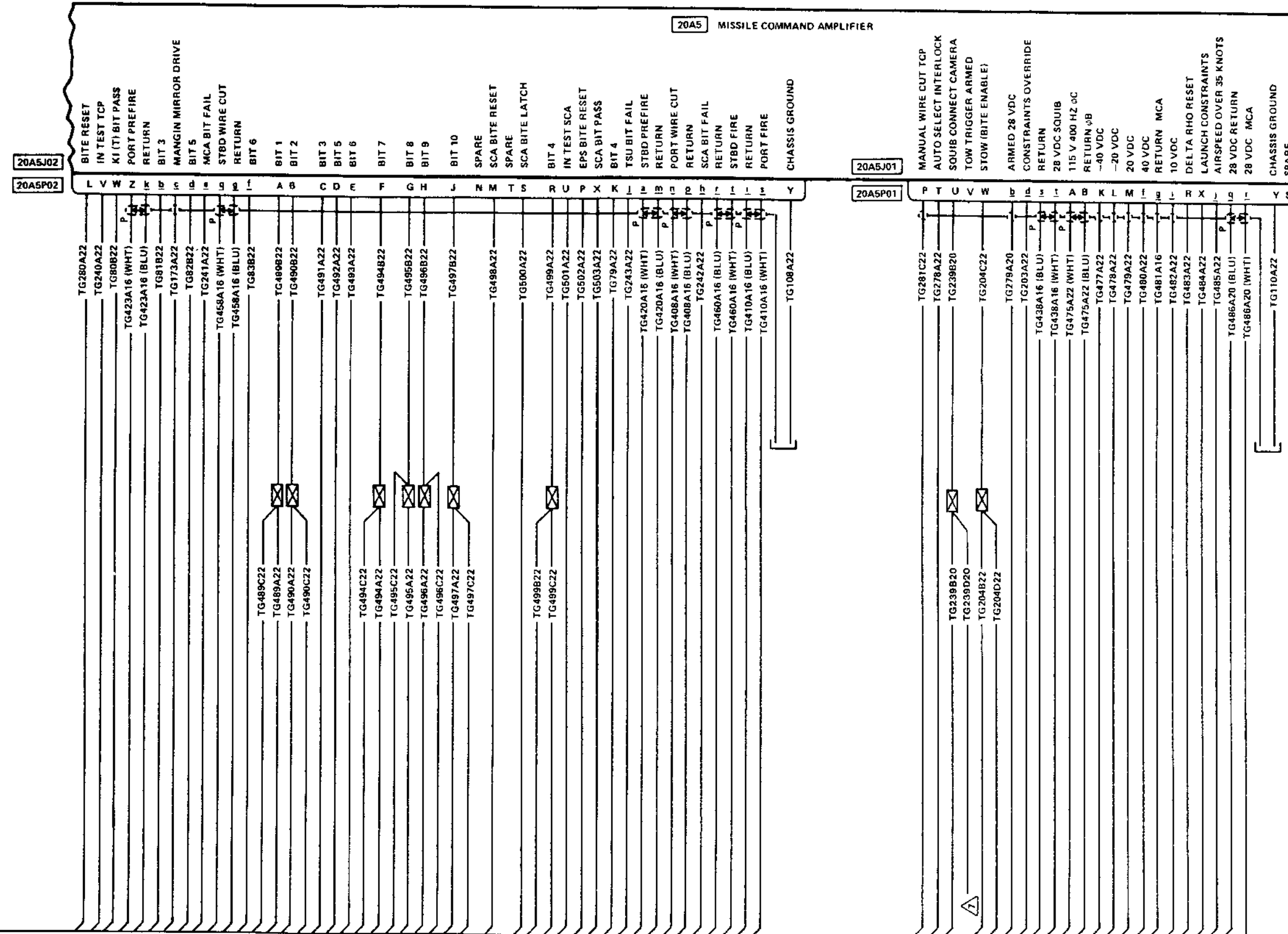
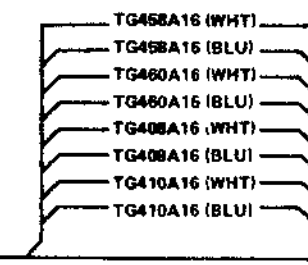
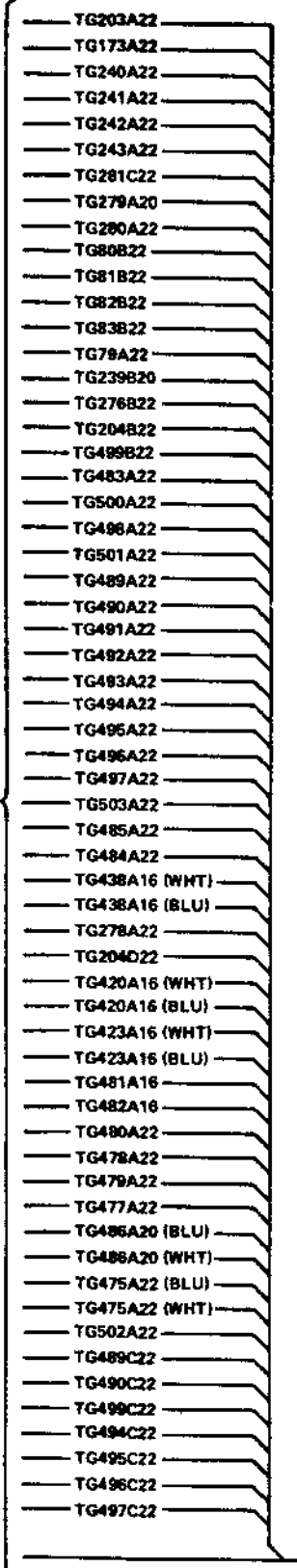


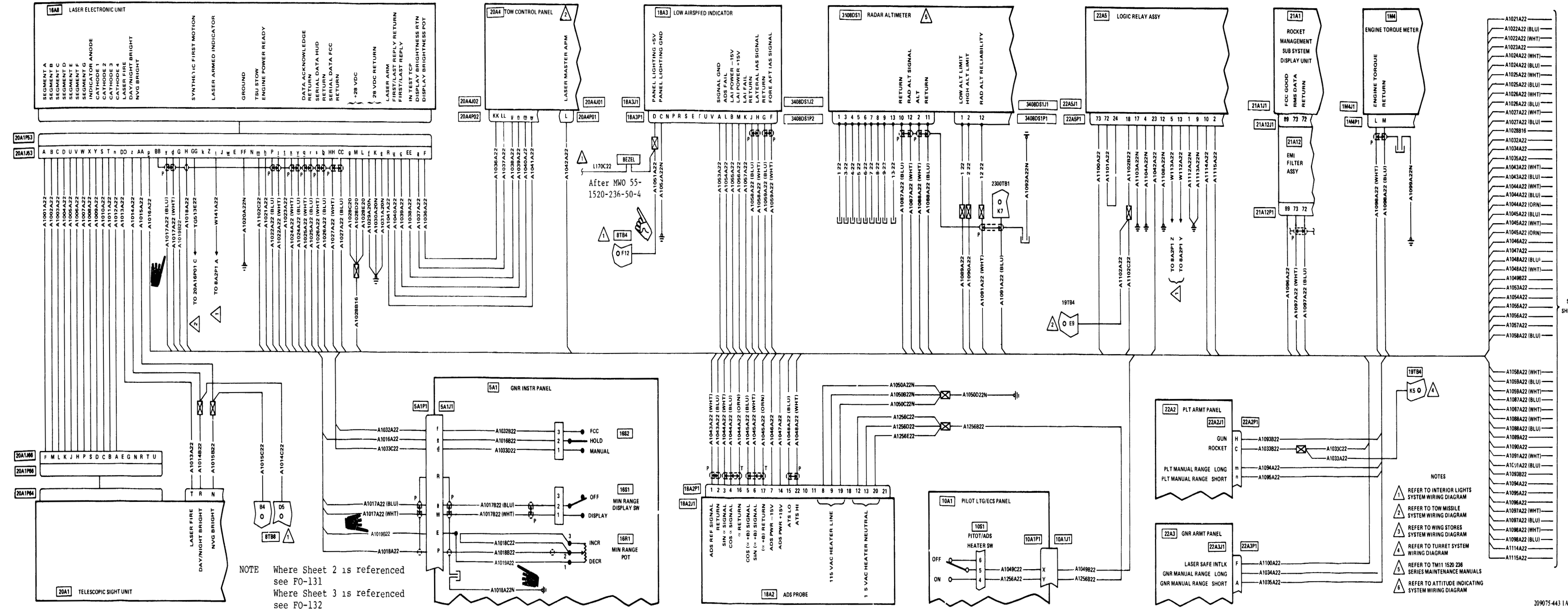
SEE SHEET B

NOTE: Where Sheet 1 is referenced see FO-119
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SEE SHEET 10



