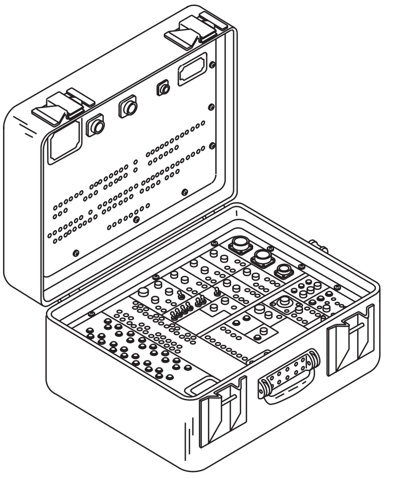
TM 1−6625−735−14

TECHNICAL MANUAL

OPERATOR, UNIT, DIRECT SUPPORT, AND GENERAL SUPPORT MAINTENANCE MANUAL

TEST SET, STABILIZATION SYSTEM
P/N 70700−20650−050



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This manual supersedes TM 1−6625−735−13, dated 29 February 1996

HEADQUARTERS, DEPARTMENT OF THE ARMY
22 JUNE 2001

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.

CONSUMABLE MATERIALS

Observe all cautions and warnings on the containers when using consumables. When applicable, wear necessary protective gear during handling and use. If a consumable is flammable or explosive, MAKE SURE consumable and its vapors are kept away from heat, spark, and flame. MAKE SURE equipment is properly grounded and firefighting equipment is readily available prior to use.

The synchro transmitter control is a precision instrument that contains a slip clutch and an 18 to 1 reduction mechanism between the outer (fine) dial and the inner (coarse) dial. Use care to avoid over torquing this mechanism which will result in activation of the slip clutch and loss of calibration between inner and outer dials. Always use outer dial when adjusting to a specific degrees setting. If it is necessary to use inner dial, MAKE SURE to turn dial using slow, smooth, continuous motion.

SAFETY STEPS TO FOLLOW IF SOMEONE IS THE VICTIM OF ELECTRICAL SHOCK

1. Do Not Try To Pull Or Grab The Individual.

2. If Possible, Turn Off The Electrical Power.

3. If You Cannot Turn Off The Electrical Power, Pull, Push, Or Lift The Person To Safety Using A Dry Wooden Pole Or A Dry Rope Or Some Other Insulating Material.

4. Send For Help As Soon As Possible.

5. After The Injured Person Is Free Of Contact With The Source Of Electrical Shock, Move The Person A Short Distance Away And Immediately Start Resuscitation.

LIST OF EFFECTIVE PAGES

Insert latest change pages; dispose of superseded pages in accordance with applicable policies.

NOTE: On a changed page, the portion of the text affected by the latest change is indicated by a vertical line in the outer margin of the page. Changes to illustrations are indicated by a vertical line in the outer margin of the page next to the illustration title.

Dates of issue for original and change pages are:

Original .... 22 June 2001

The total number of pages in this manual is 200.

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B Blank	0	3-40 Blank	0	A-2 Blank	0
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TECHNICAL MANUAL
NO. 1-6625-735-14

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C. 22 June 2001

Operator, Unit, Direct Support, and General Support Maintenance Manual for Test Set, Stabilization System P/N 70700-20650-050

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes, or if you know of a way to improve these procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms) or DA Form 2028-2 located in back of this manual direct to: Commander, US Army Aviation and Missile Command, ATTN: AMSAM-MMC-LS-LP, Redstone Arsenal, AL 35898-5230. You may also submit your recommended changes by E-mail directly to ls-lp@redstone.army.mil or by FAX at 256-842-6546/DSN 788-8546. A replay will be furnished directly to you. Instructions for sending an electronic 2028 may be found at the back of this publication.

TABLE OF CONTENTS

TABLE OF CONTENTS (Cont)

HOW TO USE THIS MANUAL

This Operator, Unit, Direct Support, and General Support Maintenance Manual is descriptive. It includes the purpose, function, physical characteristics, location, access, and theory of operation for the Stabilization System Test Set, 70700-20650-050, hereinafter referred to as SSLTS. Related illustrations show simple schematics, block diagrams, and location diagrams.

This manual contains maintenance data through the Operator, Unit, Direct and General support levels. This manual does not contain maintenance data for Depot level.

CHAPTER 1

INTRODUCTION

CHAPTER OVERVIEW

SECTION I.

GENERAL INFORMATION

SECTION OVERVIEW

1.1. SCOPE.

This manual describes the TEST SET, STABILIZATION SYSTEM 70700-20650-050 and provides instructions for replacement of parts available to operators, aviation unit, and intermediate maintenance technicians.

1.2. MAINTENANCE FORMS, RECORDS, AND REPORTS.

Department of the Army forms and procedures used for equipment maintenance will be those prescribed by DA Pam 738-750, Army Maintenance Management System; or AR 700-138, Army Logistics Readiness and Sustainability.

1.3. CORROSION PREVENTION AND CONTROL (CPC).

Corrosion Prevention and Control (CPC) of Army material is a continuing concern. It is important that any corrosion problems with this item be reported so that the problem can be corrected and improvements can be made to prevent the problem in future items.

While corrosion is typically associated with rusting of metals, it can also include deterioration of other materials, such as rubber and plastic. Unusual cracking, softening, swelling, or breaking of these materials may be a corrosion problem.

If a corrosion problem is identified, it can be reported using Standard Form 368, Product Quality Deficiency Report. Use of keywords such as, ″corrosion,″ ″rust,″ ″deterioration,″ or ″cracking″ will ensure that the information is identified as a CPC problem.

The form should be submitted to the address specified in DA PAM 738-750.

1.4. DESTRUCTION OF ARMY ELECTRONICS MATERIEL.

Destruction of Army electronics materiel to prevent enemy use shall be in accordance with TM 750-244-2.

1.5. REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR).

If your equipment needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you don't like about the design. Put it on an SF 368 (Quality Deficiency Report). Mail it to: Commander, US Army Aviation and Missile Command, ATTN: AMSAM-MMC-LS-LP, Redstone Arsenal, AL 35898-5230. We'll send you a reply.

SECTION II.

EQUIPMENT DESCRIPTION AND DATA

SECTION OVERVIEW

1.6. EQUIPMENT CHARACTERISTICS AND FEATURES.

The test set provides the AVUM technician with the capability to monitor and simulate signals to and from AFCS. UH−60A UH−60L EH−60A UH−60Q The computer test point panel monitors inputs and outputs from the SAS/FPS computer. The STABILATOR SYSTEM portion of the test set allows monitoring of various input/output/operating voltages by means of lights and test points. It also provides sensor simulators to input signals to the system under test. The SAS SYSTEM portion of the test set provides lamps and test points to monitor input and output signals, and sensor simulators to provide signal inputs.

1.7. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS.

1.7.1. Carrying Cases. The test set is made up of two carrying cases. The cable case assembly contains all the interconnecting cable assemblies. The test unit case contains the computer test point panel in the upper hinged half of the case and the STABILATOR SYSTEM and SAS SYSTEM test points, lamps, and simulators in the lower hinged half of the case.

1.7.2. Computer Test Point Panel UH60A UH60L EH60A UH−60Q The computer test point panel is connected to the SAS/FPS computer by the three cable assemblies which connect to test set's J4, J5, and J6. The test points correspond to related pins on the SAS/FPS computer connectors and are in parallel with them.

1.7.3. STABILATOR SYSTEM Section. The STABILATOR SYSTEM section of the test set has 30 INDICATORS which represent system conditions. There are 51 TEST POINTS on the test set which are used to provide access to signal and voltage conditions within the system. The simulator sections contain variable controls, mode selector controls, and test points. These simulator sections can input, if selected, simulated sensor and circuit operation. This portion of the test set also provides manual slew, fault monitoring and reset capabilities.

1.7.4. SAS SYSTEM Section. The SAS SYSTEM section of the test set has 15test points and three monitor lamps to provide access to system signal points and to visually indicate system conditions. It also provides airspeed simulation, yaw rate gyro simulation, and a roll attitude simulation. The roll attitude simulation is by means of a synchro transmitter control.

1.7.5. LAMP TEST Switch. The LAMP TEST switch provides a voltage to all STABILATOR SYSTEM INDICATORS lamps and to the three SAS SYSTEM indicator lamps.

1.7.6. POWER Section. The POWER section provides lamp monitoring, test points, and circuit breaker protection for input and output voltages.

1.8. EQUIPMENT DATA.

The following is a listing of the technical characteristics of the stabilization system test set equipment.

AC voltage	115 vac, 1ø, 400 Hz
DC voltage	27.5 to 28.5 vdc
Outputs	Simulated
Dimensions -	
Test unit (l x w x h)	55.88 cm (22 in.) x 43.18 cm (17 in.) x 35.56 cm (14 in.)
Cable case assembly (l x w x h)	66.04 cm (26 in.) x 45.72 cm (18 in.) x 21.59 cm (8.5 in.)
Volume -	
Test unit	0.09 cubic meter (3.0 cu ft)
Cable case assembly	0.069 cubic meter (2.3 cu ft)
Weight -	
Test unit	21.9 kg (48.7 lbs)
Cable case assembly	19.8 kg (44 lbs)

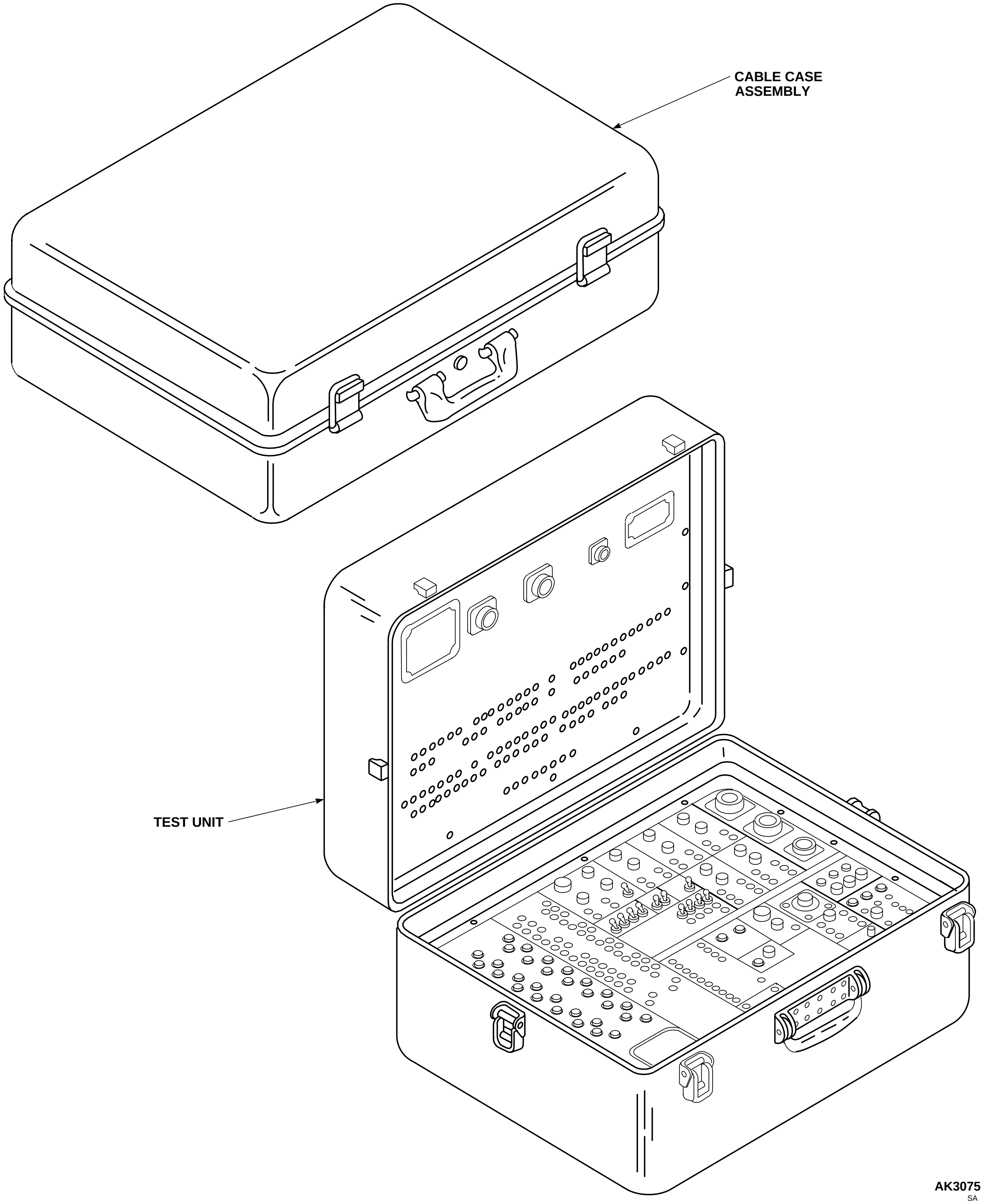

Figure 1-1. Test Set, Stabilization System

CHAPTER 2

OPERATION INSTRUCTIONS

CHAPTER OVERVIEW

SECTION I.

DESCRIPTION AND USE OF OPERATOR'S CONTROLS AND INDICATORS

SECTION OVERVIEW

2.1. OPERATOR'S CONTROLS AND INDICATORS.

All operator's controls, indicators, test points, and connectors are shown in Figure 2-1 and listed and described in Table 2-1.