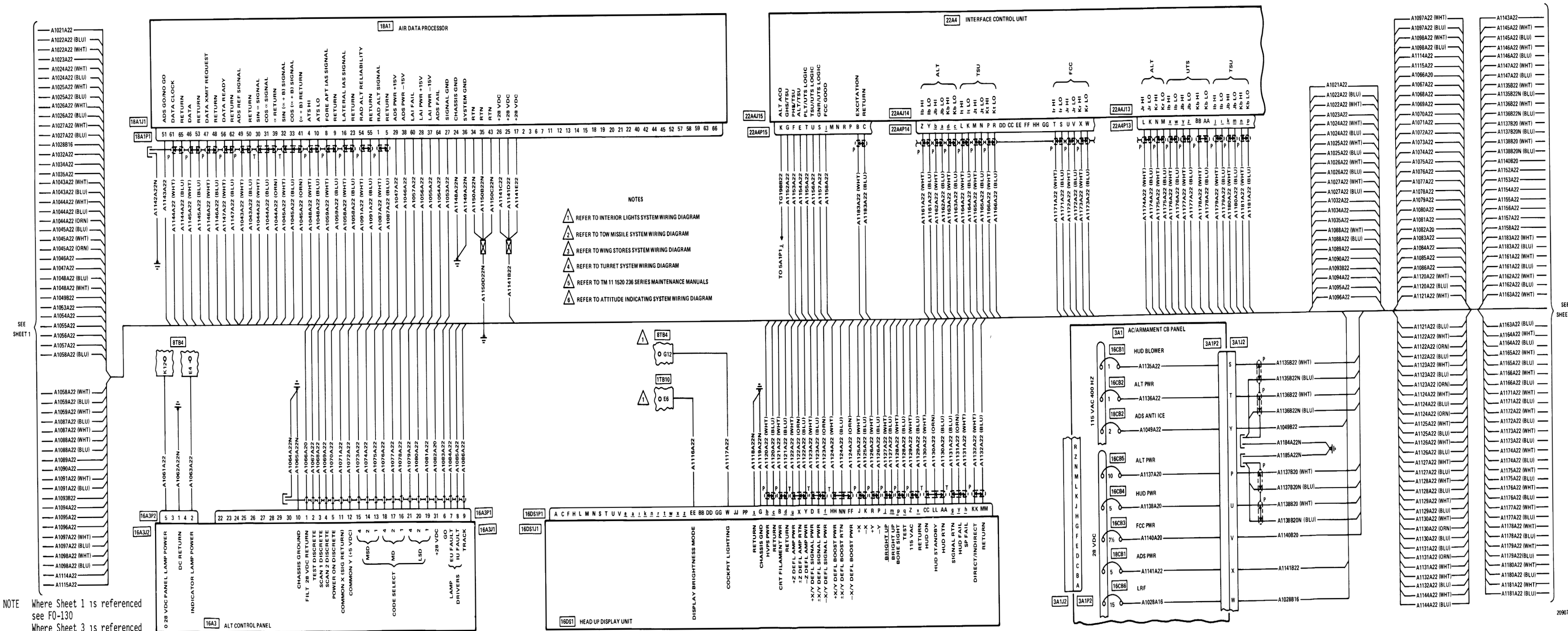


NOTE
 Where Sheet 2 is referenced see FO-131
 Where Sheet 3 is referenced see FO-132
 Where Sheet 4 is referenced see FO-133

- NOTES
- ⚠ REFER TO INTERIOR LIGHTS SYSTEM WIRING DIAGRAM
 - ⚠ REFER TO TOW MISSILE SYSTEM WIRING DIAGRAM
 - ⚠ REFER TO WING STORES SYSTEM WIRING DIAGRAM
 - ⚠ REFER TO TURRET SYSTEM WIRING DIAGRAM
 - ⚠ REFER TO TM11 1520 236 SERIES MAINTENANCE MANUALS
 - ⚠ REFER TO ATTITUDE INDICATING SYSTEM WIRING DIAGRAM

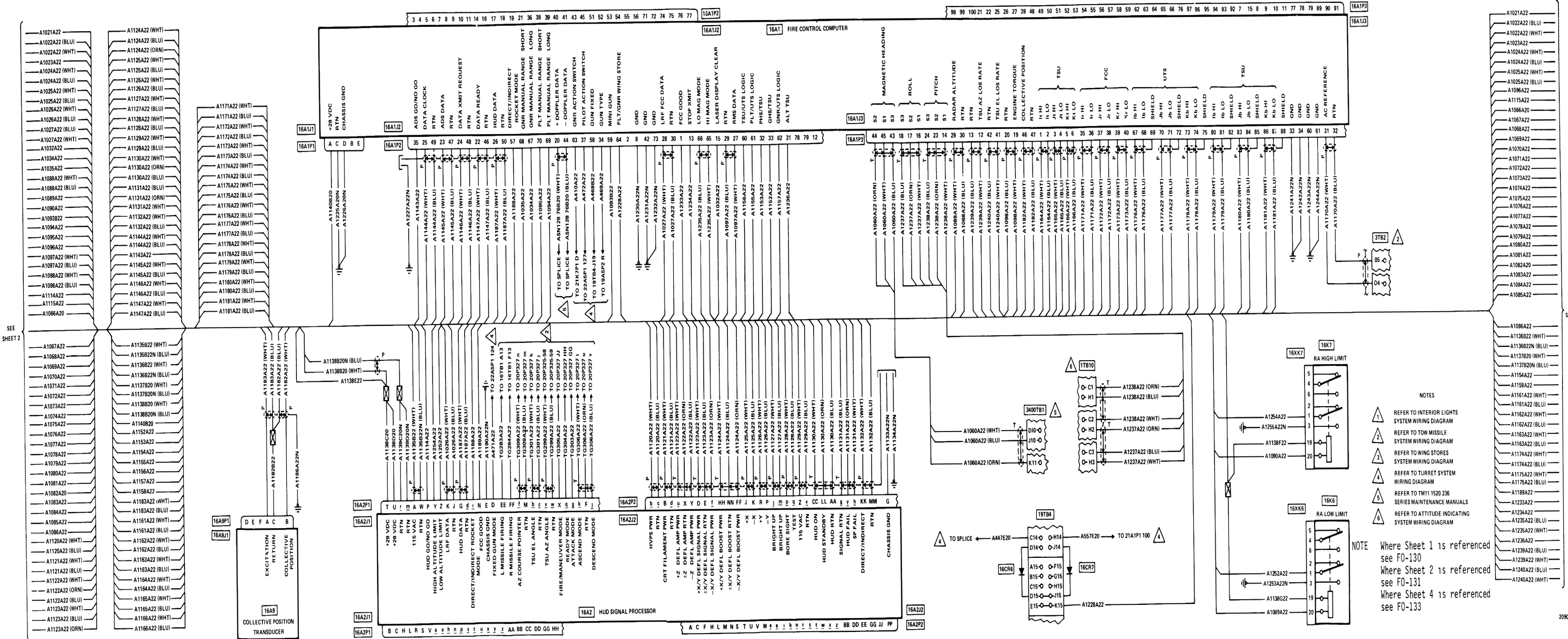
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SEE SHEET 2



NOTE: Where Sheet 1 is referenced see FO-130
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 Where Sheet 4 is referenced see FO-133

SEE SHEET 3



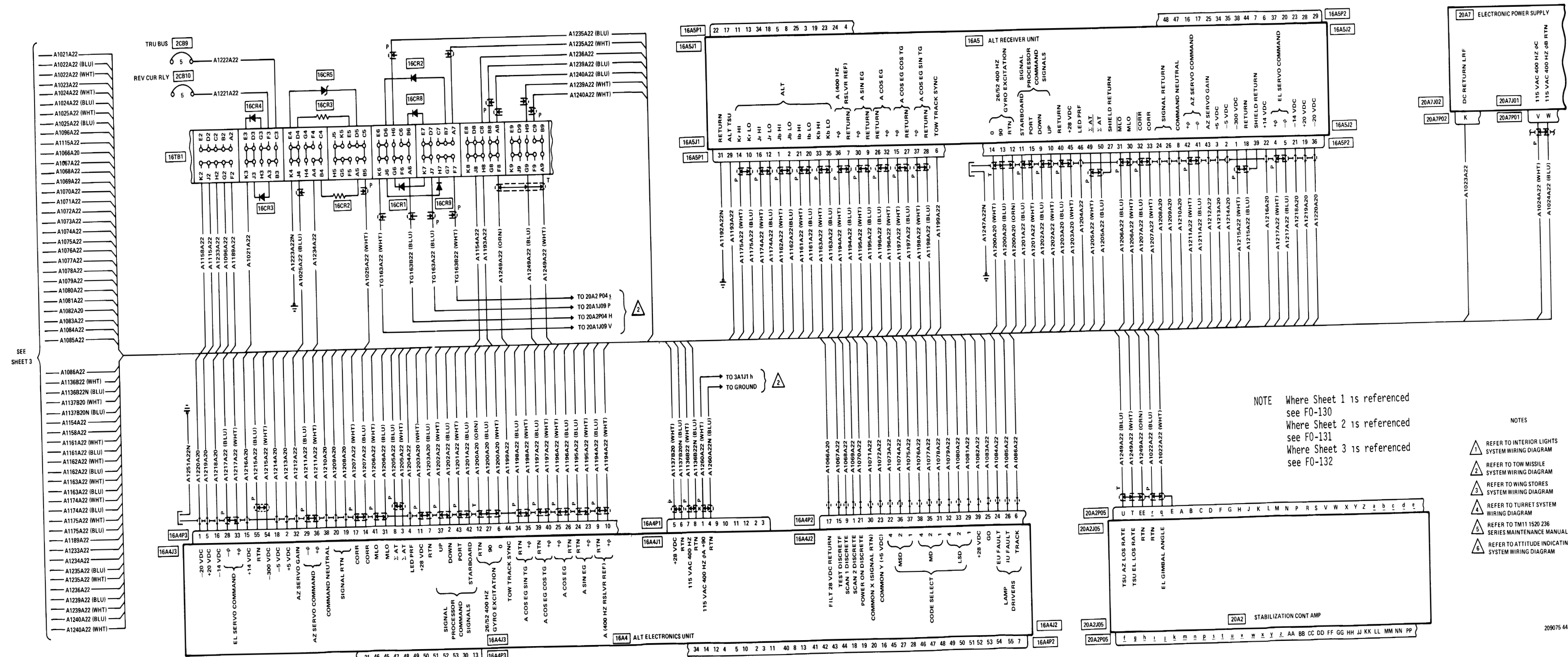
SEE SHEET 2

SEE SHEET 4

NOTES

- 1 REFER TO INTERIOR LIGHTS SYSTEM WIRING DIAGRAM
- 2 REFER TO TOW MISSILE SYSTEM WIRING DIAGRAM
- 3 REFER TO WING STORES SYSTEM WIRING DIAGRAM
- 4 REFER TO TURRET SYSTEM WIRING DIAGRAM
- 5 REFER TO TM11 1520 236 SERIES MAINTENANCE MANUALS
- 6 REFER TO ATTITUDE INDICATING SYSTEM WIRING DIAGRAM

NOTE Where Sheet 1 is referenced see FO-130
Where Sheet 2 is referenced see FO-131
Where Sheet 4 is referenced see FO-133