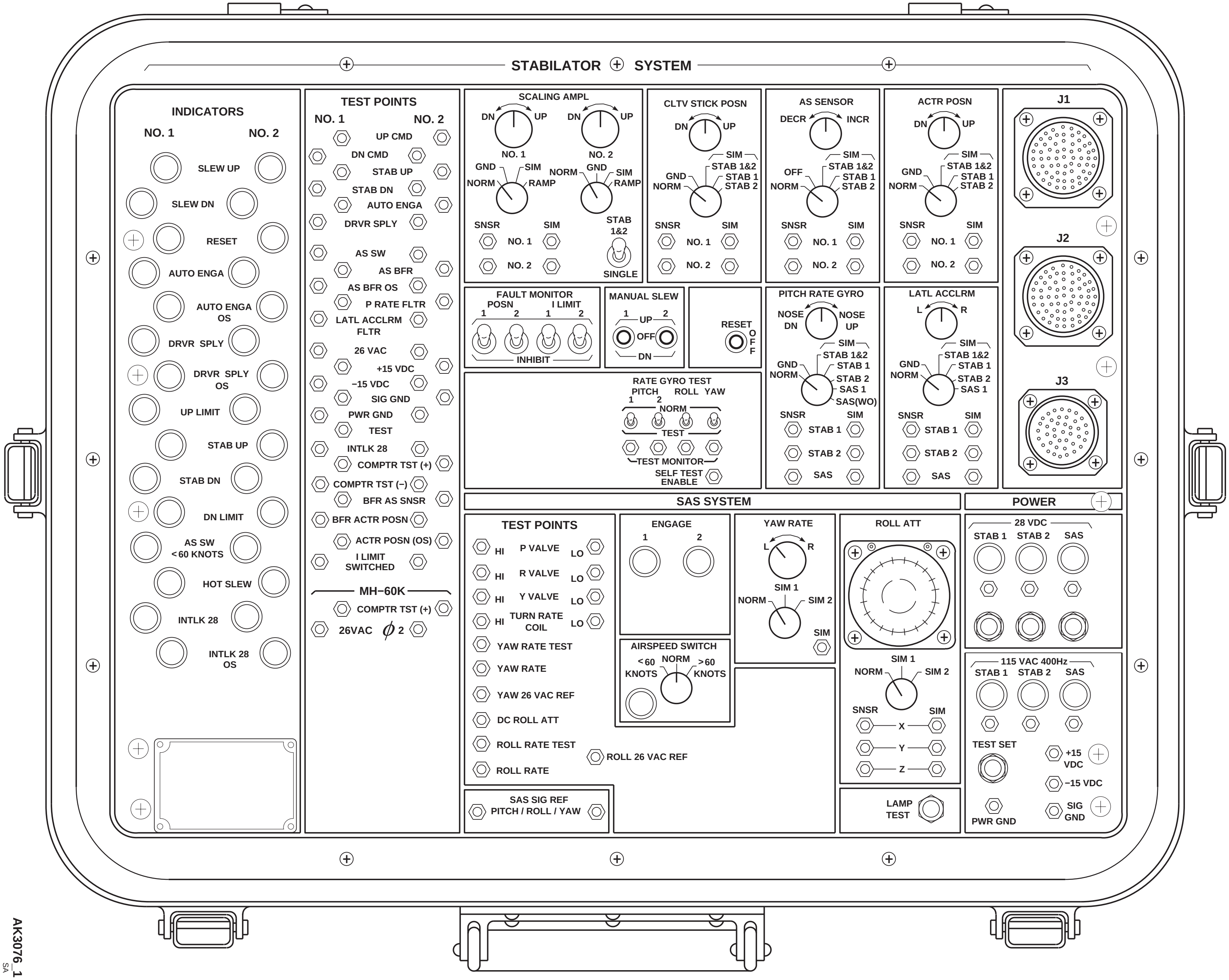

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Figure 2-1. Operator's Controls Diagram (Sheet 1 of 2)

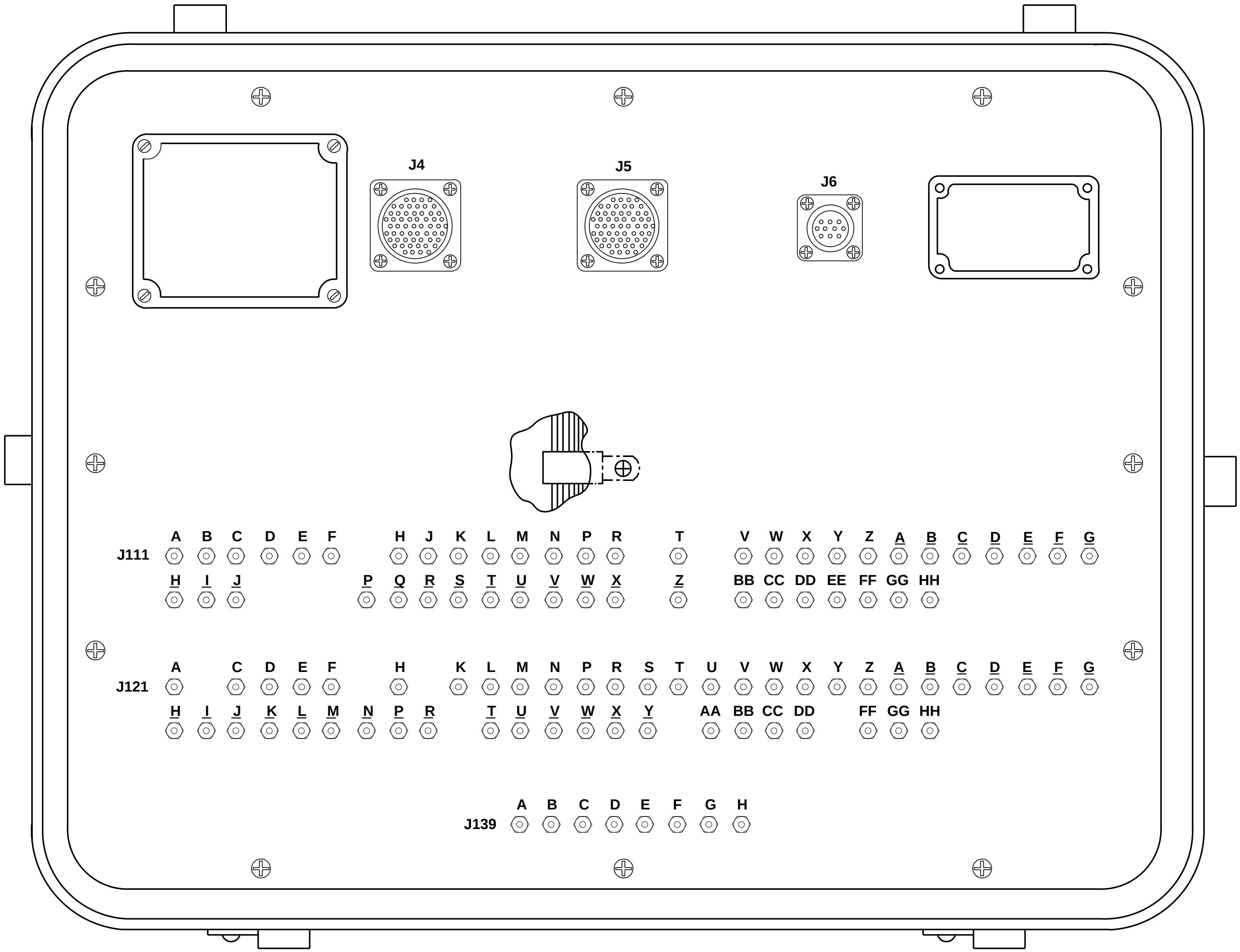

Figure 2-1. Operator's Controls Diagram (Sheet 2)

Table 2-1. Operator's Controls.

CONTROL, INDICATOR, TEST POINT, OR CONNECTOR	FUNCTION
	CONNECTORS
J1	Provides electrical connection between test set, UH−60A UH−60L EH−60A UH−60Q helicopter connector P405R or MH−60K helicopter connector P358R , and No. 1 stabilator amplifier through cable assembly W2.
J2	Provides electrical connection between test set, UH−60A UH−60L EH−60A UH−60Q helicopter connector P404R or MH−60K helicopter connector P358R , and No. 1 stabilator amplifier through cable assembly W6.
J3	Provides electrical connection between test set, UH−60A UH−60L EH−60A UH−60Q helicopter connector P423R or MH−60K helicopter connector P286R , and Stability Augmentation Set (SAS) amplifier through cable assembly W1.
J4	Provides electrical connection between test set, UH−60A UH−60L EH−60A UH−60Q helicopter connector P428R , and Stability Augmentation System/Flight Path Stabilization (SAS/FPS) computer connector J111 through cable assembly W4.
J5	Provides electrical connection between test set, UH−60A UH−60L EH−60A helicopter connector P422R , and SAS/FPS computer connector J121 through cable assembly W5.
J6	Provides electrical connection between test set, UH−60A UH−60L EH−60A helicopter connector P421R , and SAS/FPS computer connector J139 through cable assembly W3.
	POWER
28 VDC STAB 1 Indicator	Goes on to indicate 28 vdc power is applied to test set from helicopter dc electrical power system through helicopter circuit breaker, through test set connector J1, and through test set 28 VDC STAB 1 circuit breaker.
28 VDC STAB 1 Test Point	Provides monitoring capability for 28 vdc power that is used to turn on test set 28 VDC STAB 1 indicator.
28 VDC STAB 1 Circuit Breaker	Applies 28 vdc power to test set from helicopter dc electrical power system, through helicopter circuit breaker, and through test set connector J1. Functions as protective device during overloads and short circuits.
28 VDC STAB 2 Indicator	Goes on to indicate 28 vdc power is applied to test set from helicopter dc electrical power system through helicopter circuit breaker, through test set connector J2, and through test set 28 VDC STAB 2 circuit breaker.
28 VDC STAB 2 Test Point	Provides monitoring capability for 28 vdc power that is used to turn on test set 28 VDC STAB 2 indicator.
28 VDC STAB 2 Circuit Breaker	Applies 28 vdc power to test set from helicopter dc electrical power system, through test set connector J2. Functions as protective device during overloads and short circuits.

Table 2-1. Operator's Controls. (Cont)

CONTROL, INDICATOR, TEST POINT, OR CONNECTOR	FUNCTION
28 VDC SAS Indicator	Goes on to indicate 28 vdc power is applied to test set from helicopter ac electrical power system, through helicopter circuit breaker, through test set connector J3, and through test set 28 VDC SAS circuit breaker.
28 VDC SAS Test Point	Provides monitoring capability for 28 vdc power that is used to turn on test set 28 VDC SAS indicator.
28 VDC SAS Circuit Breaker	Applies 28 vdc power to test set from helicopter dc electrical power system, through helicopter circuit breaker and through test set connector J3. Functions as protective device during overloads and short circuits.
115 VAC 400 Hz STAB 1 Indicator	Goes on to indicate 115 vac 400 Hz power is applied to test set from helicopter ac electrical power system, through helicopter circuit breaker, and through test set connector J1.
115 VAC 400 Hz STAB 1 Test Point	Provides monitoring capability for 115 vac 400 Hz power that is used to turn on test set 115 VAC 400 Hz STAB 1 indicator.
115 VAC 400 Hz STAB 2 Indicator	Goes on to indicate 115 vac 400 Hz power is applied to test set from helicopter ac electrical power system, through helicopter circuit breaker, and through test set connector J2.
115 VAC 400 Hz STAB 2 Test Point	Provides monitoring capability for 115 vac 400 Hz power that is used to turn on test set 115 VAC 400 Hz STAB 2 indicator.
115 VAC 400 Hz SAS Indicator	Goes on to indicate 115 vac 400 Hz power is applied to test set from helicopter ac electrical power system, through helicopter circuit breaker, and through test set connector J3.
115 VAC 400 Hz SAS Test Point	Provides monitoring capability for 115 vac 400 Hz power that is used to turn on test set 115 VAC 400 Hz SAS indicator.
+15 VDC and −15 VDC Test Points	Provide monitoring capabilities for 15 vdc and −15 vdc voltages which are supplied by power supply within test set. Power supply receives single-phase 115 vac 400 Hz excitation voltage through test set connector priority switching arrangements as follows:
	Connectors Used — Power Excitation
	Received From
	J1, J2, J3 — J1
	J1 and J2 — J1
	J3 — J3
TEST SET Circuit Breaker	Applies single-phase 115 vac 400 Hz power to test set power supply from J1 or J3 priority switching arrangements. Functions as protective device during overloads and short circuits.

Table 2-1. Operator's Controls. (Cont)

CONTROL, INDICATOR, TEST POINT, OR CONNECTOR	FUNCTION	
PWR GND Test Point	Provides a ground reference point for monitoring power voltages. To minimize undesirable effects of ground loops, power ground reference is received through test set connector priority switching arrangements as follows:	
	Connectors Used	Power Excitation Received From
	J1, J2, J3	J1
	J1 and J2	J1
	J3	J3
SIG GND Test Point	Provides a ground reference point for monitoring signal voltages. Signal ground reference is established at test set power supply and is made common to power ground through helicopter wiring.	
	LAMP TEST	
LAMP TEST Button	Provides test set lamps with press-to-test capability. When pressed, all STABILATOR SYSTEM INDICATORS go on and SAS SYSTEM ENGAGE 1 and 2 indicators and AIRSPEED SWITCH 60 KNOTS indicator go on. 28 VDC STAB 1 power is used to turn on STABILATOR SYSTEM INDICATORS and 28 VDC SAS power is used to turn on SAS SYSTEM indicators.	
	STABILATOR SYSTEM	
SCALING AMPL Simulator	Provides capability for simulating or monitoring signal output from No. 1 and/or No. 2 stabilator amplifier - scaling amplifier. Used for testing No. 1 and No. 2 stabilator amplifier - scaling amplifier commands for automatic mode operation.	
NO. 1 SNSR Test Point	Provides monitoring capability for signal output from scaling amplifier in No. 1 stabilator amplifier. When NO. 1 mode selector control is at NORM, NO. 1 SIM test point is connected to NO. 1 SNSR test point.	
NO. 1 SIM Test Point	Provides monitoring capability for SCALING AMPL simulator signal selected by NO. 1 DN/UP control when NO. 1 mode selector control is at SIM. Provides monitoring capability for ground supplied to driver logic module in No. 1 stabilator amplifier when NO. 1 mode selector control is at GND. When NO. 1 mode selector control is at NORM, NO. 1 SIM test point is connected to NO. 1 SNSR test point to provide monitoring capability for signal output from scaling amplifier in No. 1 stabilator amplifier.	

Table 2-1. Operator's Controls. (Cont)

CONTROL, INDICATOR, TEST POINT, OR CONNECTOR	FUNCTION
NO. 1 DN/UP Control	Supplies variable dc simulation signal, with a voltage range of −10.0 vdc to 0 to 10.0 vdc, through SIM of NO. 1 mode selector control and through test set connector J1 to driver logic module in No. 1 stabilator amplifier. This simulation voltage can be monitored at NO. 1 SIM test point. With STAB 1 & 2/SINGLE selector switch placed to STAB 1 & 2, this simulation signal is also supplied through SIM of NO. 2 mode selector control and through connector J2 to driver logic module in No. 2 stabilator amplifier, and can be monitored at NO. 2 SIM test point. From 0 vdc reference, turning control DN supplies a positive voltage output from test set, and turning control UP supplies a negative voltage output from test set. Control can be turned 10 complete turns from each mechanical stop.
NO. 1 Mode Select Control	NORM position supplies output signal from scaling amplifier in No. 1 stabilator amplifier through test set connector J1 to driver logic module in No. 1 stabilator amplifier. This signal can be monitored at NO. 1 SIM and NO. 1 SNSR test points. GND position supplies ground from test set through connector J1 to input of driver logic module in No. 1 stabilator amplifier. This ground can be monitored at NO. 1 SIM test point. SIM position supplies variable dc simulation signal selected by NO. 1 DN/UP control, through test set connector J1, to driver logic module in No. 1 stabilator amplifier. This signal can be monitored at NO. 1 SIM test point.
NO. 2 SNSR Test Point	Provides monitoring capability for signal output from scaling amplifier in No. 2 stabilator amplifier. When NO. 2 mode selector control is at NORM, NO. 2 SIM test point is connected to NO. 2 SNSR test point.
NO. 2 SIM Test Point	Provides monitoring capability for SCALING AMPL simulator signal selected by NO. 2 DN/UP control when NO. 2 mode selector control is at SIM. Provides monitoring capability for ground supplied to driver logic module in No. 2 stabilator amplifier when NO. 2 mode selector control is at GND. When NO. 2 mode selector control is at NORM, NO. 2 SNSR test point is connected to NO. 2 SIM test point to provide monitoring capability for signal output from scaling amplifier in No. 2 stabilator amplifier.
NO. 2 DN/UP Control	Supplies variable dc simulation signal, with voltage range of −10.0 vdc to 0 to 10.0 vdc, through SINGLE of STAB 1 & 2/SINGLE control, through SIM of NO. 2 mode selector control, and through test set connector J2 to driver logic module in No. 2 stabilator amplifier. This simulation voltage can be monitored at NO. 2 SIM test point. From 0 vdc reference, turning control DN supplies positive voltage output from test set and turning control UP supplies negative voltage output from test set. Control can be turned 10 complete turns from each mechanical stop.