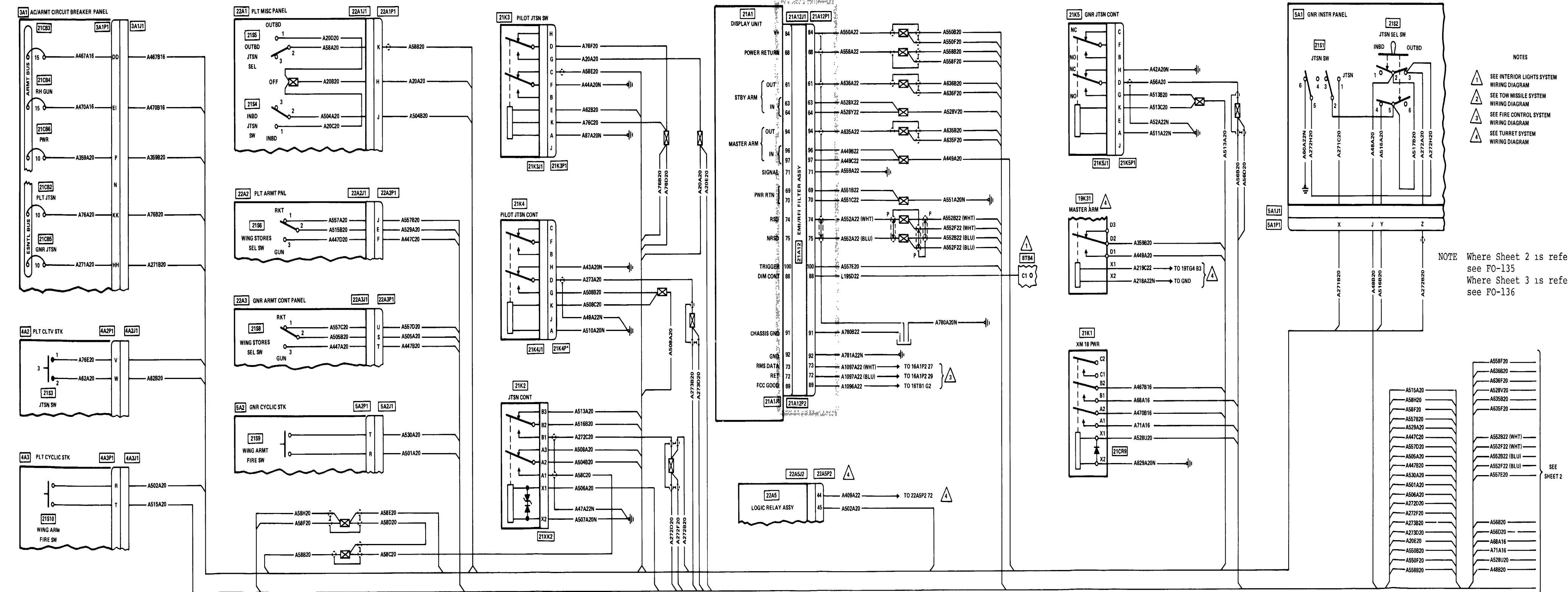


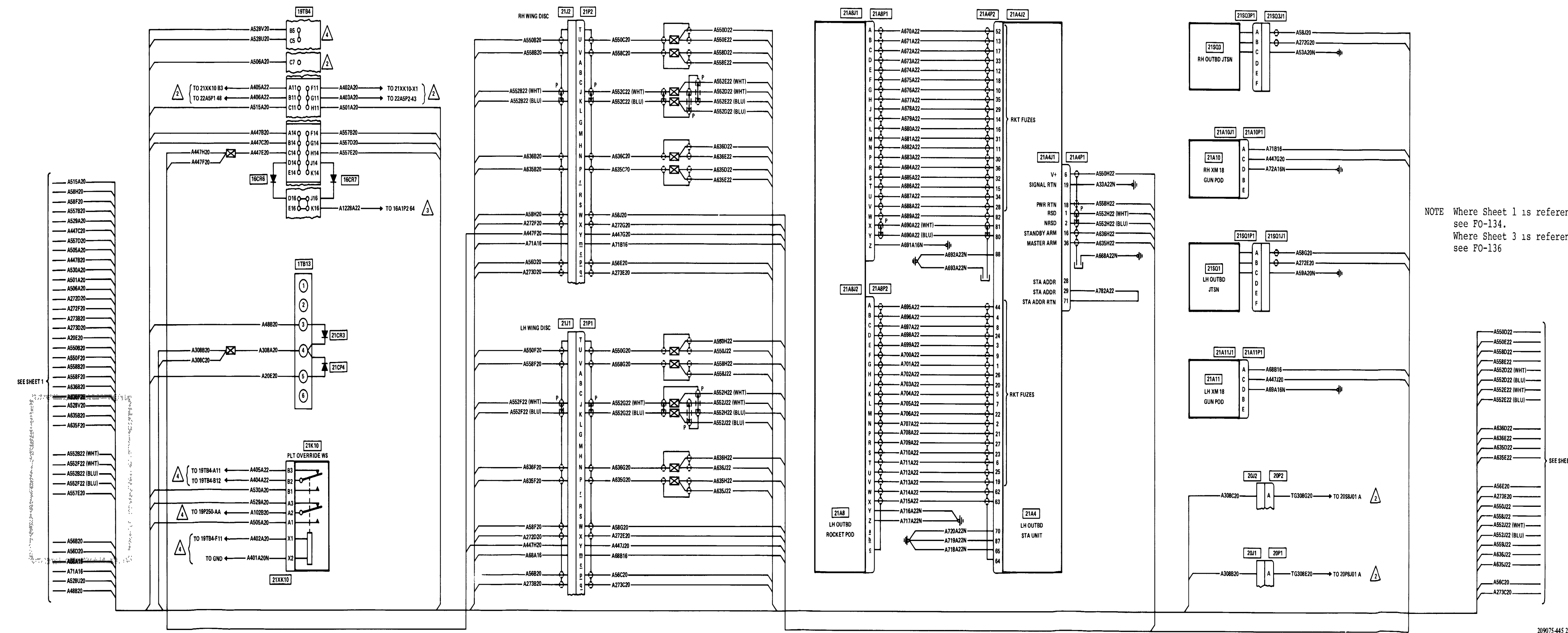
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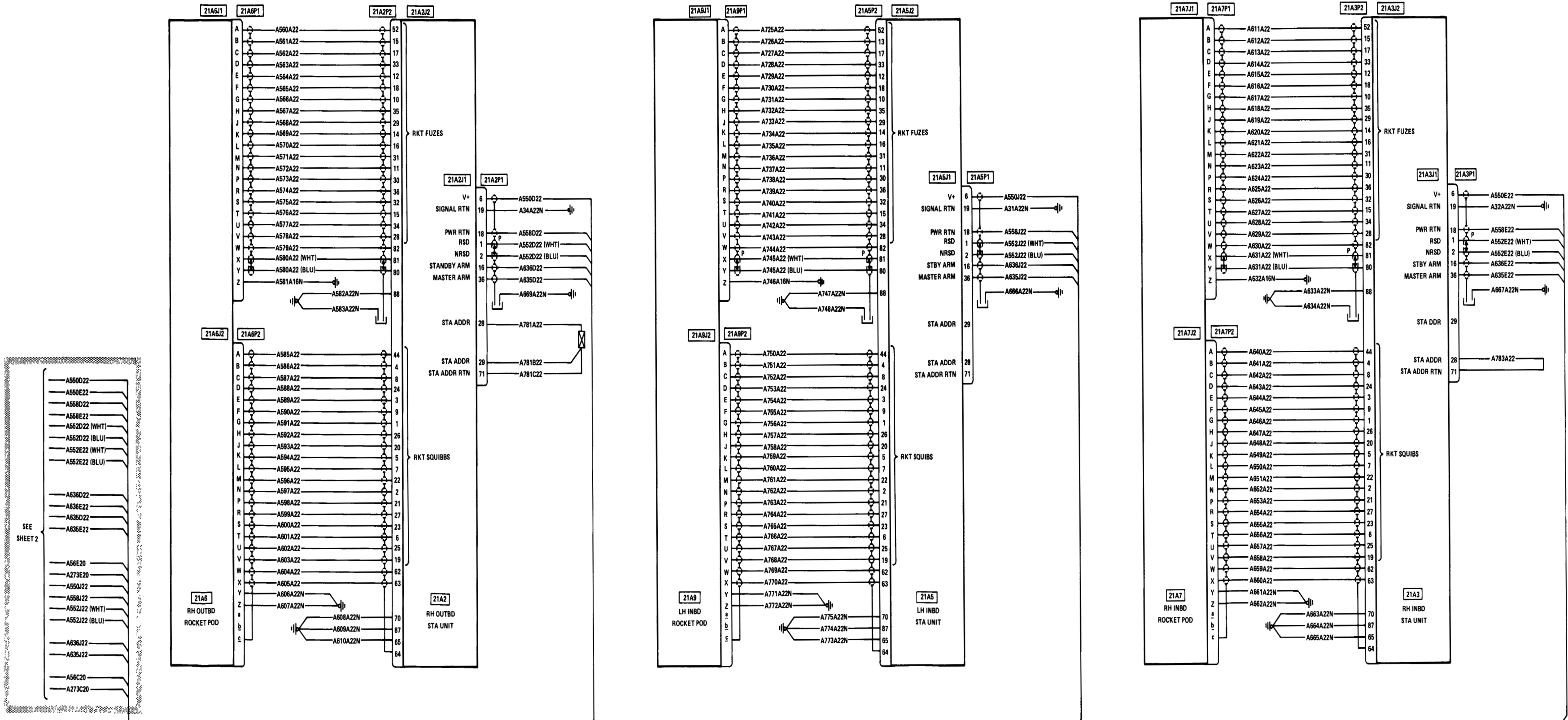
SEE SHEET 3

NOTE Where Sheet 1 is referenced see F0-130
Where Sheet 2 is referenced see F0-131
Where Sheet 3 is referenced see F0-132

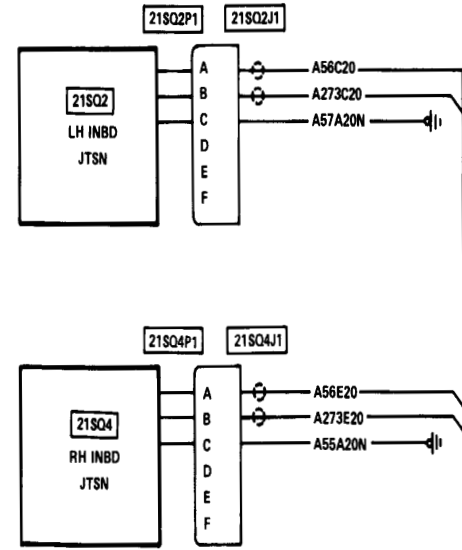
- NOTES
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 - ⚠ REFER TO TOW MISSILE SYSTEM WIRING DIAGRAM
 - ⚠ REFER TO WING STORES SYSTEM WIRING DIAGRAM
 - ⚠ REFER TO TURRET SYSTEM WIRING DIAGRAM
 - ⚠ REFER TO TM11 1520 236 SERIES MAINTENANCE MANUALS
 - ⚠ REFER TO ATTITUDE INDICATING SYSTEM WIRING DIAGRAM