Table 2-1. Operator's Controls. (Cont)

CONTROL, INDICATOR, TEST POINT, OR CONNECTOR	FUNCTION
NO. 2 Mode Select Control	NORM supplies output signal from scaling amplifier in No. 2 stabilator amplifier through test set connector J2 to driver logic module in No. 2 stabilator amplifier. This signal can be monitored at NO. 2 SIM and NO. 2 SNSR test points. GND supplies ground from test set through connector J2 to input of driver logic module in No. 2 stabilator amplifier. This ground can be monitored at NO. 2 SIM test points. SIM supplies variable dc simulator signal selected by NO. 2 DN/UP control through test set connector J2 to driver logic module in No. 2 stabilator amplifier. This signal can be monitored at NO. 2 SIM test point.
STAB 1 & 2/SINGLE Control	STAB 1 & 2 supplies variable dc simulation signal selected by NO. 1 DN/UP control through SIM of NO. 1 and NO. 2 mode selector controls and through test set connectors J1 and J2 to driver logic module in No. 1 and No. 2 stabilator amplifiers. This signal can be monitored at NO. 1 and NO. 2 SIM test points. SINGLE supplies variable dc simulation signal selected by NO. 2 DN/UP control, through SIM of NO. 2 mode selector control, and through test set connector J2 to driver logic module in No. 2 stabilator amplifier. This signal can be monitored at NO. 2 SIM test point.
CLTV STICK POSN Simulator	Provides capability for simulating or monitoring signal output from No. 1 and/or No. 2 collective stick position sensors. Used for testing collective function of No. 1 and No. 2 stabilator amplifiers.
NO. 1 SNSR Test Point	Provides monitoring capability for signal output of No. 1 collective stick position sensor. When mode selector control is at NORM, NO. 1 SNSR test point is connected to NO. 1 SIM test point.
NO. 1 SIM Test Point	Provides monitoring capability for No. 1 collective stick position sensor simulation signal when mode selector control is at SIM STAB 1 & 2 or SIM STAB 1. Provides monitoring capability for ground supplied to No. 1 stabilator amplifier when mode selector control is at GND or SIM STAB 2. When mode selector control is at NORM, NO. 1 SIM test point is connected to NO. 1 SNSR test point to provide monitoring capability for signal output of No. 1 collective stick position sensor.
NO. 2 SNSR Test Point	Provides monitoring capability for signal output of No. 2 collective stick position sensor. When mode selector control is at NORM, NO. 2 SIM test point is connected to NO. 2 SNSR test point.
NO. 2 SIM Test Point	Provides monitoring capability for No. 2 collective stick position sensor simulation signal when mode selector control is at SIM STAB 1 & 2 or SIM STAB 2. Provides monitoring capability for ground supplied to No. 2 stabilator amplifier when mode selector control is at GND or SIM STAB 1. When mode selector is at NORM, NO. 2 SIM test point is connected to NO. 2 SNSR test point to provide monitoring capability for signal output of No. 2 collective stick position sensor.

Table 2-1. Operator's Controls. (Cont)

CONTROL, INDICATOR, TEST POINT, OR CONNECTOR	FUNCTION
DN/UP Control	Supplies variable dc simulation signal, with a voltage range of −6.6 vdc to 6.6 vdc, through selected SIM of mode selector control, to specific amplifiers selected. Simulation voltages, which are selected by mode selector control and supplied through test set connector J1 to No. 1 stabilator amplifier, can be monitored at NO. 1 SIM test point. Simulation voltages, which are selected by mode selector control and supplied through test set connector J2 to No. 2 stabilator amplifier, can be monitored at NO. 2 SIM test point. From 0 vdc reference, turning control DN supplies positive voltage output from test set, and turning control UP supplies negative voltage output from test set.
Mode Selector Control	NORM supplies output signal from No. 1 and No. 2 collective stick position sensors through test set connectors J1 and J2, to No. 1 and No. 2 stabilator amplifiers, respectively. Signals from No. 1 collective stick position sensor can be monitored at NO. 1 SNSR and NO. 1 SIM test points. Signals from No. 2 collective stick position sensor can be monitored at NO. 2 SNSR and NO. 2 SIM test points. GND supplies ground from test set through connectors J1 and J2, to No. 1 and No. 2 stabilator amplifiers, respectively. These grounds can be monitored by NO. 1 and NO. 2 SIM test points. SIM STAB 1 & 2 position supplies variable dc simulation signal selected by DN/UP control through test set connectors J1 and J2, to No. 1 and No. 2 stabilator amplifiers, respectively. These simulation signals can be monitored at NO. 1 and NO. 2 SIM test points. SIM STAB 1 supplies variable dc simulation signal selected by DN/UP control through test set connector J1 to No. 1 stabilator amplifier. This simulation signal can be monitored at NO. 1 SIM test point. This switch position also supplies ground through test set connector J2 to No. 2 stabilator amplifier. This ground can be monitored at NO. 2 SIM test point. SIM STAB 2 supplies variable dc simulation signal selected by DN/UP control through test set connector J2 to No. 2 stabilator amplifier. This simulation signal can be monitored at NO. 2 SIM test point. This switch position also supplies ground through test set connector J1 to No. 1 stabilator amplifier. This ground can be monitored at NO. 1 SIM test point.
AS SENSOR Simulator	Provides capability for simulating or monitoring signal output from NO. 1 and/or NO. 2 airspeed sensors. Used for testing airspeed functions of No. 1 and No. 2 stabilator amplifiers.
NO. 1 SNSR Test Point	Provides monitoring capability for signal output of NO. 1 airspeed sensor. When mode selector control is at NORM, NO. 1 SNSR test point is connected to NO. 1 SIM test point.
NO. 1 SIM Test Point	Provides monitoring capability for No. 1 airspeed sensor simulation signal when mode selector control is at SIM STAB 1 & 2 or SIM STAB 1. Provides monitoring capability for 2.26 vdc (simulated signal output from airspeed sensor from 0 to 30 knots of airspeed) supplied to No. 1 stabilator amplifier when mode selector control is at SIM STAB 2. When mode selector control is at NORM, NO. 1 SIM test point is connected to NO. 1 SNSR test point to provide monitoring capability for signal output of No. 1 airspeed sensor.

Table 2-1. Operator's Controls. (Cont)

CONTROL, INDICATOR, TEST POINT, OR CONNECTOR	FUNCTION
NO. 2 SNSR Test Point	Provides monitoring capability for signal output of No. 2 airspeed sensor. When mode selector control is at NORM, NO. 1 SNSR test point is connected to NO. 1 SIM test point.
NO. 2 SIM Test Point	Provides monitoring capability for No. 2 airspeed sensor simulation signal when mode selector control is at SIM STAB 1 & 2 or SIM STAB 2. Provides monitoring capability for 2.26 vdc (simulated signal output from airspeed sensor from 0 to 30 knots of airspeed) supplied to No. 2 stabilator amplifier when mode selector control is at SIM STAB 1. When mode selector control is at NORM, NO. 1 SIM test point is connected to NO. 1 SNSR test point to provide monitoring capability for signal output of No. 2 airspeed sensor.
DECR/INCR Control	Supplies variable dc simulation signal, with voltage range of less than 2.0 vdc and not greater than 15.0 vdc, through selected SIM of mode selector control, to specific amplifiers selected. Simulation voltages, which are selected by mode selector control and supplied through test set connector J1 to No. 1 stabilator amplifier, can be monitored at NO. 1 SIM test point. Simulation voltages, which are selected by mode selector control and supplied through test set connector J2 to No. 2 stabilator amplifier, can be monitored at NO. 2 SIM test point. Turning control in INCR direction increases positive voltage output from test set. Turning control in DECR direction decreases positive voltage output from test set. Test set variable dc signal output is equal to 75 millivolts per knot of simulated airspeed.
Mode Selector Control	NORM position supplies output from No. 1 and No. 2 airspeed sensors through test set connectors J1 and J2, to No. 1 and No. 2 stabilator amplifiers, respectively. Signals from No. 1 airspeed sensor can be monitored at NO. 1 SNSR and NO. 1 SIM test points. Signals from No. 2 airspeed sensor can be monitored at NO. 2 SNSR and NO. 2 SIM test points. OFF position opens input to stabilator amplifier to test amplifier's auto shutdown function. SIM STAB 1 & 2 supplies variable dc simulation signal selected by DECR/INCR control through test set connectors J1 and J2, to No. 1 and No. 2 stabilator amplifiers, respectively. These simulation signals can be monitored at NO. 1 and NO. 2 SIM test points. SIM STAB 1 supplies variable dc simulation signal selected by DECR/INCR control through test set connector J1, to No. 1 stabilator amplifier. This simulation signal can be monitored at NO. 1 SIM test point. This switch position also supplies 2.26 vdc (simulated signal output from airspeed sensor from 0 to 30 knots of airspeed) through test connector J2, to No. 2 stabilator amplifier. This 2.26 vdc can be monitored at NO. 2 SIM test point. SIM STAB 2 supplies variable dc simulation signal selected by DECR/INCR control through test set connector J2, to No. 2 stabilator amplifier. This simulation signal can be monitored at NO. 2 SIM test point. This switch position also supplies 2.26 vdc (simulated signal output from airspeed sensor from 0 to 30 knots of airspeed), through test set connector J1, to No. 1 stabilator amplifier. This 2.26 vdc can be monitored at NO. 1 SIM test point.

Table 2-1. Operator's Controls. (Cont)

CONTROL, INDICATOR, TEST POINT, OR CONNECTOR	FUNCTION
ACTR POSN Simulator	Provides capability for simulating or monitoring No. 1 and/or No. 2 stabilator actuator position feedback signals. Used for testing function of No. 1 and No. 2 stabilator amplifiers.
NO. 1 SNSR Test Point	Provides monitoring capability for No. 1 stabilator actuator position feedback signal. When mode selector control is at NORM, NO. 1 SNSR test point is connected to NO. 1 SIM test point.
NO. 1 SIM Test Point	Provides monitoring capability for No. 1 stabilator actuator position feedback simulation signal when mode selector control is at SIM STAB 1 & 2 or SIM STAB 1. Provides monitoring capability for ground supplied to No. 1 stabilator amplifier when mode selector control is at GND or SIM STAB 2. When mode selector control is at NORM, NO. 1 SIM test point is connected to NO. 1 SNSR test point to provide monitoring capability for position feedback signal from No. 1 stabilator actuator. All signals monitored at NO. 1 SIM test point are also supplied through test set connector J2 to No. 2 stabilator amplifier for monitoring No. 1 stabilator actuator position and rate of movement.
NO. 2 SNSR Test Point	Provides monitoring capability for No. 2 stabilator actuator position feedback signal. When mode selector control is at NORM, NO. 2 SNSR test point is connected to NO. 2 SIM test point.
NO. 2 SIM Test Point	Provides monitoring capability for No. 2 stabilator actuator position feedback simulation signal when mode selector control is at SIM STAB 1 & 2 or SIM STAB 2. Provides monitoring capability for ground supplied to No. 2 stabilator amplifier when mode selector control is at GND or SIM STAB 1. When mode selector control is at NORM, NO. 2 SIM test point is connected to NO. 2 SNSR test point to provide monitoring capability for position feedback signal from No. 2 simulator actuator. All signals monitored at NO. 2 SIM test point are also supplied through test set connector J1 to No. 1 stabilator amplifier for monitoring No. 2 stabilator actuator position and rate of movement.
DN/UP Control	Supplies variable dc simulation signal, with voltage range of −15.0 vdc to 15.0 vdc, through selected SIM position of mode selector control to specific amplifiers selected. Simulation voltages, which are selected by mode selector control and supplied through test set connector J1 to No. 1 stabilator amplifier, can be monitored at NO. 1 SIM test point. Simulation voltages, which are selected by mode selector control and supplied through test set connector J2 to No. 2 stabilator amplifier, can be monitored at NO. 2 SIM test point. From 0 vdc reference, turning control DN supplies positive voltage output from test set and turning control UP supplies negative voltage output from test set. Control can be turned 10 complete turns from each mechanical stop.

Table 2-1. Operator's Controls. (Cont)

CONTROL, INDICATOR, TEST POINT, OR CONNECTOR	FUNCTION
Mode Selector Control	NORM supplies No. 1 and No. 2 stabilator actuator feedback signals through test set connectors J1 and J2, to No. 1 and No. 2 stabilator amplifiers, respectively. This position also allows No. 1 and No. 2 stabilator amplifiers to monitor position and rate of movement of No. 2 and No. 1 stabilator actuators, respectively. Signals from No. 1 stabilator actuator can be monitored at NO. 1 SNSR and NO. 1 SIM test points. Signals from No. 2 stabilator actuator can be monitored at NO. 2 SNSR and NO. 2 SIM test points. GND supplies ground from test set through connectors J1 and J2, to No. 1 and No. 2 stabilator amplifiers. These grounds can be monitored at NO. 1 and NO. 2 SIM test points. SIM STAB 1 & 2 supplies variable dc simulation signal selected by DN/UP control through test set connectors J1 and J2, to No. 1 and No. 2 stabilator amplifiers, respectively. This position also supplies No. 1 simulation signal through test set connector J2 to No. 2 stabilator amplifier and No. 2 simulation signal through test set connector J1 to No. 1 stabilator amplifier. These simulation signals can be monitored at NO. 1 and NO. 2 SIM test points. SIM STAB 1 supplies variable dc simulation signal selected by DN/UP control through test set connector J1 to No. 1 stabilator amplifier. Variable dc simulation signal is also supplied through test set connector J2 to No. 2 stabilator amplifier for monitoring simulated No. 1 stabilator actuator position. This simulation signal can be monitored at NO. 1 SIM test point. This switch position also supplies ground through test set connector J2 to No. 2 stabilator amplifier. Ground is also supplied through test set connector J1 to No. 1 stabilator amplifier. This ground can be monitored at NO. 2 SIM test point. SIM STAB 2 supplies variable dc simulation signal selected by DN/UP control through test set connector J2 to No. 2 stabilator amplifier. Variable dc simulation signal is also supplied through test set connector J1 to No. 1 stabilator amplifier for monitoring simulated No. 2 stabilator actuator position. This simulation signal can be monitored at NO. 2 SIM test point. This switch position also supplies ground through test set connector J1 to No. 1 stabilator amplifier. Ground is also supplied through test set connector J2 to No. 2 stabilator amplifier. This ground can be monitored at NO. 1 SIM test point.
LATL ACCLRM Simulator	Provides capability for simulating or monitoring signal output of No. 1 and/or No. 2 lateral accelerometers. Used for testing acceleration functions of No. 1 and No. 2 stabilator amplifiers. Also provides capability for simulating or monitoring filtered lateral accelerometer signal from No. 1 stabilator amplifier. This is used for testing acceleration functions of stability augmentation system (SAS) amplifier.
STAB 1 SNSR Test Point	Provides monitoring capability for signal output of No. 1 lateral accelerometer. When mode selector control is at NORM or SIM STAB 2, STAB 1 SNSR test point is connected to STAB 1 SIM test point.

Table 2-1. Operator's Controls. (Cont)

CONTROL, INDICATOR, TEST POINT, OR CONNECTOR	FUNCTION
STAB 1 SIM Test Point	Provides monitoring capability for No. 1 lateral accelerometer simulation signal when mode selector control is at SIM STAB 1 & 2 or SIM STAB 1. Provides monitoring capability for ground supplied to No. 1 stabilator amplifier when mode selector control is at GND or SIM SAS 1. When mode selector control is at NORM or SIM STAB 2, STAB 1 SIM test point is connected to STAB 1 SNSR test point to provide monitoring capability for signal output from No. 1 lateral accelerometer.
STAB 2 SNSR Test Point	Provides monitoring capability for signal output of No. 2 lateral accelerometer. When mode selector control is at NORM or SIM STAB 1, STAB 2 SNSR test point is connected to STAB 2 SIM test point.
STAB 2 SIM Test Point	Provides monitoring capability for No. 2 lateral accelerometer simulation signal when mode selector control is at SIM STAB 1 & 2 or SIM STAB 2. Provides monitoring capability for ground supplied to No. 2 stabilator amplifier when mode selector control is at GND or SIM SAS 1. When mode selector control is at NORM or SIM STAB 1, STAB 2 SIM test point is connected to STAB 2 SNSR test point to provide monitoring capability for signal output from No. 2 lateral accelerometer.
SAS SNSR Test Point	Provides monitoring capability for filtered lateral accelerometer output signal from No. 1 stabilator amplifier. When mode selector control is at NORM or SIM STAB 1, SAS SNSR test point is connected to SAS SIM test point.
SAS SIM Test Point	Provides monitoring capability for filtered lateral accelerometer simulation signal when mode selector control is at SIM SAS 1. Provides monitoring capability for ground supplied to SAS amplifier when mode selector control is at GND, SIM STAB 1 & 2, and SIM STAB 2. When mode selector control is at NORM or SIM STAB 1, SAS SIM test point is connected to SAS SNSR test point to provide monitoring capability for filtered lateral accelerometer output signal from No. 1 stabilator amplifier.
L/R Control	Supplies variable dc simulation signal through selected SIM position of mode selector control to specific amplifiers selected. Simulation voltages, which are selected by mode selector control and supplied through test set connector J1 to No. 1 stabilator amplifier, can be monitored at STAB 1 SIM test point. Simulation voltages, which are selected by mode selector control and supplied through test set connector J2 to No. 2 stabilator amplifier, can be monitored at STAB 2 SIM test point. Simulation voltages, which are selected by mode selector control and supplied through test set connector J3 to SAS amplifier, can be monitored at SAS SIM test point. Simulation voltages supplied to No. 1 and No. 2 stabilator amplifiers are within voltage range of −3.75 vdc to 3.75 vdc. From 0 vdc reference, turning control L supplies positive voltage output from test set to No. 1 and No. 2 stabilator amplifiers, and turning control R supplies negative voltage output from test set to No. 1 and No. 2 stabilator amplifiers. Simulation voltages supplied to SAS amplifier are within voltage range of −3.0 vdc to 3.0 vdc. From 0 vdc reference, turning control L supplies negative voltage output from test set to SAS amplifier and turning control R supplies positive voltage output from test set to SAS amplifier.

Table 2-1. Operator's Controls. (Cont)

CONTROL, INDICATOR, TEST POINT, OR CONNECTOR	FUNCTION
Mode Selector Control	NORM supplies No. 1 and No. 2 lateral accelerometer signals through test set connectors J1 and J2 to No. 1 and No. 2 stabilator amplifiers, respectively. NORM also supplies filtered lateral accelerometer signal from No. 1 stabilator amplifier through test set connector J3 to SAS amplifier. Signal from No. 1 lateral accelerometer can be monitored at STAB 1 SNSR and STAB 1 SIM test points. Signal from No. 2 lateral accelerometer can be monitored at STAB 2 SNSR and STAB 2 SIM test points. Signal from No. 1 stabilator amplifier can be monitored at SAS SNSR and SAS SIM test points. GND supplies ground from test set through connectors J1, J2, and J3 to No. 1 stabilator amplifier, No. 2 stabilator amplifier, and SAS amplifier, respectively. These grounds can be monitored at STAB 1 SIM, STAB 2 SIM, and SAS SIM test points. SIM STAB 1 & 2 supplies variable dc simulation signal selected by L/R control through test set connectors J1 and J2, to No. 1 and No. 2 stabilator amplifiers, respectively. These simulation signals can be monitored at STAB 1 SIM and STAB 2 SIM test points. This position also supplies a ground through test set connector J3 to SAS amplifier. This ground can be monitored at SAS SIM test point. SIM STAB 1 supplies variable dc simulation signal selected by L/R control through test set connector J1 to No. 1 stabilator amplifier. This simulation signal can be monitored at STAB 1 SIM test point. SIM STAB 1 also supplies No. 2 lateral accelerometer signal through test set connector J2 to No. 2 stabilator amplifier. This accelerometer signal can be monitored at SIM STAB 2 test point. SIM STAB 1 also supplies filtered lateral accelerometer signal from No. 1 stabilator amplifier through test set connector J3 to SAS amplifier. This filtered accelerometer signal can be monitored at SAS SIM test point. SIM STAB 2 supplies variable dc simulation signal selected by L/R control through test set connector J2 to No. 2 stabilator amplifier. This simulation signal can be monitored at STAB 2 SIM test point. SIM STAB 2 also supplies No. 1 lateral accelerometer signal through test set connector J1, to No. 1 stabilator amplifier. This accelerometer signal can be monitored at STAB 1 SIM test point. SIM STAB 2 also supplies ground from test set through connector J3 to SAS amplifier. This ground can be monitored at SAS SIM test point. SIM SAS 1 supplies variable dc simulation signal selected by L/R control through test set connector J3 to SAS amplifier. This simulation signal can be monitored at SAS SIM test point. SIM SAS 1 also supplies ground from test set through connectors J1 and J2 to No. 1 and No. 2 stabilator amplifiers, respectively. These grounds can be monitored at STAB 1 SIM and STAB 2 SIM test points.
PITCH RATE GYRO Simulator	Provides capability for simulating or monitoring No. 1 and/or No. 2 stabilator amplifiers-pitch rate gyro output signals. This simulation signal is used for testing No. 1 and No. 2 stabilator amplifier-pitch rate path. Also provides capability for simulating or monitoring No. 1 stabilator amplifier-filtered pitch rate output signal. This simulation signal is used for testing stability augmentation system (SAS) amplifier-pitch rate path.

Table 2-1. Operator's Controls. (Cont)

CONTROL, INDICATOR, TEST POINT, OR CONNECTOR	FUNCTION
STAB 1 SNSR Test Point	Provides monitoring capability for signal output of pitch rate gyro in No. 1 stabilator amplifier. When mode selector control is at NORM, STAB 1 SNSR test point is connected to STAB 1 SIM test point.
STAB 1 SIM Test Point	Provides monitoring capability for No. 1 stabilator amplifier-pitch rate gyro simulation signal when mode selector control is at SIM STAB 1 & 2 or SIM STAB 1. Provides monitoring capability for ground supplied to No. 1 stabilator amplifier-pitch rate path when mode selector control is at GND, SIM STAB 2, SIM SAS 1, or SIM SAS (WO). When mode selector control is at NORM, STAB 1 SIM test point is connected to STAB 1 SNSR test point to provide monitoring capability for signal output of pitch rate gyro in No. 1 stabilator amplifier.
STAB 2 SNSR Test Point	Provides monitoring capability for signal output of pitch rate gyro in No. 2 stabilator amplifier. When mode selector control is at NORM, STAB 1 SNSR test point is connected to STAB 1 SIM test point.
STAB 2 SIM Test Point	Provides monitoring capability for No. 2 stabilator amplifier-pitch rate gyro simulation signal when mode selector control is at SIM STAB 1 & 2 or SIM STAB 2. Provides monitoring capability for ground supplied to No. 2 stabilator amplifier-pitch rate path when mode selector control is at GND, SIM STAB 1, SIM SAS 1, or SIM SAS (WO). When mode selector control is at NORM, STAB 2 SIM test point is connected to STAB 2 SNSR test point to provide monitoring capability for signal output of pitch rate gyro in No. 2 stabilator amplifier.
SAS SNSR Test Point	Provides monitoring capability for No. 1 stabilator amplifier-filtered pitch rate output signal. When mode selector control is at NORM or STAB 1, SAS SNSR test point is connected to SAS SIM test point.
SAS SIM Test Point	Provides monitoring capability for No. 1 stabilator amplifier-filtered pitch rate simulation signal when mode selector control is at SIM SAS 1 or SIM SAS (WO). Provides monitoring capability for ground supplied to SAS amplifier when mode selector control is at GND, SIM STAB 1 & 2, and SIM STAB 2. When mode selector switch is at NORM or SIM STAB 1, SAS SIM test point is connected to SAS SNSR test point to provide monitoring capability for No. 1 stabilator amplifier-filtered pitch rate output signal.

Table 2-1. Operator's Controls. (Cont)

CONTROL, INDICATOR, TEST POINT, OR CONNECTOR	FUNCTION
NOSE DN/NOSE UP Control	Supplies variable dc simulation signal through selected SIM position of mode selector control, to specific amplifiers selected. Simulation voltages, which are selected by mode selector control and supplied through test set connector J1 to No. 1 stabilator amplifier, can be monitored at STAB 1 SIM test point. Simulation voltages, which are selected by mode selector control and supplied through test set connector J2 to No. 2 stabilator amplifier, can be monitored at STAB 2 SIM test point. Simulation voltages, which are selected by mode selector control and supplied through test set connector J3 to SAS amplifier, can be monitored at SAS SIM test point. Simulation voltages supplied to No. 1 and No. 2 stabilator amplifiers are within voltage range of −5.0 vdc to 5.0 vdc. From 0 vdc reference, turning control NOSE DN supplies positive voltage output from test set to No. 1 and No. 2 stabilator amplifiers and turning control NOSE UP supplies negative voltage output from test set to No. 1 and No. 2 stabilator amplifiers. Simulation voltages supplied to SAS amplifiers are within voltage range of −1.0 vdc to 1.0 vdc. From 0 vdc reference, turning control NOSE DN supplies negative voltage output from test set to SAS amplifier, and turning control NOSE UP supplies positive voltage output from test set to SAS amplifier.

Table 2-1. Operator's Controls. (Cont)

CONTROL, INDICATOR, TEST POINT, OR CONNECTOR	FUNCTION
Mode Selector Control	NORM supplies No. 1 and No. 2 stabilator amplifier-pitch rate gyro output signals through test set connectors J1 and J2, to No. 1 and No. 2 stabilator amplifiers, respectively. NORM also supplies No. 1 stabilator amplifier-filtered pitch rate output signal through test set connector J3 to SAS amplifier. Signal from No. 1 stabilator amplifier-pitch rate gyro can be monitored at STAB 1 SNSR and STAB 1 SIM test points. No. 1 stabilator amplifier-filtered pitch rate output signal can be monitored at SAS SNSR and SAS SIM test points. GND supplies ground from test set through connectors J1, J2, and J3 to No. 1 stabilator amplifier, No. 2 stabilator amplifier, and SAS amplifier inputs, respectively. These grounds can be monitored at STAB 1 SIM, STAB 2 SIM, and SAS SIM test points. SIM STAB 1 & 2 supplies variable dc simulation signal selected by NOSE DN/NOSE UP control through test set connectors J1 and J2 to No. 1 and No. 2 stabilator amplifiers, respectively. These simulation signals can be monitored at STAB 1 SIM and STAB 2 SIM test points. This position also supplies a ground through test set connector J3 to SAS amplifier. This ground can be monitored at SAS SIM test point. SIM STAB 1 supplies variable dc simulation signal selected by NOSE DN/NOSE UP control, through test set connector J1 to No. 1 stabilator amplifier. This simulation signal can be monitored at STAB 1 SIM test point. SIM STAB 1 position also supplies No. 1 stabilator amplifier-filtered pitch rate output signal through test set connector J3 to SAS amplifier. This filtered pitch rate signal can be monitored at SAS SIM test point. SIM STAB 1 also supplies ground through test set connector J2 to No. 2 stabilator amplifier. This ground can be monitored at STAB 2 SIM test point. SIM STAB 2 supplies variable dc simulation signal selected by NOSE DN/NOSE UP control, through test set connector J2 to No. 2 stabilator amplifier. This simulation signal can be monitored at STAB 2 SIM test point. SIM STAB 2 also supplies ground, through test set connectors J1 and J3, to No. 1 stabilator amplifier and SAS amplifier, respectively. These grounds can be monitored at STAB 1 SIM and SAS SIM test points. SIM SAS 1 supplies variable dc simulation signal selected by NOSE DN/NOSE UP control, through test set connector J3 to SAS amplifier. This simulation signal can be monitored at SAS SIM test point. SIM SAS 1 position also supplies ground from test set through connectors J1 and J2, to No. 1 and No. 2 stabilator amplifiers, respectively. These grounds can be monitored at STAB 1 SIM and STAB 2 SIM test points. SIM SAS (WO) supplies variable dc simulation signal selected by NOSE DN/NOSE UP control through test set connector J3 to SAS amplifier. This simulation signal can be monitored at SAS SIM test point. SIM SAS (WO) position also shorts out capacitor in SAS amplifier, allowing gain checks to be done using steady state dc simulation signal from NOSE DN/NOSE UP control. SIM SAS (WO) also supplies ground from test set through connectors J1 and J2, to No. 1 and No. 2 stabilator amplifiers, respectively. These grounds can be monitored at STAB 1 SIM and STAB 2 SIM test points.

Table 2-1. Operator's Controls. (Cont)

CONTROL, INDICATOR, TEST POINT, OR CONNECTOR	FUNCTION
RESET Control	Pushbutton switch used to simulate reset function of stabilator control/auto flight control panel. When pressed, test set 28 VDC STAB 2 POWER is supplied through test set connector J1 and J2, to No. 1 and No. 2 stabilator amplifiers, respectively. When pressed, test set NO. 1 and NO. 2 RESET indicators go on. RESET control is OFF when not pressed.
MANUAL SLEW 1 Control	Simulates No. 1 stabilator manual slew switch function of stabilator control/auto flight control panel. UP supplies test set 28 VDC STAB 1 POWER to turn on NO. 1 SLEW UP indicator and also supplies power through test set connector J1 to No. 1 stabilator amplifier. UP also supplies test set 28 VDC STAB 1 POWER to turn on NO. 1 HOT slew indicator and also supplies power through test set connector J1 to No. 1 stabilator amplifier. DN supplies test set 28 VDC STAB 1 POWER to turn on NO. 1 SLEW DN indicator, and also supplies power through test set connector J1 to No. 1 stabilator amplifier. DN also supplies test set 28 VDC STAB 1 POWER to turn on NO. 1 HOT SLEW indicator, and as well supplies power through test set connector J1 to No. 1 stabilator amplifier. OFF disables simulation of No. 1 stabilator manual slew switch function of stabilator control/auto flight control panel.
MANUAL SLEW 2 Control	Simulates No. 2 stabilator manual slew function of stabilator control/auto flight control panel. UP supplies test set 28 VDC STAB 2 POWER to turn on NO. 2 SLEW UP indicator, and also supplies power through test set connector J2 to No. 2 stabilator amplifier. UP also supplies test set 28 VDC STAB 2 POWER to turn on NO. 2 HOT SLEW indicator, and as well supplies power through test set connector J2 to No. 2 stabilator amplifier. DN supplies test set 28 VDC STAB 2 POWER to turn on NO. 2 SLEW DN indicator, and also supplies power through test set connector J2 to No. 2 stabilator amplifier. DN also supplies test set 28 VDC STAB 2 POWER to turn on NO. 2 HOT SLEW indicator, and as well supplies power through test set connector J2 to No. 2 stabilator amplifier. OFF disables simulation of No. 2 stabilator manual slew switch function of stabilator control/auto flight control panel.
FAULT MONITOR POSN 1 Control	NORM enables No. 1 stabilator fault monitor shutdown of automatic mode to function normally if No. 1 stabilator actuator position miscompare fault should exist. INHIBIT supplies ground through test set connector J1 to No. 1 stabilator amplifier, preventing shutdown of No. 1 stabilator automatic mode should No. 1 stabilator actuator position miscompare fault exist.
FAULT MONITOR POSN 2 Control	NORM enables No. 2 stabilator fault monitor shutdown of automatic mode to function normally if No. 2 stabilator actuator position miscompare fault should exist. INHIBIT supplies ground through test set connector J2 to No. 2 stabilator amplifier, preventing shutdown of No. 2 stabilator automatic mode, should No. 2 stabilator actuator position miscompare fault exist.
FAULT MONITOR I LIMIT 1 Control	NORM enables No. 1 stabilator amplifier current limit fault monitor circuit to function normally if a current sense fault exists. INHIBIT supplies ground through test set connector J1 to No. 1 stabilator amplifier, preventing shutdown of No. 1 stabilator automatic mode, should a current sense fault exist.