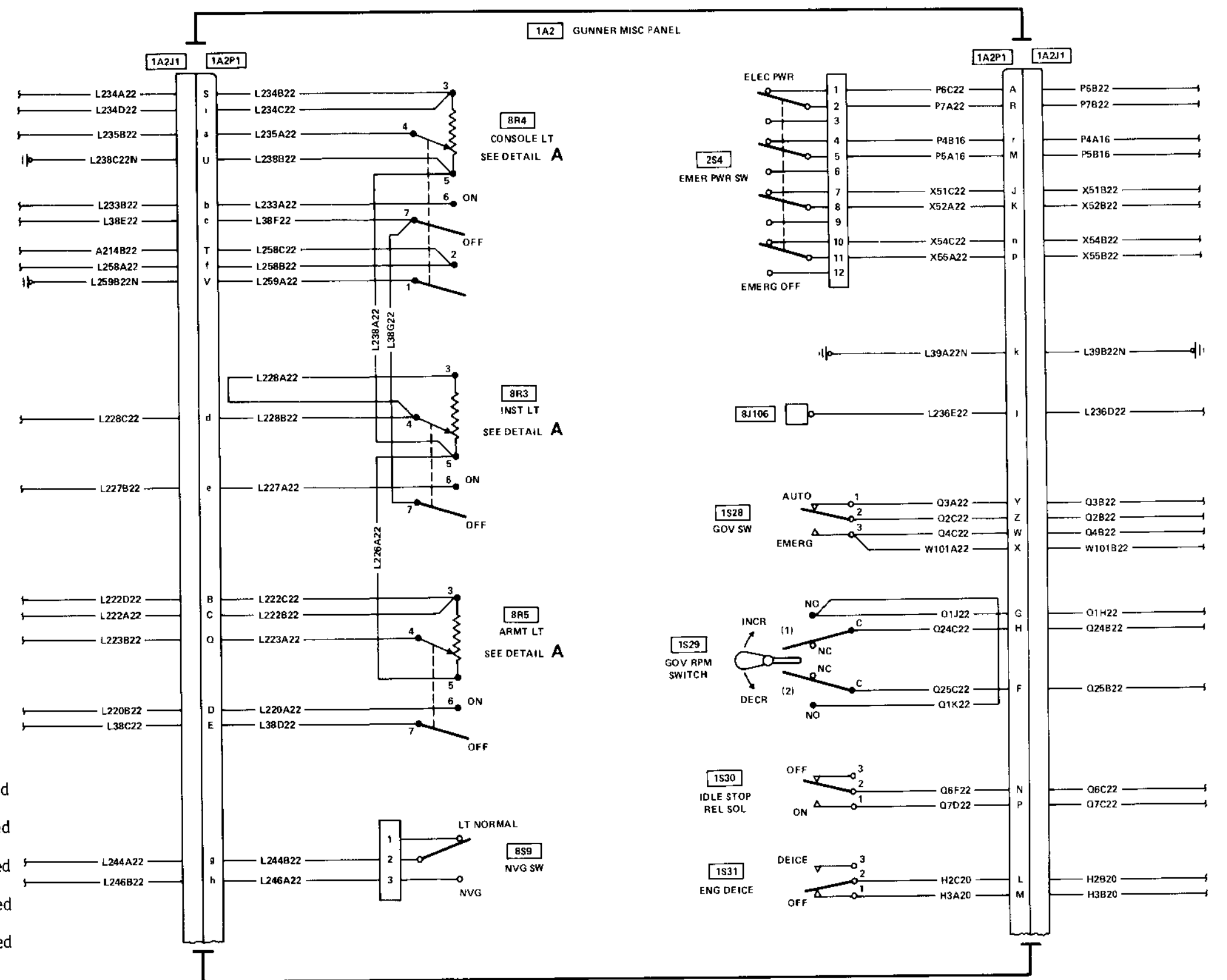


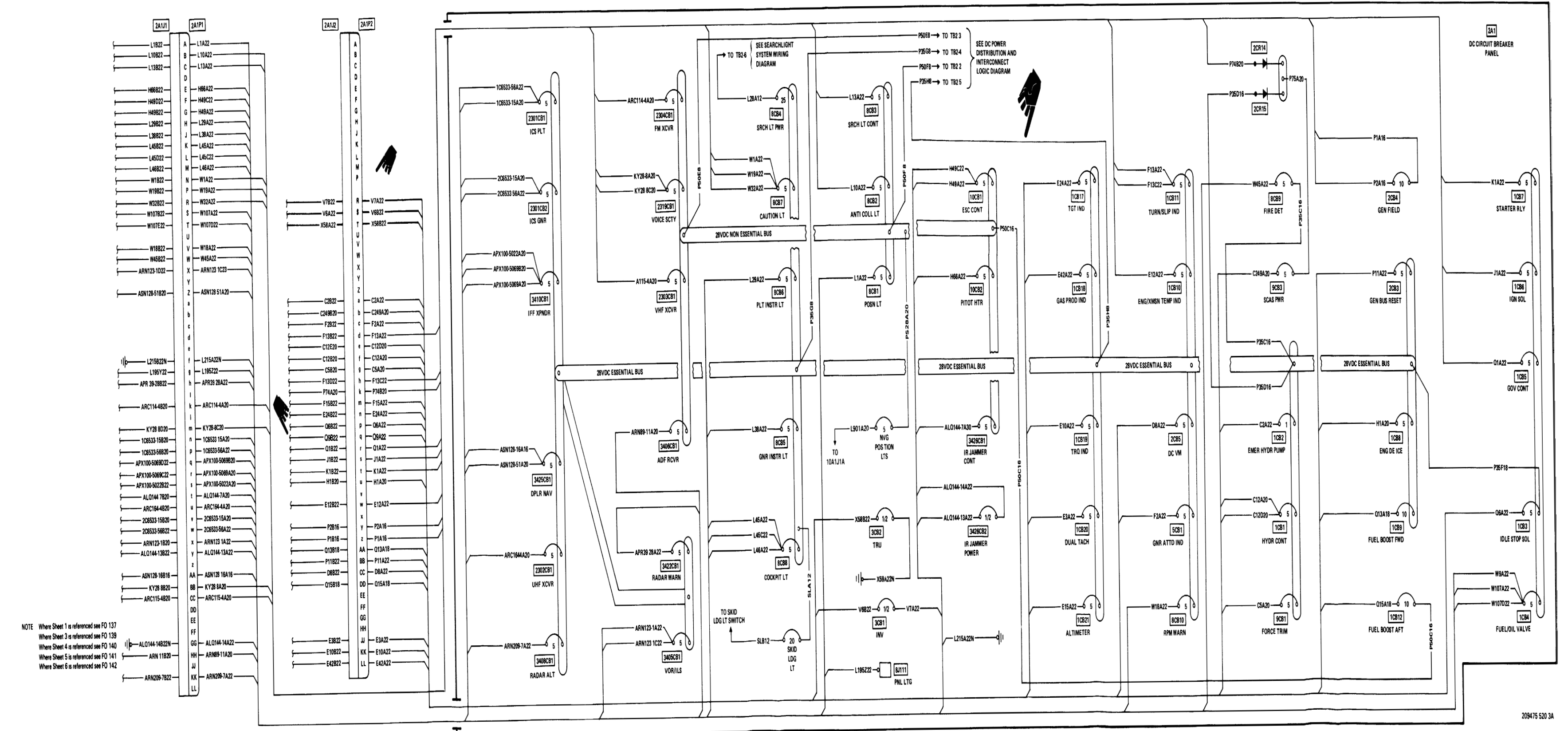


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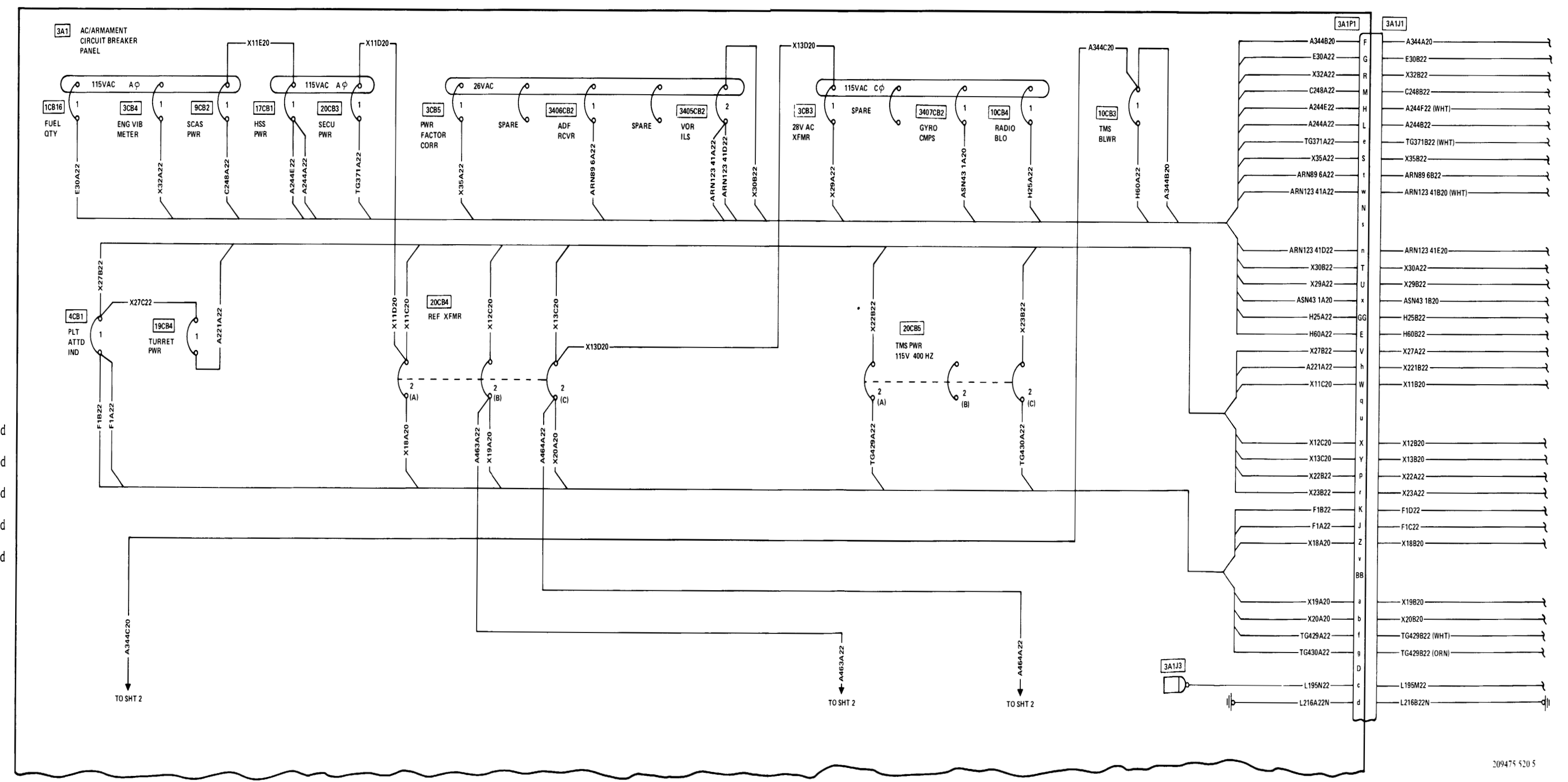
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 Where Sheet 3 is referenced see F0-139
 Where Sheet 4 is referenced see F0-140
 Where Sheet 5 is referenced see F0-141
 Where Sheet 6 is referenced see F0-142