Table 2-1. Operator's Controls. (Cont)

CONTROL, INDICATOR, TEST POINT, OR CONNECTOR	FUNCTION
FAULT MONITOR I LIMIT 2 Control	NORM enables No. 2 stabilator amplifier current limit fault monitor circuit to function normally if a current sense fault exists. INHIBIT supplies ground through test set connector J2 to No. 2 stabilator amplifier, preventing shutdown of No. 2 stabilator automatic mode, should a current sense fault exist.
RATE GYRO TEST PITCH 1 Control	MH-60K TEST position supplies 28 vdc to No. 1 pitch rate gyro to provide gyro self-test operation.
RATE GYRO TEST PITCH 2 Control	MH-60K TEST position supplies 28 vdc to No. 2 pitch rate gyro to provide gyro self-test operation.
RATE GYRO TEST ROLL Control	MH-60K TEST position supplies 28 vdc to roll rate gyro to provide gyro self-test operation.
RATE GYRO TEST YAW Control	MH-60K TEST position supplies 28 vdc to yaw rate gyro to provide gyro self-test operation.
PITCH 1 TEST MONITOR Test Point	MH-60K Provides monitoring capability for No. 1 pitch rate gyro 28 vdc self-test signal.
PITCH 2 TEST MONITOR Test Point	MH-60K Provides monitoring capability for No. 2 pitch rate gyro 28 vdc self-test signal.
ROLL TEST MONITOR Test Point	MH-60K Provides monitoring capability for roll rate gyro 28 vdc self-test signal.
YAW TEST MONITOR Test Point	MH-60K Provides monitoring capability for yaw rate gyro 28 vdc self-test signal.
SELF TEST ENABLE Test Point	MH-60K Provides monitoring capability for rate gyro self-test enable signal from AFCS control panel.
TEST POINTS	Provide monitoring capability for functional conditions of stabilator system operation. NO. 1 test points relate to No. 1 stabilator amplifier, and NO. 2 test points relate to No. 2 stabilator amplifier.
NO. 1 and NO. 2 UP CMD and NO. 1 and NO. 2 DN CMD Test Points	Provide monitoring capability for No. 1 and No. 2 stabilator amplifiers scaling amplifier gated output command signal. Command signal determines which drive in driver logic module turns on to command actuator. Each test point voltage may be 15 vdc or 0 vdc.
NO. 1 and NO. 2 STAB UP and NO. 1 and NO. 2 STAB DN Test Points	Provide monitoring capability for voltages supplied by No. 1 and No. 2 stabilator amplifiers that will drive No. 1 and No. 2 stabilator actuators. When system is in manual slew mode, test points have steady 28 vdc. When system is in automatic mode, test points have 0 vdc to 28 vdc pulse with modulation.
NO. 1 and NO. 2 AUTO ENGA Test Points	Provide monitoring capability for 28 vdc engage voltage supplied by No. 1 and No. 2 stabilator amplifiers as soon as power is applied to helicopter, or when stabilator is operated in automatic mode. NO. 1 and NO. 2 AUTO ENGA and NO. 1 and NO. 2 AUTO ENGA OS indicators also go on.
NO. 1 and NO. 2 DRVR SPLY Test Points	Provide monitoring capability for 28 vdc from No. 1 and No. 2 stabilator amplifier that will be supplied back to drive amplifiers in No. 1 and No. 2 stabilator amplifiers. 28 vdc is available at these test points as soon as power is applied to helicopter or when stabilator is operated in automatic mode. NO. 1 and NO. 2 DRVR SPLY and NO. 1 and NO. 2 DRVR SPLY OS indicators also go on.

Table 2-1. Operator's Controls. (Cont)

CONTROL, INDICATOR, TEST POINT, OR CONNECTOR	FUNCTION
NO. 1 and NO. 2 AS SW Test Points	Provide monitoring capability for electronic airspeed switch in No. 1 and No. 2 stabilator amplifiers. Each test point voltage is 15 vdc at less than 60 knots and −15 vdc above 60 knots. When simulated airspeed is less than 60 knots, NO. 1 and NO. 2 AS SW <60 KNOTS indicators go on.
NO. 1 and NO. 2 AS BFR and NO. 1 and NO. 2 AS BFR OS Test Points	Provide monitoring capability for No. 1 and No. 2 stabilator amplifier airspeed buffer amplifier output signals. From 0 to 30 knots of simulated airspeed, test points will be 0 vdc. From 30 to 150 knots of simulated airspeed, test point voltage will increase linearly to 10.6 vdc. Signal from NO. 1 AS BFR test point is supplied to NO. 2 AS BFR OS test point. Signal from NO. 2 AS BFR test point is supplied to NO. 1 AS BFR OS test point.
NO. 1 and NO. 2 P RATE FLTR Test Points	Provide monitoring capability for No. 1 and No. 2 stabilator amplifier pitch rate filter output signals. Voltage monitored at these test points will be equal voltage but opposite polarity to voltage selected by PITCH RATE GYRO simulator when mode selector control is turned to SIM STAB 1 & 2.
NO. 1 and NO. 2 LATL ACCLRM FLTR Test Points	Provide monitoring capability for No. 1 and No. 2 stabilator amplifier lateral accelerometer filter output signals. Voltage monitored at these test points will be four times greater, with a maximum of 15 vdc, than voltage selected by LATL ACCLRM simulator when mode selector control is turned to SIM STAB 1 & 2.
NO. 1 and NO. 2 26 VAC Test Point	Provide monitoring capability for 26 vac supplied by No. 1 and No. 2 stabilator amplifiers which is used as excitation for fan in each amplifier and pitch rate gyro.
NO. 1 and NO. 2 SIG GND Test Points	Provide No. 1 and No. 2 signal ground reference monitoring capability.
NO. 1 and NO. 2 +15 VDC and −15 VDC Test Points	Provide monitoring capability for No. 1 and No. 2 stabilator amplifier power supply + and −15 vdc.
NO. 1 and NO. 2 PWR GND Test Points	Provide No. 1 and No. 2 power ground reference monitoring capability.
TEST Test Point	Provides monitoring capability for 15 vdc when TEST switch on stabilator control/auto flt control panel is pressed.
NO. 1 and NO. 2 INTLK 28 Test Points	Provide monitoring capability for 28 vdc power interlock voltage from No. 1 and No. 2 stabilator amplifiers when amplifiers are electrically connected and helicopter dc electrical power is applied to Stabilator Units. No. 1 and No. 2 INTLK 28 and No. 1 and No. 2 INTLK 28 OS indicators also go on.
NO. 1 and NO. 2 COMPT TST (+) Test Points	UH−60A UH−60L EH−60A UH−60Q , provide monitoring capability for actuator window positive comparator testing.
NO. 1 and NO. 2 COMPT TST (−) Test Points	Provide monitoring capability for actuator window negative comparator testing.
NO. 1 and NO. 2 BFR AS SNSR Test Points	Provide monitoring and testing capabilities of airspeed buffer.

Table 2-1. Operator's Controls. (Cont)

CONTROL, INDICATOR, TEST POINT, OR CONNECTOR	FUNCTION
NO. 1 and NO. 2 BFR ACTR POSN Test Points	Provide monitoring and testing capabilities of actuator position buffer.
NO. 1 and NO. 2 ACTR POSN (OS) Test Points	Provide monitoring and testing capabilities of opposite actuator position buffer. Signal from NO. 1 BFR ACTR POSN test point is supplied to NO. 2 ACTR POSN (OS) test point. Signal from NO. 2 BFR ACTR POSN test point is supplied to NO. 1 ACTR POSN (OS) test point.
NO. 1 and NO. 2 I LIMIT SWITCHED Test Points	Provide monitoring capability for No. 1 and No. 2 stabilator amplifier current sense fault monitor circuit output signals when FAULT MONITOR I LIMIT 1 and 2 controls are at NORM. When FAULT MONITOR I LIMIT 1 and 2 controls are at INHIBIT, NO. 1 and NO. 2 I LIMIT SWITCHED test points provide monitoring of grounds supplied by test set to No. 1 and No. 2 stabilator amplifiers to disable current sense fault monitor circuits.
MH-60K NO. 1 and NO. 2 COMPTR TST (+) Test Points	MH−60K , provide monitoring capability for actuator window positive comparator testing.
MH-60K NO. 1 and NO. 2 26VAC ø2 Test Points	MH−60K , provide monitoring capability for 26 vac ø2 supplied by No. 1 and No. 2 stabilator amplifiers which is used in each pitch rate gyro.
INDICATORS	Go on and off to indicate functional conditions of stabilator system operation. NO. 1 indicators relate to No. 1 stabilator amplifier and NO. 2 indicators relate to No. 2 stabilator amplifier.
NO. 1 and NO. 2 SLEW UP, NO. 1 and NO. 2 SLEW DN, and HOT SLEW Indicators	HOT SLEW indicators go on to indicate manual slew switch on stabilator control/auto flight control panel is being used and that stabilator system is in manual mode. SLEW UP or SLEW DN indicators go on to indicate direction of slewing command.
NO. 1 and NO. 2 RESET Indicators	Go on to indicate reset switch on stabilator control/auto flight control panel is pressed.
NO. 1 and NO. 2 AUTO ENGA and NO. 1 and NO. 2 AUTO ENGA OS Indicators	Go on to indicate stabilator is operating in automatic mode. Power that turns on NO. 1 AUTO ENGA indicator also turns on NO. 2 AUTO ENGA OS indicator. Power that turns on NO. 2 AUTO ENGA indicator also turns on NO. 1 AUTO ENGA OS indicator.
NO. 1 and NO. 2 DRVR SPLY and NO. 1 and NO. 2 DRVR SPLY OS Indicators	Go on to indicate No. 1 and No. 2 stabilator amplifier-driver amplifiers are being supplied 28 vdc power. Power that turns on NO. 1 DRVR SPLY indicator also turns on NO. 2 DRVR SPLY OS indicator. Power that turns on NO. 2 DRVR SPLY indicator also turns on NO. 1 DRVR SPLY OS indicator.
NO. 1 and NO. 2 UP LIMIT and NO. 1 and NO. 2 STAB UP Indicators	STAB UP indicators go on, indicating stabilator trailing edge is moving up. UP LIMIT indicators go on indicating stabilator has reached maximum up-limit. When stabilator up-limit is reached and UP LIMIT indicators go on, STAB UP indicators go off.
NO. 1 and NO. 2 STAB DN and NO. 1 and NO. 2 DN LIMIT Indicators	STAB DN indicators go on, indicating stabilator trailing edge is moving down. DN LIMIT indicators go on indicating stabilator has reached maximum down-limit. When stabilator down-limit is reached and DN LIMIT indicators go on, STAB DN indicators go off.

Table 2-1. Operator's Controls. (Cont)

CONTROL, INDICATOR, TEST POINT, OR CONNECTOR	FUNCTION
NO. 1 and NO. 2 AS SW <60 KNOTS Indicators	Go on to indicate simulated airspeed is less than 60 knots. When indicators are on, 15 vdc can be monitored at NO. 1 and NO. 2 AS SW test points. When indicators are off, −15 vdc can be monitored at NO. 1 and NO. 2 AS SW test points.
No. 1 and No. 2 INTLK 28 and No. 1 and No. 2 INTLK 28 OS Indicators	Go on when No. 1 and No. 2 stabilator amplifiers are electrically connected and helicopter dc electrical power is applied to stabilator system. Power that turns on No. 1 INTLK 28 indicator also turns on No. 2 INTLK OS indicator. Power that turns on No. 2 INTLK 28 indicator also turns on No. 1 INTLK 28 OS indicator. When indicators are on, 28 vdc can be monitored at No. 1 and No. 2 INTLK 28 vdc test points.
ENGAGE 1 Indicator	Goes on to indicate stabilator control/auto flight control panel SAS 1 switch is engaged and stability augmentation system (SAS) amplifier is installed. Power is supplied from helicopter dc electrical power system, through engaged position of control panel SAS 1 switch, through SAS amplifier, and through test set connector J3 to ENGAGE 1 indicator. Pressing test set LAMP TEST button also causes ENGAGE 1 indicator to go on.
ENGAGE 2 Indicator	Goes on to indicate stabilator control/auto flight control panel SAS 2 switch is engaged. Power is supplied from helicopter dc electrical power system, through engaged position of control panel SAS 2 switch, and through test set connector J3 to ENGAGE 2 indicator. Pressing test set LAMP TEST button also causes ENGAGE 2 indicator to go on.
AIRSPEED SWITCH Simulator	Provides capability for simulating and visual monitoring of airspeed logic commands. These commands are used for testing coordinated turn function of SAS amplifier yaw channel.
<60 KNOTS Indicator	Goes on to indicate that simulated or monitored airspeed is less than 60 knots. When mode selector control is placed to <60 KNOTS, 15 vdc from test set power supply controls circuitry in test set, allowing 28 vdc from test set 28 VDC SAS circuit breaker to turn on indicator. When mode selector control is placed to <60 KNOTS, 15 vdc is also supplied through test set connector J3 to SAS amplifier. When mode selector control is placed to NORM, No. 1 stabilator amplifier airspeed switch logic is supplied through test set connector J3, through NORM of mode selector switch, and back through connector J3 to SAS amplifier. If No. 1 stabilator amplifier airspeed switch logic is +15 vdc, <60 KNOTS indicator goes on. Pressing test set LAMP TEST button also causes indicator to go on.
Mode Selector Control	NORM supplies No. 1 stabilator amplifier airspeed switch logic commands through test set connector J3 to SAS amplifier. If logic command is 15 vdc (<60 knots), circuitry in test set allows 28 vdc from test set 28 VDC SAS circuit breakers to turn on <60 KNOTS indicator.<60 KNOTS supplies 15 vdc from test set power supply through test set connector J3 to SAS amplifier. In this position, 15 vdc also controls circuitry in test set allowing 28 vdc from test set 28 VDC SAS circuit breaker to turn on <60 KNOTS indicator. >60 KNOTS supplies −15 vdc from test set power supply through test set connector J3 to SAS amplifier.

Table 2-1. Operator's Controls. (Cont)

CONTROL, INDICATOR, TEST POINT, OR CONNECTOR	FUNCTION
YAW RATE Simulator	Provides capability for simulating SAS amplifier dc yaw rate output signals. This simulation signal is used for testing rate/lagged rate and washout functions of SAS amplifier yaw channel. SAS amplifier dc yaw rate output can be monitored at test set YAW RATE test point.
SIM Test Point	Provides monitoring capability for SAS amplifier dc yaw rate simulation signal. When mode selector switch is at SIM 1 or SIM 2, SIM test point is connected to YAW RATE TESTtest point.
L/R Control	Supplies variable dc simulation signals through selected positions of mode selector control to SAS amplifier. From 0 vdc reference, turning control L supplies negative voltage to SIM test point, and turning control R supplies positive voltage to SIM test point. Control can be turned 10 complete turns from each mechanical stop.
Mode Selector Control	NORM position disconnects variable dc simulation signal selected by L/R control from SAS amplifier. When control is moved from SIM 1 to NORM, one polarity of bipolar gain of SAS amplifier washout function can be checked. SIM 1 connects SIM test point to YAW RATE TEST test point. When control is moved from SIM 2 to SIM 1, one polarity of bipolar gain of SAS amplifier washout function can be checked. SIM 2 bypasses SAS amplifier washout function, allowing proportional gain of rate/lag rate function of SAS amplifier to be checked using L/R control. Bipolar gain check of SAS amplifier washout function can be done by selecting steady state dc simulation voltage, using L/R control with mode selector control at SIM 2 and monitoring decay time of SAS amplifier response when mode selector control is moved to SIM 1 and then to NORM. SIM 2 also connects SIM test point to YAW RATE TESTtest point.
ROLL ATT Simulator	Provides capability for simulating or monitoring No. 2 vertical gyro-roll three-wire output signal. This simulation signal is used for testing stability augmentation system (SAS) amplifier roll proportional, derived rate, and rate/lagged rate plus proportional functions.
X, Y, and Z SNSR Test Points	Provide monitoring capability for three-wire roll signal output of No. 2 vertical gyro. When mode selector control is at NORM, X, Y, and Z SNSR test points are connected to X, Y, and Z SIM test points, respectively.
X, Y, and Z SIM Test Points	Provide monitoring capability for No. 2 vertical gyro-roll three-wire output simulation signal when mode selector control is at SIM 1 or SIM 2. When mode selector control is at NORM, X, Y, and Z SIM test points are connected to X, Y, and Z SNSR test points, respectively.
Synchro Transmitter	Supplies variable three-phase ac simulation signal through SIM 1 and SIM 2 of mode selector control, and through test set connector J3 to SAS amplifier. This simulation signal can be monitored at X, Y, and Z SIM test points.

Table 2-1. Operator's Controls. (Cont)

CONTROL, INDICATOR, TEST POINT, OR CONNECTOR	FUNCTION
	CAUTION The synchro transmitter control is a precision instrument that contains a slip clutch and an 18 to 1 reduction mechanism between the outer (fine) dial and the inner (coarse) dial. Use care to avoid over torquing this mechanism which will result in activation of the slip clutch and loss of calibration between inner and outer dials. Always use outer dial when adjusting to a specific degrees setting. If it is necessary to use inner dial, MAKE SURE to turn dial using a slow, smooth, continuous motion.
Mode Selector Control	NORM position supplies three-wire roll signal output of No. 2 vertical gyro through test set connector J3 to SAS amplifier. This signal can be monitored at X, Y, and Z SIM test points. SIM 1 supplies variable three-phase ac simulation signal selected by synchro transmitter control through test set connector J3 to SAS amplifier. This simulation signal can be monitored at X, Y, and Z SIM test points. SIM 2 jumpers DC ROLL ATT and ROLL RATE TESTtest points together and supplies variable three-phase ac simulation signal selected by synchro transmitter control through test set connector J3 to SAS amplifier. This simulation signal can be monitored at X, Y, and Z SIM test points.
TEST POINTS	Provide monitoring capability for functional conditions of SAS system operation.
P VALVE HI/LO Test Points	Provide monitoring capability for resistance and voltage measurements of pitch SAS valve in pitch/trim assembly.
R VALVE HI/LO Test Points	Provide monitoring capability for resistance and voltage measurements of roll SAS valve, in roll actuator.
Y VALVE HI/LO Test Points	Provide monitoring capability for resistance and voltage measurements of yaw SAS valve, in yaw boost servo.
TURN RATE COIL HI/LO Test Points	MH–60K Provides monitoring capability for amplified SAS amplifier yaw rate gyro output.
DC ROLL ATT Test Point	Provides monitoring capability for transformed roll attitude from SAS amplifier. Three-wire simulation signal is supplied by test set ROLL ATT simulator to SAS amplifier. SAS amplifier changes three-wire ac to two-wire dc. Amplitude of dc (transformed roll attitude) is directly proportional to amount of degrees of roll attitude displacement simulated by ROLL ATT simulator. When ROLL ATT simulator mode selector control is placed to SIM 2, DC ROLL ATT test point is connected to ROLL RATE TESTtest point.
ROLL RATE TEST Test Point	MH–60K Provides monitoring capability for simulated SAS amplifier derived rate signal. When test set ROLL ATT simulator mode selector control is placed to SIM 2, ROLL RATE TEST test point is connected to DC ROLL ATT test point.
ROLL RATE Test Point	MH–60K Provides monitoring capability for SAS amplifier derived rate signal.

Table 2-1. Operator's Controls. (Cont)

CONTROL, INDICATOR, TEST POINT, OR CONNECTOR	FUNCTION
YAW RATE TEST Test Point	MH−60K Provides monitoring capability for simulated SAS amplifier-dc yaw rate gyro signal. When test set YAW RATE simulator mode selector switch is placed to SIM 1 or SIM 2, YAW RATE TEST test point is connected to YAW RATE SIM test point.
YAW RATE Test Point	MH−60K Provides monitoring capability for SAS amplifier-dc yaw rate gyro output.
YAW 26VAC REF Test Point	MH−60K Provides monitoring capability for 26 vac yaw demodulator reference derived in SAS amplifier.
ROLL 26VAC REF Test Point	MH−60K Provides monitoring capability for 26 vac roll demodulator reference derived in SAS amplifier.
SAS SIG REF PITCH and ROLL/YAW Test Points	Provides monitoring capability for command reference supplied by SAS amplifier power supply. These test points are about 12.0 vdc relative to power ground.
Computer Test Point Panel	UH−60A UH−60L EH−60A EH60A UH−60Q Provides test points for monitoring SAS/FPS computer. Each test point labeling corresponds to pin letters on SAS/FPS computer connectors J111, J121, and J139. Test point panel also provides connectors J4, J5, and J6, which are used with cable assemblies W4, W5, and W3 to connect test set to SAS/FPS computer.

SECTION II.

OPERATOR PREVENTIVE MAINTENANCE CHECKS AND SERVICES

SECTION OVERVIEW

2.2. GENERAL.

Preventive maintenance checks and services consist of a visual inspection to be done at each operation of the test set, operational check, any troubleshooting required, and the repair required to correct any malfunctions. If your equipment does not operate, troubleshoot with proper equipment. Report any deficiencies using the proper forms, see DA Pam 738-750.

2.3. INSPECTIONS.

Do inspections as shown in Table 2-2.

Table 2-2. Operator/Aviation Unit Maintenance Checks and Services.

Within designated interval, these checks are to be done in the order listed.

B- Before
D- During
A- After

Item No.	Interval	Item to be inspected	Procedures Check for and have repaired or adjusted as necessary	Equipment is not ready/available if:
1	B, A	Cables	Check for broken wires, burned insulation, damage or dirt in connectors.	
2	B	Controls and Switches	Positive action and freedom of movement	
3	D	Indicator Lights	Check operation of lights	

SECTION III.

OPERATION UNDER USUAL CONDITIONS

SECTION OVERVIEW

2.4. ASSEMBLY AND PREPARATION FOR USE.

a. When received, SSLTS is packaged in two corrugated cardboard cartons. The cable case assembly carton is 78.74 cm (31 inches) long by 58.42 cm (23 inches) wide by 33.02 cm (13 inches) deep. The volume of the carton is 0.16 cubic meters (5.4 cubic feet). The total weight of the carton when packed for shipment is about 24.3 kg (54 pounds). The test set carton is 68.58 cm (27 inches) long by 55.88 cm (22 inches) wide by 48.26 cm (19 inches) deep. The volume of the carton is 0.19 cubic meters (6.5 cubic feet). The total weight of the carton when packed for shipment is about 26.5 kg (59 pounds). A typical shipping carton and contents are shown in Figure 2–2.

b. Removing Contents.

(1) Cut or remove gummed tape from top of carton, and open top of carton.

(2) Remove polyethylene cushioning material from top of carton.

(3) Lift carrying case from carton and remove remaining polyethylene cushioning material.

c. Checking Unpacked Equipment.

NOTE

To open the test set, release air pressure by opening the air release valve.

(1) Inspect the equipment for damage caused during shipment. If the equipment has been damaged, report the damage on SF 364 in accordance with instructions in AR 735-11-2.

(2) Check the equipment against the component listing and the packing slip to see if the shipment is complete. Report all discrepancies per instructions of DA Pam 738-750. The equipment should be placed in service even though a minor assembly or part that does not affect proper functioning is missing.

(3) Check to see whether the equipment has been modified. (Equipment that has been modified will have the MWO number on the front panel, near the nomenclature plate.) Check also to see whether all currently applicable MWOs have been applied. (Current MWOs applicable to the equipment are listed in DA Pam 310-1.)

2.5. OPERATION PROCEDURE.

Test set, stabilization system will operate in the helicopter environment by connecting the test set to the SAS/FPS computer, either or both stabilator amplifiers, and/or the SAS amplifier. Follow the instructions provided in MH60K TM 11-1520-250-20, UH60A UH60L TM 11-1520-237-23 or EH60A TM 11-1520-249-23-2.

2.6. LOCALLY MADE TEST CABLE.

Locally make test set cable for operational checkout. Instructions for manufacture of locally made test cable are listed in Appendix D.

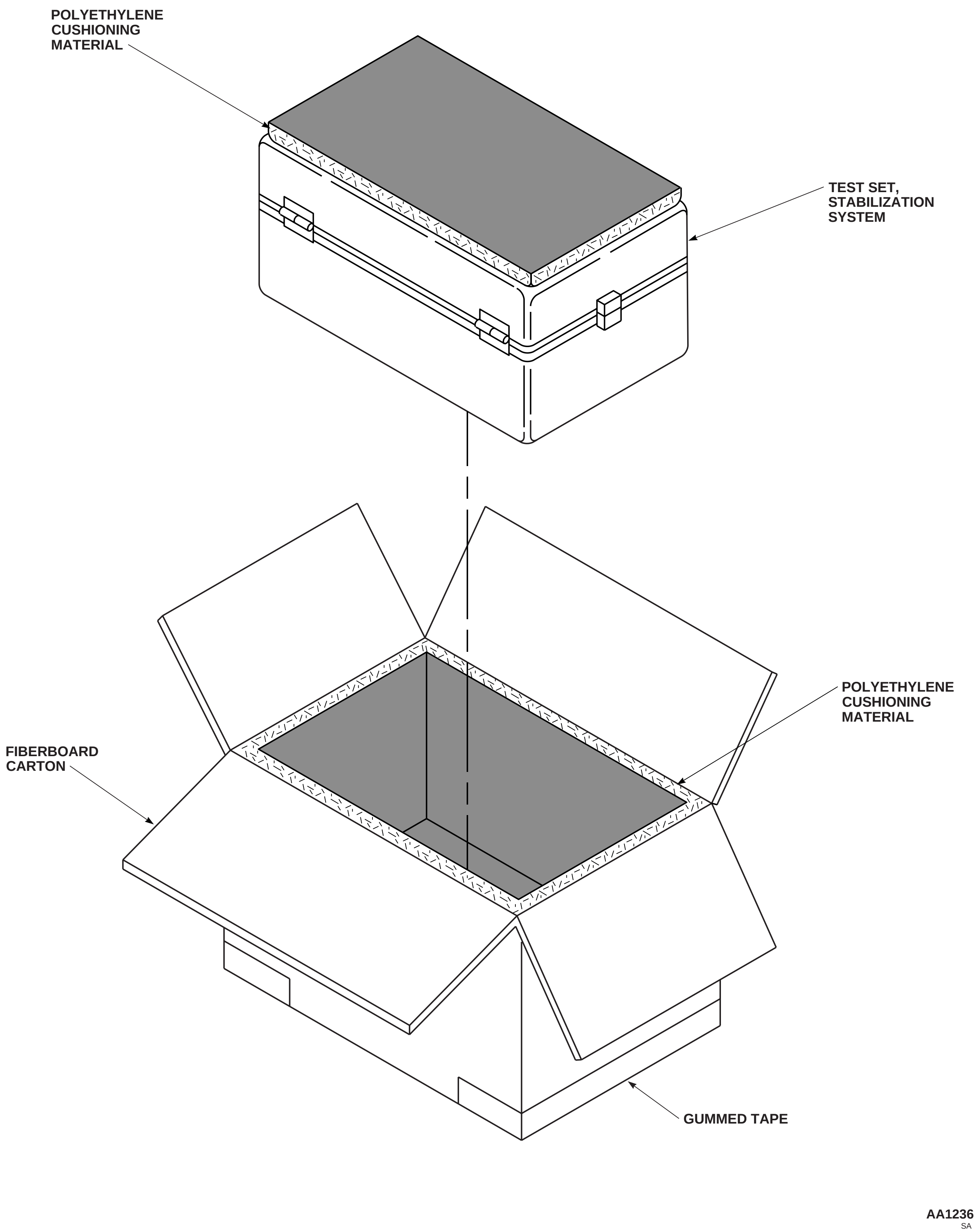

Figure 2-2. Typical Packaging

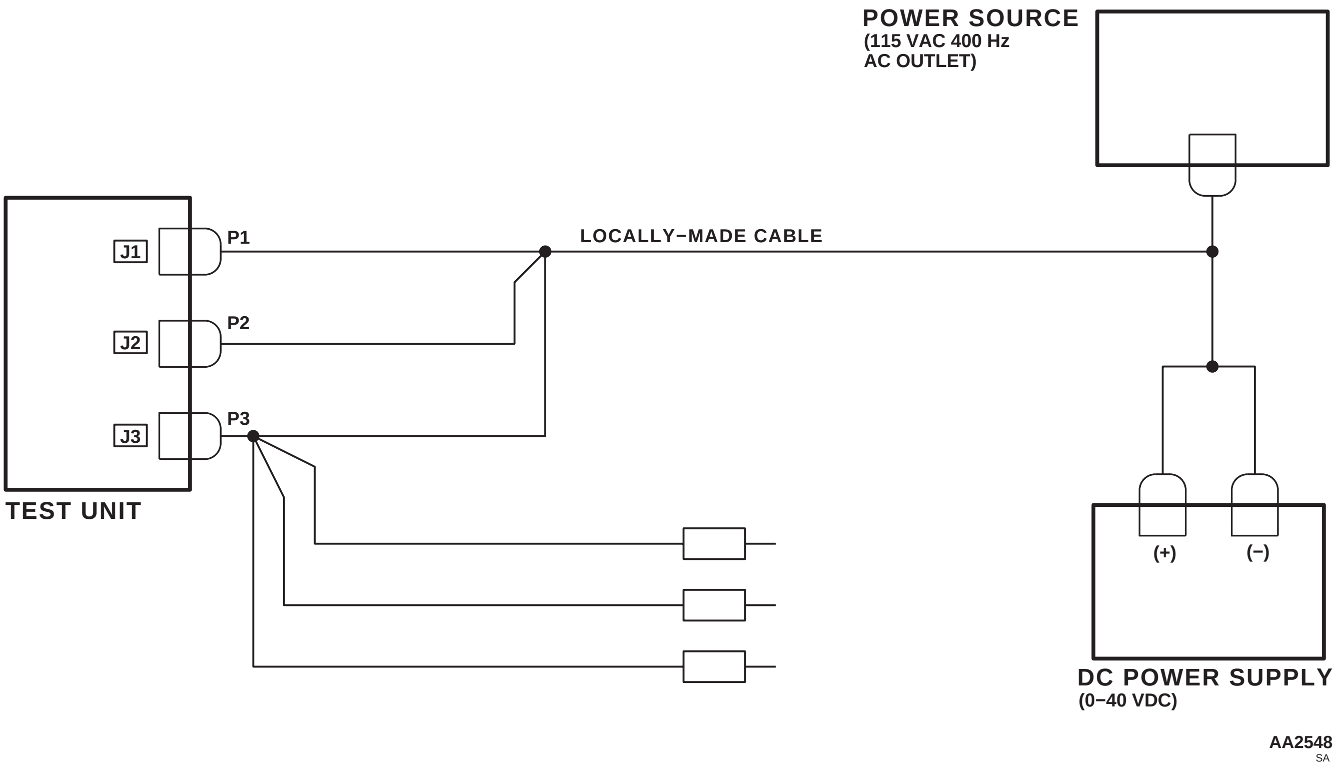

Figure 2-3. Test Setup Diagram

CHAPTER 3

GENERAL SUPPORT

CHAPTER OVERVIEW

SECTION I.