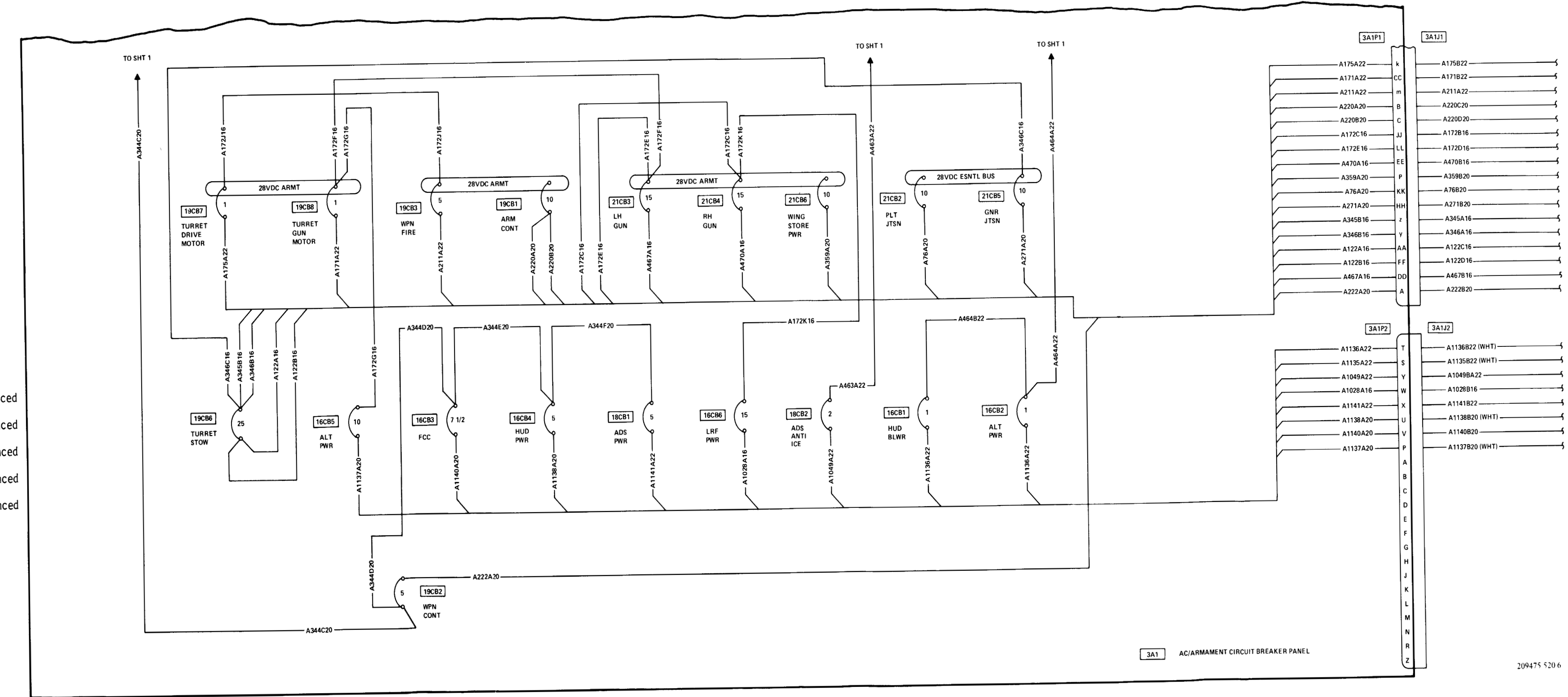


NOTE Where Sheet 1 is referenced see FO 137
 Where Sheet 2 is referenced see FO 138
 Where Sheet 3 is referenced see FO 140
 Where Sheet 4 is referenced see FO 141
 Where Sheet 5 is referenced see FO 142

NOTE Where Sheet 1 is referenced see F0-137
 Where Sheet 2 is referenced see F0-138
 Where Sheet 4 is referenced see F0-140
 Where Sheet 5 is referenced see F0-141
 Where Sheet 6 is referenced see F0-142

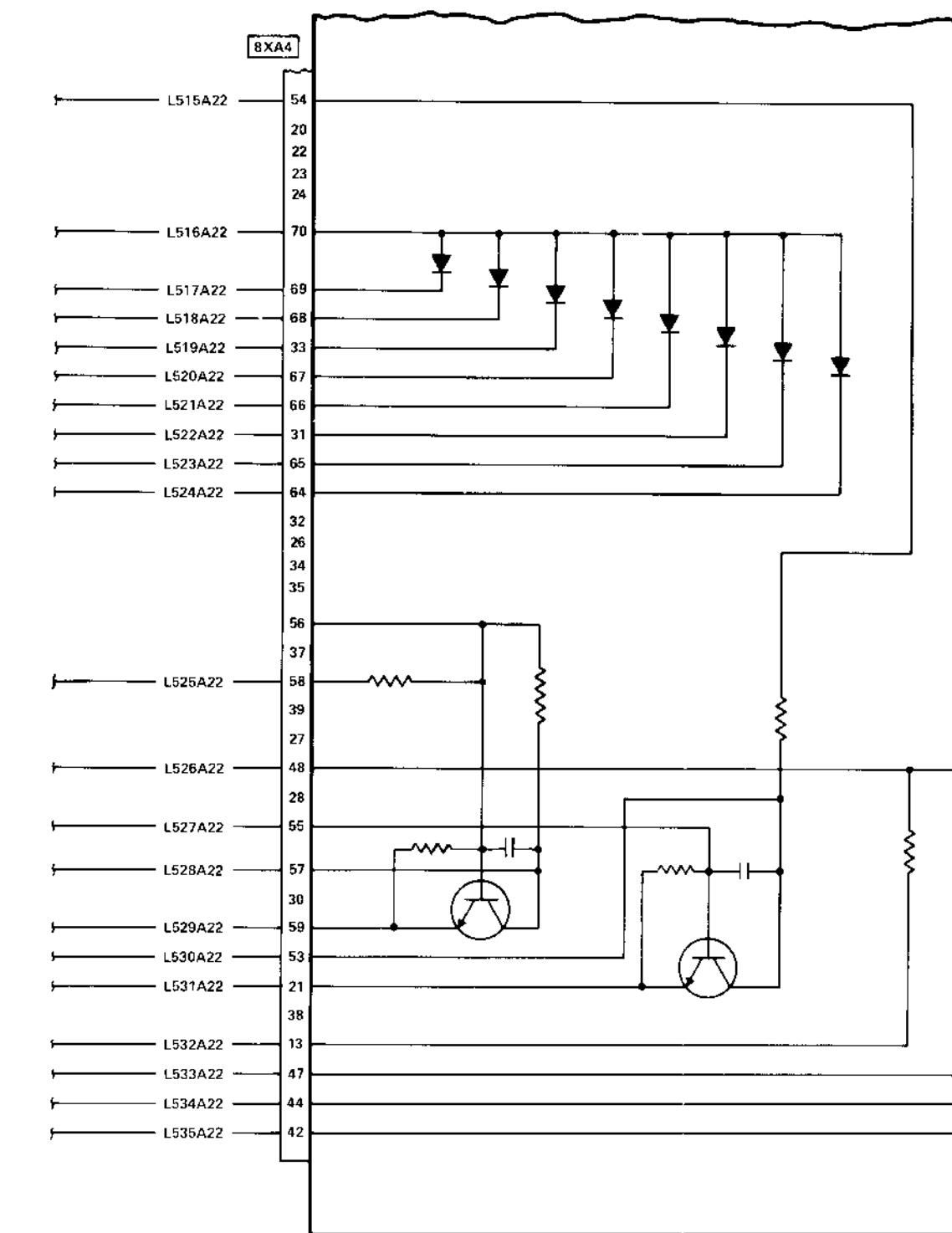
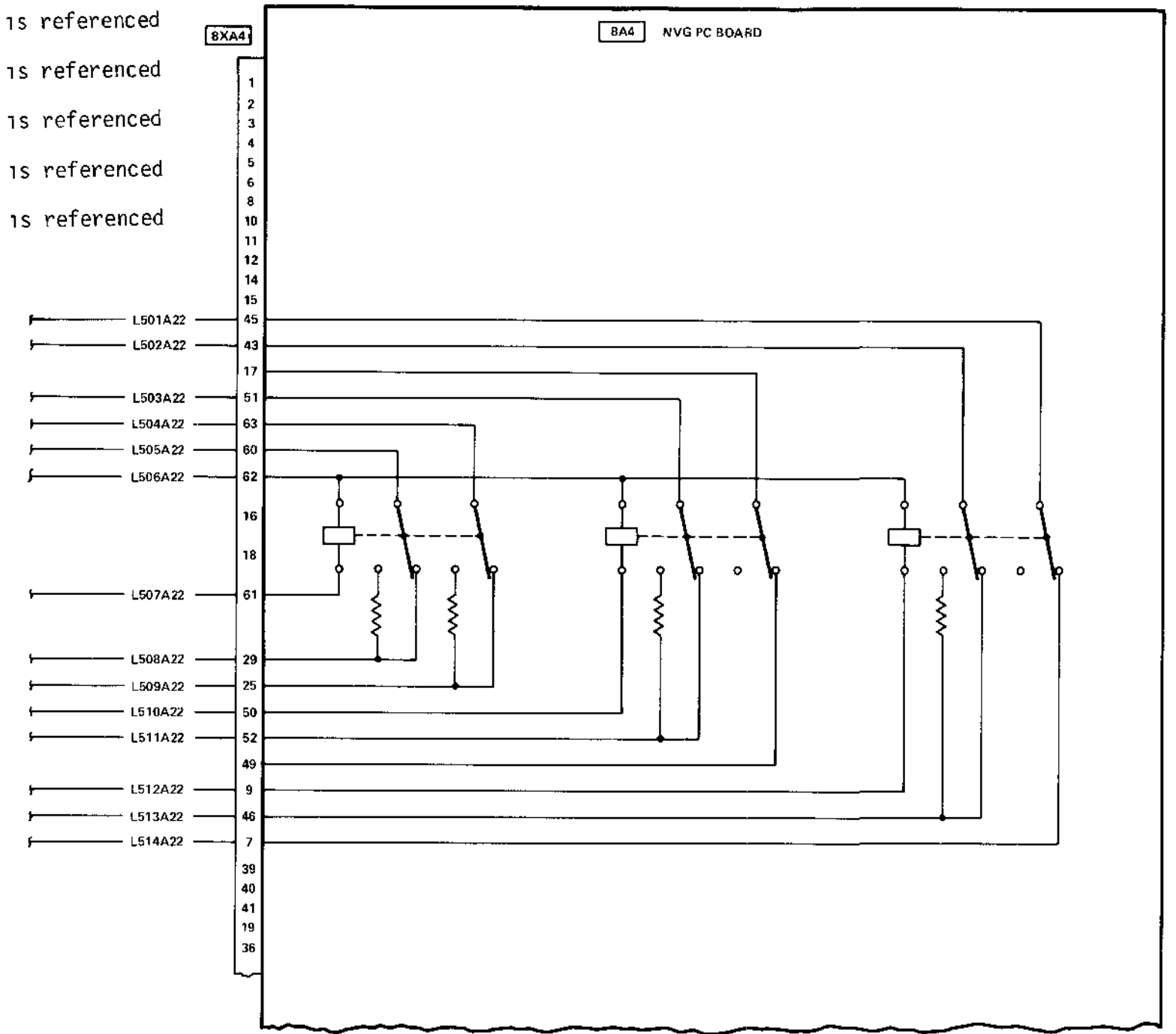


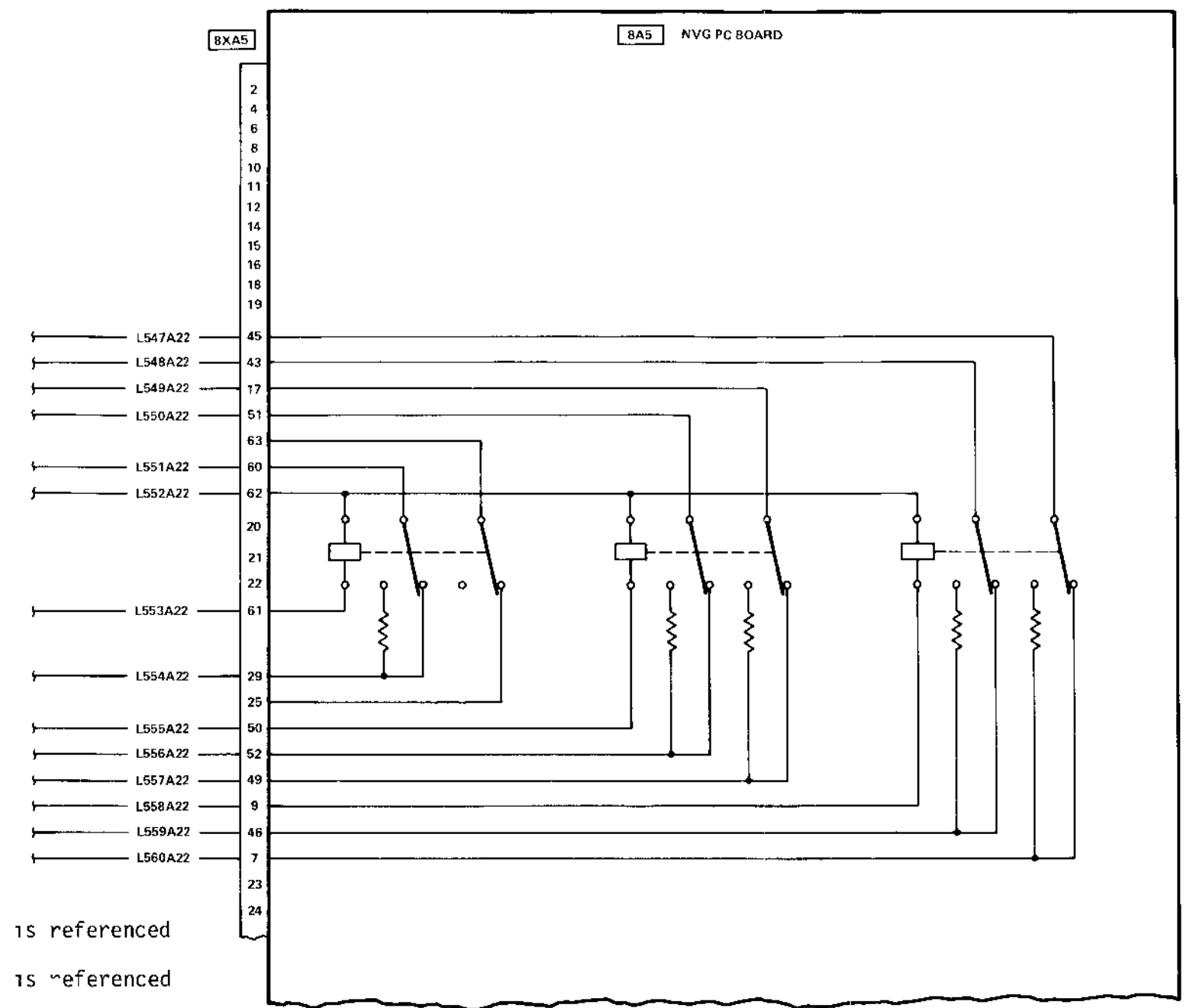
NOTE Where Sheet 1 is referenced see FO-137
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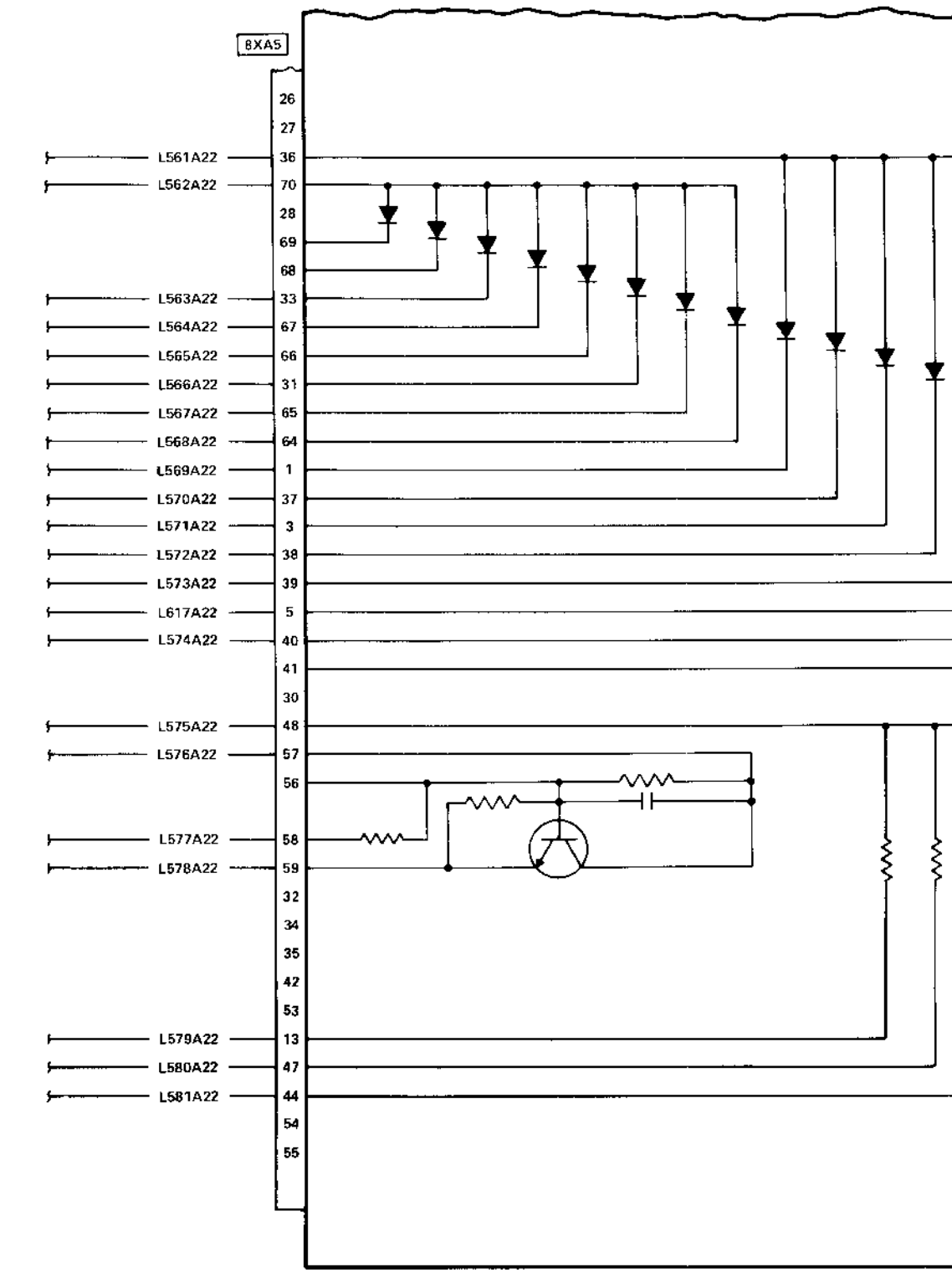
3A1 AC/ARMAMENT CIRCUIT BREAKER PANEL