LUBRICATION INSTRUCTIONS

SECTION OVERVIEW

3.1. LUBRICATION OF EQUIPMENT.

No lubrication of equipment is required.

SECTION II.

TROUBLESHOOTING PROCEDURES

SECTION OVERVIEW

3.2. SCOPE.

3.2.1. General. This section contains aviation intermediate maintenance troubleshooting or malfunction information and tests for locating and correcting most of the troubles which may occur in the test set. Each test procedure provides indications whereby portions of a circuit are proven acceptable or troubleshooting can be done. Troubleshooting is directly related to test procedures to assist in isolating a specific subassembly or component malfunction. Refer to Chapter 5 for disassembly and assembly procedures.

3.2.2. Malfunctions Not Listed. This manual cannot list all possible malfunctions which may occur or all tests or inspections and corrective actions. If a malfunction is not listed (except when malfunction and cause are obvious), or is not corrected by listed corrective actions, you shall notify higher level maintenance. You shall do the test/inspections and corrective actions in the order listed.

3.3. TROUBLESHOOTING TEST SET.

3.3.1. General. In the test procedures below, do not make electrical connections or apply power to the test set unless instructed to do so. Standard test equipment is listed in Appendix B, section III.

3.3.2. Troubleshooting. Table 3-2. contains troubleshooting and malfunction information and test for locating and correcting most of the troubles which may occur in the test set, stabilization system.

3.4. TESTING UPPER PANEL ASSEMBLY.

Check for continuity between connector pins and test point connections listed in Table 3-1. Refer to Figure 2-1. for operator’s control diagram. If continuity does not exist, repair wiring, Figure 5–8.

3.5. TESTING LOWER PANEL ASSEMBLY.

Table 3-2. lists common malfunctions that you may find during the operation or maintenance of the test set or its components. You shall do the tests/inspections and corrective actions in the order listed. Each malfunction or trouble symptom for an individual component, unit, or system is followed by a list of testing/checkout procedures necessary for determining probable cause of malfunction. Corrective actions are listed below the testing/checkout procedure when an operational check is not as specified. See Figure 5-10. for lower panel assembly schematic diagram. Refer to Figure 5–9. for lower panel assembly wiring diagram.

Table 3-1. Upper Panel Assembly Continuity Test

WIRE NO.	FROM	TO
1-22	J4-A	J111-A
2-22	J4-B	J111-B
3-22	J4-C	J111-C
4-22	J4-D	J111-D
5-22	J4-E	J111-E
6-22	J4-F	J111-F
117B-20	J4-G	J139-G
8-22	J4-H	J111-H
9-22	J4-J	J111-J
10-22	J4-K	J111-K
11-22	J4-L	J111-L
12-22	J4-M	J111-M
13-22	J4-N	J111-N
14-22	J4-P	J111-P
15-22	J4-R	J111-R
*	J4-S	
17-22	J4-T	J111-T
*	J4-U	
19-22	J4-V	J111-V
20-22	J4-W	J111-W
21-22	J4-X	J111-X
22-22	J4-Y	J111-Y
23-22	J4-Z	J111-Z
24-22	J4-a	J111-A
25-22	J4-b	J111-B
26-22	J4-c	J111-C
27-22	J4-d	J111-D
28-22	J4-e	J111-E
29-22	J4-f	J111-F
30-22	J4-g	J111-G
31-22	J4-h	J111-H
32-22	J4-i	J111-I
33-22	J4-j	J111-J
*	J4-k	
*	J4-m	
*	J4-n	
37-22	J4-p	J111-P
38-22	J4-q	J111-Q
39-22	J4-r	J111-R
40-22	J4-s	J111-S
41-22	J4-t	J111-T
42-22	J4-u	J111-U
43-22	J4-v	J111-V
44-22	J4-w	J111-W
45-22	J4-x	J111-X
*	J4-y	
47-22	J4-z	J111-Z
*	J4-AA	
49-22	J4-BB	J111-BB
50-22	J4-CC	J111-CC
51-22	J4-DD	J111-DD
52-22	J4-EE	J111-EE
53-22	J4-FF	J111-FF
54-22	J4-GG	J111-GG
55-22	J4-HH	J111-HH
56-22	J5-A	J121-A
*	J5-B	
58-22	J5-C	J121-C
59-22	J5-D	J121-D
60-22	J5-E	J121-E
61-22	J5-F	J121-F
117A-20	J5-G	J139-G
63-22	J5-H	J121-H
*	J5-J	
65-22	J5-K	J121-K
66-22	J5-L	J121-L
67-22	J5-M	J121-M
68-22	J5-N	J121-N
69-22	J5-P	J121-P
70-22	J5-R	J121-R
71-22	J5-S	J121-S
72-22	J5-T	J121-T
73-22	J5-U	J121-U
74-22	J5-V	J121-V
75-22	J5-W	J121-W
76-22	J5-X	J121-X
77-22	J5-Y	J121-Y
78-22	J5-Z	J121-Z
79-22	J5-a	J121-A
80-22	J5-b	J121-B
81-22	J5-c	J121-C
82-22	J5-d	J121-D
83-22	J5-e	J121- E
84-22	J5-f	J121-F
85-22	J5-g	J121-G
86-22	J5-h	J121-H
87-22	J5-i	J121-I
88-22	J5-j	J121-J

Table 3-1. Upper Panel Assembly Continuity Test (Cont)

WIRE NO.	FROM	TO
89-22	J5-k	J121-K
90-22	J5-m	J121-M
91-22	J5-n	J121-N
92-22	J5-p	J121-P
93-22	J5-q	J121-Q
94-22	J5-r	J121-R
*	J5-s	
96-22	J5-t	J121-T
97-22	J5-u	J121-U
98-22	J5-v	J121-V
99-22	J5-w	J121-W
100-22	J5-x	J121-X
101-22	J5-y	J121-Y
*	J5-z	
103-22	J5-AA	J121-AA
104-22	J5-BB	J121-BB
105-22	J5-CC	J121-CC
106-22	J5-DD	J121-DD
*	J5-EE	
108-22	J5-FF	J121-FF
109-22	J5-GG	J121-GG
110-22	J5-HH	J121-HH
111-22	J6-A	J139-A
112-22	J6-B	J139-B
113-22	J6-C	J139-C
114-20	J6-D	J139-D
114A-20	E1	J139-D
115-20	J6-E	J139-E
116-20	J6-F	J139-F
117-20	J6-G	J139-G
118-20	J6-H	J139-H

*Connector contact not used.

TABLE NO. 3-2. POWER 115 VAC 400 Hz STAB 1, STAB 2, And SAS Indicator Lights Do Not Go On When Facility Power Is Applied To Test Set.

TEST OR INSPECTION
CORRECTIVE ACTION

1. Place all test set mode selector controls to OFF or NORM. Go to 2

2. Place AIRSPEED SWITCH mode selector control to greater than (>) 60 KNOTS. Go to 3

3. Place SCALING AMPL STAB 1 & 2 SINGLE control to STAB 1 & 2. Go to 4.

4. Pull out all test set circuit breakers. Go to 5.

5. Connect P1, P2, and P3 of locally made cable to test set connectors J1, J2, and J3 of test set as shown in Figure 2-3. Go to 6

6. Apply 28 vdc and 115 vac power to test set. POWER 115 VAC 400 Hz STAB 1, STAB 2, and SAS indicator lights shall go on. Go to 7.

7. If indicator lights do not go on, replace lamp (DS4, DS5, and/or DS6).

TABLE NO. 3-3. POWER 28 VDC STAB 1 Indicator Light Does Not Go On When Power 28 VDC STAB 1 Circuit Breaker Is Pushed In.

TEST OR INSPECTION
CORRECTIVE ACTION

Check for 27.5 ± 0.5 vdc between 28 VDC STAB1 and PWR GND test jacks.

Step 1. If voltage is present, replace lamp DS3.
Step 2. If voltage is not present, replace circuit breaker CB3.

TABLE NO. 3-4. POWER 28 VDC STAB 2 Indicator Light Does Not Go On When POWER 28 VDC STAB 2 Circuit Breaker Is Pushed In.

TEST OR INSPECTION
CORRECTIVE ACTION

Check for 27.5 ± 0.5 vdc between 28 VDC STAB2 and PWR GND test jacks.

Step 1. If voltage is present, replace lamp DS2 and retest.

TABLE NO. 3-4. POWER 28 VDC STAB 2 Indicator Light Does Not Go On When POWER 28 VDC STAB 2 Circuit Breaker Is Pushed In. (Cont)

TEST OR INSPECTION
CORRECTIVE ACTION

Step 2. If voltage is not present, replace circuit breaker CB2.

TABLE NO. 3-5. POWER 28 VDC SAS Indicator Light Does Not Go On When POWER 28 VDC SAS Circuit Breaker Is Pushed In.

TEST OR INSPECTION
CORRECTIVE ACTION

Check for 27.5 ± 0.5 vdc between 28 VDC SAS and PWR GND test jacks.

Step 1. If voltage is present, replace lamp DS1.
Step 2. If voltage is not present, replace circuit breaker CB1.

TABLE NO. 3-6. Multimeter Does Not Indicate −15.15 ± 0.15 Vdc When POWER 115 VAC 400 Hz Test Set Circuit Breaker Is Pushed In.

TEST OR INSPECTION
CORRECTIVE ACTION

NOTE

The test set has separate grounds, identified as PWR GND and SIG GND, which are not connected inside the test set. Ground circuits are switched through relay K1, contacts B1 and B3. A burnt or open contact will cause erroneous indication at ac input of PS1.

1. Disconnect connector P1 of locally made cable from connector J1 of test set. Go to 2.

2. Connect multimeter between POWER +15 VDC and SIG GND test jacks. Go to 3.

3. Push in POWER 115 VAC 400 Hz TEST SET circuit breaker. Go to 4.

4. Multimeter shall indicate 15 ± 0.15 vdc.

Step 1. If voltage is present, go to **11.**
Step 2. If voltage is not present, go to **5.**

TABLE NO. 3-6. Multimeter Does Not Indicate −15.15 ± 0.15 Vdc When POWER 115 VAC 400 Hz Test Set Circuit Breaker Is Pushed In. (Cont)

TEST OR INSPECTION
CORRECTIVE ACTION

5. Check for 115 vac between the ac terminals of PS1.

Step 1. If voltage is present, go to **11.**
Step 2. If voltage is not present, go to **6.**

6. Check continuity of Filter FL1.

Step 1. If continuity is present, go to **7.**
Step 2. If continuity is not present, replace FL1.

7. Check continuity of CB4.

Step 1. If continuity is present, go to **8.**
Step 2. If continuity is not present, replace CB4.

8. Check continuity through contacts A2 and A3 of relay K1.

Step 1. If continuity is present, go to **9.**
Step 2. If continuity is not present, replace K1.

9. Check continuity between contact A3 of relay K1 and J3-A.

Step 1. If continuity is present, go to **10.**
Step 2. If continuity is not present, repair/replace wiring as required.

10. Check ac return through contacts B2 and B3 of relay K1.

Step 1. If ac return is present, go to **15.**
Step 2. If ac return is not present, replace K1.

11. Check PS1 for 15 ± 0.15 vdc.

Step 1. If voltage is low, go to **12.**

12. Disconnect lead to + terminal of PS1. Go to 13.

13. Connect multimeter + lead to + terminal of PS1 and − lead to T/C terminal of PS1.

Step 1. If multimeter indicates 15 ± 0.15 vdc, go to **14.**
Step 2. If multimeter does not indicate 15 ± 0.15 vdc, replace PS1.

TABLE NO. 3-6. Multimeter Does Not Indicate −15.15 ± 0.15 Vdc When POWER 115 VAC 400 Hz Test Set Circuit Breaker Is Pushed In. (Cont)

TEST OR INSPECTION
CORRECTIVE ACTION

14. Connect multimeter + lead to − terminal of PS1 and − lead to T/C terminal of PS1.

Step 1. If multimeter indicates −15 ± 0.15 vdc, trouble is elsewhere. Go to **15.**
Step 2. If multimeter does not indicate −15 ± 0.15 vdc, replace PS1.

15. Pull out POWER 115 VAC 400 Hz TEST SET circuit breaker.

TABLE NO. 3-7. All STABILATOR And SAS SYSTEM Indicators Do Not Go On When LAMP TEST Switch Is Pressed And Held And Indicators Do Not Go Off When LAMP TEST Switch Is Released.

TEST OR INSPECTION
CORRECTIVE ACTION

1. Press and hold LAMP TEST control and check that all STABILATOR INDICATORS and SAS indicators go on.

Step 1. If all indicator lamps are on, go to **5.**
Step 2. If all indicator lamps are off, go to **3.**
Step 3. If all STABILATOR INDICATOR lamps are off, go to **2.**
Step 4. If all SAS indicator lamps are off, go to **3.**
Step 5. If one or more indicator lamps are off, go to **4.**

2. Check filter FL4 for continuity.

Step 1. If continuity exists, go to **3.**
Step 2. If continuity does not exist, replace filter FL4.

3. Check switch S24 for continuity.

Step 1. If continuity exists, replace component on board assembly A3.
Step 2. If continuity does not exist, replace switch S24.

4. Check for malfunctioning lamps.

Step 1. If any lamps are malfunctioning, replace lamps.
Step 2. If all lamps are good, replace component on board assembly A3.

TABLE NO. 3-7. All STABILATOR And SAS SYSTEM Indicators Do Not Go On When LAMP TEST Switch Is Pressed And Held And Indicators Do Not Go Off When LAMP TEST Switch Is Released. (Cont)

TEST OR INSPECTION
CORRECTIVE ACTION

5. Release LAMP TEST control and check that all STABILATOR INDICATORS and SAS indicators go off. Go to 6.

6. If lamps do not go off, replace switch S24.

TABLE NO. 3-8. Multimeter Does Not Indicate 10.22 ± 0.35 Vdc When SCALING AMPL NO. 1 Control Is Turned Fully Counterclockwise And Does Not Indicate −10.22 ± 0.35 Vdc When SCALING AMPL NO. 1 Control Is Turned Fully Clockwise.