NOTE Where Sheet 1 is referenced see F0-137
 Where Sheet 2 is referenced see F0-138
 Where Sheet 3 is referenced see F0-139
 Where Sheet 4 is referenced see F0-140
 Where Sheet 6 is referenced see F0-142





NOTE Where Sheet 1 is referenced see FO-137
 Where Sheet 2 is referenced see FO-138
 Where Sheet 3 is referenced see FO-139
 Where Sheet 4 is referenced see FO-140
 Where Sheet 5 is referenced see FO-141





SOMETHING WRONG WITH THIS MANUAL?

THEN... JOT DOWN THE DOPE ABOUT IT ON THIS FORM, TEAR IT OUT, FOLD IT AND DROP IT IN THE MAIL!

FROM: (YOUR UNIT'S COMPLETE ADDRESS)
PFC JOHN DOE
COA, 3^d ENGINEER BN
FT. LEONARD WOOD MO 63108

DATE

PUBLICATION NUMBER

TM 55-1520-236-23-4

DATE

8 May 1980

TITLE

AVIM/AVUM Maint Manual - AH-1S
 (PROD), (ECAS), (MODERNIZED COBRA)

BE EXACT... PIN-POINT WHERE IT IS

IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:

PAGE NO.	PARA-GRAPH	FIGURE NO.	TABLE NO.
6	2-1 a		
81		4-3	
125	line 20		

In line 6 of paragraph 2-1a the manual states the engine has 6 cylinders. The engine on my set only has 4 cylinders. Change the manual to show 4 cylinders.

Callout 16 on figure 4-3 is pointing at a bolt. In the key to fig. 4-3, item 16 is called a skim. Please correct one or the other.

Ordered a gasket, item 19 on figure B-16 by NSN 2910-00-762-3001. I got a gasket but it doesn't fit. Supply says I got what I ordered, so the NSN is wrong. Please give me a good NSN.

TYPED NAME, GRADE OR TITLE, AND TELEPHONE NUMBER

JOHN DOE, PFC (268) 317-7111

SIGN HERE:

John Doe

DA FORM 2028-2
 1 AUG 74

P.S.--IF YOUR OUTFIT WANTS TO KNOW ABOUT YOUR MANUAL "FIND," MAKE A CARBON COPY OF THIS AND GIVE IT TO YOUR HEADQUARTERS.
 DRSTS-M Overprint 1, 1 Nov 78

TEAR ALONG DOTTED LINE

SAMPLE

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PARA-GRAPH

FIGURE NO.

TABLE NO.

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RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL MANUALS



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ING DOTTED LINE

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Material Readiness Command
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4300 Goodfellow Boulevard
St. Louis, Mo. 63120

T... ALONG DOTTED LINE

FOLD BACK

The Metric System and Equivalents

Linear Measure

1 centimeter = 10 millimeters = .39 inch
 1 decimeter = 10 centimeters = 3.94 inches
 1 meter = 10 decimeters = 39.37 inches
 1 dekameter = 10 meters = 32.8 feet
 1 hectometer = 10 dekameters = 328.08 feet
 1 kilometer = 10 hectometers = 3,280.8 feet

Weights

1 centigram = 10 milligrams = .15 grain
 1 decigram = 10 centigrams = 1.54 grains
 1 gram = 10 decigrams = .035 ounce
 1 dekagram = 10 grams = .35 ounce
 1 hectogram = 10 dekagrams = 3.52 ounces
 1 kilogram = 10 hectograms = 2.2 pounds
 1 quintal = 100 kilograms = 220.46 pounds
 1 metric ton = 10 quintals = 1.1 short tons

Liquid Measure

1 centiliter = 10 milliliters = .34 fl. ounce
 1 deciliter = 10 centiliters = 3.38 fl. ounces
 1 liter = 10 deciliters = 38.82 fl. ounces
 1 dekaliter = .10 liters = 2.64 gallons
 1 hectoliter = 10 dekaliters = 26.42 gallons
 1 kiloliter = 10 hectoliters = 264.18 gallons

Square Measure

1 sq. centimeter = 100 sq. millimeters = .155 sq. inch
 1 sq. decimeter = 100 sq. centimeters = 15.5 sq. inches
 1 sq. meter (centare) = 100 sq. decimeters = 10.76 sq. feet
 1 sq. dekameter (are) = 100 sq. meters = 1,076.4 sq. feet
 1 sq. hectometer (hectare) = 100 sq. dekameters = 2.47 acres
 1 sq. kilometer = 100 sq. hectometers = .386 sq. mile

Cubic Measure

1 cu. centimeter = 1000 cu. millimeters = .06 cu. inch
 1 cu. decimeter = 1000 cu. centimeters = 61.02 cu. inches
 1 cu. meter = 1000 cu. decimeters = 35.31 cu. feet

Approximate Conversion Factors

To change	To	Multiply by	To change	To	Multiply by
inches	centimeters	2.540	ounce-inches	newton-meters	.007062
feet	meters	.305	centimeters	inches	.394
yards	meters	.914	meters	feet	3.280
miles	kilometers	1.609	meters	yards	1.094
square inches	square centimeters	6.451	kilometers	miles	.621
square feet	square meters	.093	square centimeters	square inches	.155
square yards	square meters	.836	square meters	square feet	10.764
square miles	square kilometers	2.590	square meters	square yards	1.196
acres	square hectometers	.405	square kilometers	square miles	.386
cubic feet	cubic meters	.028	square hectometers	acres	2.471
cubic yards	cubic meters	.765	cubic meters	cubic feet	35.315
fluid ounces	milliliters	29.573	cubic meters	cubic yards	1.308
pints	liters	.473	milliliters	fluid ounces	.034
quarts	liters	.946	liters	pints	2.113
gallons	liters	3.785	liters	quarts	1.057
ounces	grams	28.349	liters	gallons	.264
pounds	kilograms	.454	grams	ounces	.035
short tons	metric tons	.907	kilograms	pounds	2.205
pound-feet	newton-meters	1.365	metric tons	short tons	1.102
pound-inches	newton-meters	.11375			

Temperature (Exact)

°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C
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