TEST OR INSPECTION
CORRECTIVE ACTION

1. Place SCALING AMPL STAB 1&2/SINGLE control to SINGLE. Go to 2.

2. Place SCALING AMPL NO. 1 control to SIM. Go to 3.

3. Connect multimeter between SCALING AMPL SIM NO. 1 and SIG GND test jacks. Go to 4.

4. Turn SCALING AMPL NO. 1 control through its range from fully counterclockwise (DN) to fully clockwise (UP). Multimeter shall indicate 10.22 ± 0.35 vdc when SCALING AMPL NO. 1 control is fully counterclockwise and shall indicate −10.22± 0.35 vdc when SCALING AMPL NO. 1 control is fully clockwise. Multimeter shall indicate a continuously adjust-able voltage from counterclockwise to clockwise position.

Step 1. If multimeter indicates 0.0 vdc, go to **5.**
Step 2. If multimeter indication is not correct, go to **6.**
Step 3. If multimeter indication changes abruptly from 10.57 to −10.57 vdc, replace potentiometer R5.

5. Check switch S5 for continuity.

Step 1. If continuity exists, go to **6.**
Step 2. If continuity does not exist, replace switch S5.

6. Connect multimeter between terminal 2 of potentiometer R5 and signal ground. Go to 7.

7. Turn SCALING AMPL NO. 1 control through its range from fully counterclockwise (DN) to fully clockwise (UP). multimeter shall indicate 10 and -10 vdc.

TABLE NO. 3-8. Multimeter Does Not Indicate 10.22 ± 0.35 Vdc When SCALING AMPL NO. 1 Control Is Turned Fully Counterclockwise And Does Not Indicate −10.22 ± 0.35 Vdc When SCALING AMPL NO. 1 Control Is Turned Fully Clockwise. (Cont)

TEST OR INSPECTION
CORRECTIVE ACTION

Step 1. If multimeter indication is correct, replace circuit board assembly A1.
Step 2. If multimeter indication is not correct, replace component board assembly A4.

TABLE NO. 3-9. Multimeter Does Not Indicate 10.22 ± 0.35 Vdc When SCALING AMPL NO. 2 Control Is Turned Fully Counterclockwise And Does Not Indicate −10.22 ± 0.35 Vdc When SCALING AMPL NO. 2 Control Is Turned Fully Clockwise.

TEST OR INSPECTION
CORRECTIVE ACTION

1. Place SCALING AMPL NO. 2 control to SIM. Go to 2.

2. Connect multimeter between SCALING AMPL SIM NO. 2 and SIG GND test jacks. Go to 3.

3. Turn SCALING AMPL NO. 2 control through its range from fully counterclockwise (DN) to fully clockwise (UP). Multimeter shall indicate 10.22 ± 0.35 vdc when SCALING AMPL NO. 2 control is fully counterclockwise and shall indicate −10.22± 0.35 vdc when SCALING AMPL NO. 2 control is fully clockwise. Multimeter shall indicate a continuously adjust-able voltage from counterclockwise to clockwise position.

Step 1. If multimeter indicates 0.0 vdc, go to **4.**
Step 2. If multimeter indication is not correct, go to **5.**
Step 3. If multimeter indication changes abruptly from 10.57 to −10.57 vdc, replace potentiometer R4.

4. Check switch S4 for continuity.

Step 1. If continuity exists, go to **5.**
Step 2. If continuity does not exist, replace switch S4.

5. Connect multimeter between terminal 2 of potentiometer R4 and signal ground. Go to 6.

6. Turn SCALING AMPL NO. 2 control through its range from fully counterclockwise (DN) to fully clockwise (UP). Multimeter shall indicate -10 and 10 vdc.

Step 1. If multimeter indication is correct, replace circuit board assembly A1.
Step 2. If multimeter indication is not correct, replace component board assembly A4.

TABLE NO. 3-10. Multimeter Does Not Indicate 10.22 ± 0.35 Vdc When STAB 1&2/SINGLE Switch Is Placed To STAB 1&2 And Does Not Indicate −10.22 ± 0.3.5 Vdc When STAB 1&2/SINGLE Switch Is Placed To SINGLE.

TEST OR INSPECTION
CORRECTIVE ACTION

1. Place SCALING AMPL NO. 1 control fully counterclockwise (DN). Go to 2.

2. Place SCALING AMPL NO. 2 control fully clockwise (UP). Go to 3.

3. Connect multimeter between SCALING AMPL SIM NO. 2 and SIG GND test jacks. Go to 4.

4. Place SCALING AMPL STAB 1&2/SINGLE control to STAB 1&2 and then to SINGLE. Multimeter shall indicate 10.22 ± 0.35 vdc when SCALING AMPL STAB 1&2/SINGLE control is at STAB 1&2 and shall indicate −10.22 ± 0.35 vdc when SCALING AMPL STAB 1&2/SINGLE control is at SINGLE. Go to 5.

5. If multimeter indication is not correct, replace switch S6.

TABLE NO. 3-11. Multimeter Does Not Indicate 7.16 ± 0.74 Vdc When CLTV STICK POSN Control Is Turned Fully Counterclockwise And Does Not Indicate −7.16 ± 0.74 Vdc When CLTV STICK POSN Control Is Turned Fully Clockwise.

TEST OR INSPECTION
CORRECTIVE ACTION

1. Place CLTV STICK POSN control to SIM STAB 1. Go to 2.

2. Connect multimeter between CLTV STICK POSN SIM NO. 1 and SIG GND test jacks. Go to 3.

3. Turn CLTV STICK POSN control throughout its range from fully counterclockwise (DN) to fully clockwise (UP). Multimeter shall indicate 7.16 ± 0.74 vdc when CLTV STICK POSN control is fully counterclockwise and shall indicate −7.16± 0.74 vdc when CLTV STICK POSN control is fully clockwise. Multimeter shall indicate a continuously adjustable voltage from counterclockwise to clockwise position.

Step 1. If multimeter indication is not correct, go to **4.**
Step 2. If multimeter indication changes abruptly from 7.90 to −7.90 vdc, replace potentiometer R3.

4. Check switch S3 for continuity.

TABLE NO. 3-11. Multimeter Does Not Indicate 7.16 ± 0.74 Vdc When CLTV STICK POSN Control Is Turned Fully Counterclockwise And Does Not Indicate −7.16 ± 0.74 Vdc When CLTV STICK POSN Control Is Turned Fully Clockwise. (Cont)

TEST OR INSPECTION
CORRECTIVE ACTION

Step 1. If continuity exists, replace component board assembly A4.
Step 2. If continuity does not exist, replace switch S3.

TABLE NO. 3-12. Multimeter Does Not Indicate 1.0 ± 0.2 Vdc When CLTV STICK POSN Switch Is Placed To SIM STAB 2.

TEST OR INSPECTION
CORRECTIVE ACTION

1. Place CLTV STICK POSN control to SIM STAB 1. Go to 2.

2. Connect multimeter between CLTV STICK POSN SIM NO. 1 and SIG GND test jacks. Go to 3.

3. Turn CLTV STICK POSN control to a multimeter indication of 1.0 vdc. Go to 4.

4. Connect multimeter between CLTV STICK POSN SIM NO. 2 and SIG GND test jacks. Go to 5.

5. Place CLTV STICK POSN control to SIM STAB 1&2 and then to SIM STAB 2. Multimeter shall indicate 1.0 ± 0.2 vdc when CLTV STICK POSN control is at STAB 1&2 and shall indicate 1.0 ± 0.2 vdc when CLTV STICK POSN control is at SIM STAB 2. Go to 6.

6. If multimeter indication is not correct, replace switch S3.

TABLE NO. 3-13. Multimeter Does Not Indicate 2.3 ± 0.1 Vdc With AS SENSOR Switch Placed To SIM STAB 2 Or To SIM STAB 1.

TEST OR INSPECTION
CORRECTIVE ACTION

1. Connect multimeter between AS SENSOR SIM NO. 1 and SIG GND test jacks. Go to 2.

2. Place AS SENSOR control to SIM STAB 2. Multimeter shall indicate 2.3± 0.1 vdc.

Step 1. If multimeter indication is not correct, go to **3.**
Step 2. If multimeter indication is correct, go to **4.**

TABLE NO. 3-13. Multimeter Does Not Indicate 2.3 ± 0.1 Vdc With AS SENSOR Switch Placed To SIM STAB 2 Or To SIM STAB 1. (Cont)

TEST OR INSPECTION
CORRECTIVE ACTION

3. Check switch S2 for continuity.

Step 1. If continuity exists, replace circuit board assembly A2.
Step 2. If continuity does not exist, replace switch S2.

4. Connect multimeter between AS SENSOR SIM NO. 2 and SIG GND test jacks. Go to 5.

5. Place AS SENSOR control to SIM STAB 1. Multimeter shall indicate 2.3 ± 0.1 vdc. Go to 6.

6. If multimeter indicates 0.0 vdc, replace switch S2.

TABLE NO. 3-14. Multimeter Does Not Indicate 0 ± 0.15 Vdc When AS SENSOR Control Is Turned Fully Counterclockwise And Does Not Indicate 12.2 ± 1.25 Vdc When AS SENSOR Control Is Turned Fully Clockwise.

TEST OR INSPECTION
CORRECTIVE ACTION

1. Place AS SENSOR control to SIM STAB 1&2. Go to 2.

2. Connect multimeter between AS SENSOR SIM NO. 1 and SIG GND test jacks. Go to 3.

3. Turn AS SENSOR control throughout its range from fully counterclockwise (DECR) to fully clockwise (INCR). Multimeter shall indicate 0 ± 0.15 vdc when AS SENSOR control is fully counterclockwise and shall indicate 12.2 ± 1.25 vdc when AS SENSOR control is fully clockwise. Multimeter shall indicate a continuously adjustable voltage from counter-clockwise to clockwise position.

Step 1. If multimeter indicates 0.0 vdc, go to **4.**
Step 2. If multimeter indication is not correct, replace component board assembly A4.
Step 3. If multimeter indication changes abruptly from −0.15 to 13.45 vdc, replace potentiometer R2.

4. Check switch S2 for continuity.

Step 1. If continuity exists, replace circuit board assembly A2.
Step 2. If continuity does not exist, replace switch S2.

TABLE NO. 3-15. Multimeter Does Not Indicate 0 ± 0.2 Vdc When AS SENSOR Switch Is Placed To SIM STAB 2 Or To STAB 1.

TEST OR INSPECTION
CORRECTIVE ACTION

1. Turn AS SENSOR control to a multimeter indication of 1.0 vdc. Go to 2.

2. Connect multimeter between AS SENSOR SIM NO. 2 and SIG GND test jacks. Go to 3.

3. Place AS SENSOR control to SIM STAB 2. Multimeter shall indicate 0 ± 0.2 vdc.

Step 1. If multimeter indicates 0.0 vdc, replace switch S2.
Step 2. If multimeter indication is not correct, replace circuit board assembly A2.

4. Connect multimeter between AS SENSOR SIM NO. 1 and SIG GND test jacks. Go to 5.

5. Place AS SENSOR control to SIM STAB 1&2. Multimeter shall indicate 0 ± 0.2 vdc. Go to 6.

6. If multimeter indication is not correct, replace switch S2.

TABLE NO. 3-16. Multimeter Does Not Indicate −13.5 ± 0.15 Vdc When ACTR POSN Control Is Turned Fully Counterclockwise And Does Not Indicate 13.5 ± 0.15 Vdc When ACTR POSN Control Is Turned Fully Clockwise.

TEST OR INSPECTION
CORRECTIVE ACTION

1. Connect multimeter between ACTR POSN SIM NO. 1 and SIG GND test jacks. Go to 2.

2. Place ACTR POSN control to SIM STAB 1&2. Go to 3.

3. Turn ACTR POSN control throughout its range from fully counterclockwise (ACTR POSN DN) to fully clockwise (ACTR POSN UP). Multimeter shall indicate -13.5 ± 0.15 vdc when ACTR POSN control is fully counterclockwise and shall indicate 13.5 ± 0.15 vdc when ACTR POSN control is fully clockwise. Digital multimeter shall indicate a continuously adjustable voltage from counterclockwise to clockwise position.

Step 1. If multimeter indication is not correct, go to **4.**
Step 2. If multimeter indication changes abruptly from −15.0 to 15.0 vdc, replace potentiometer R1.

TABLE NO. 3-16. Multimeter Does Not Indicate −13.5 ± 0.15 Vdc When ACTR POSN Control Is Turned Fully Counterclockwise And Does Not Indicate 13.5 ± 0.15 Vdc When ACTR POSN Control Is Turned Fully Clockwise. (Cont)

TEST OR INSPECTION
CORRECTIVE ACTION

4. Connect multimeter between ACTR POSN SIM NO. 2 and SIG GND test jacks. Go to 5.

5. Turn ACTR POSN control throughout its range from fully counterclockwise (ACTR POSN DN) to fully clockwise (ACTR POSN UP). Multimeter shall indicate −15.0 and 15.0 vdc.

Step 1. If multimeter indication is not correct, go to **6.**
Step 2. If multimeter indication is correct, replace switch S1.

6. Connect multimeter between terminal 2 of potentiometer R1 and signal ground. Go to 7.

7. Turn ACTR POSN control throughout its range from fully counterclockwise (ACTR POSN DN) to fully clockwise (ACTR POSN UP). Multimeter shall indicate 15.0 and -15.0 vdc.

Step 1. If multimeter indication is correct, go to **8.**
Step 2. If multimeter indication is not correct, replace potentiometer R1.

8. Check switch S1 for continuity.

Step 1. If continuity exists, replace circuit board assembly A1.
Step 2. If continuity does not exist, replace switch S1.

TABLE NO. 3-17. Multimeter Does Not Indicate −1.0 ± 0.2 Vdc When ACTR POSN Switch Is Placed To SIM STAB 1, SIM STAB 2, Or SIM STAB 1&2.

TEST OR INSPECTION
CORRECTIVE ACTION

Replace switch S1.

TABLE NO. 3-18. Multimeter Does Not Indicate 5.01 ± 0.53 Vdc When PITCH RATE GYRO Control Is Turned Fully Counterclockwise And Does Not Indicate −5.01 ± 0.53 Vdc When PITCH RATE GYRO Control Is Turned Fully Clockwise.

TEST OR INSPECTION
CORRECTIVE ACTION

1. Connect multimeter between PITCH RATE GYRO SIM STAB 1 and SIG GND test jacks. Go to 2.

2. Place PITCH RATE GYRO control to SIM STAB 1&2. Go to 3.

3. Turn PITCH RATE GYRO control throughout its range from fully counter-clockwise (NOSE DN) to fully clockwise (NOSE UP). Multimeter shall indicate 5.01 ± 0.53 when PITCH RATE GYRO control is fullycounterclockwise and shall indicate -5.01 ± 0.53 when PITCH RATE GYRO control is fully clockwise. Multimeter shall indicate a continuously adjustable voltage from counterclockwise to clockwise position.

Step 1. If multimeter indicates 0.0 vdc, go to **4.**
Step 2. If multimeter indication is not correct, replace circuit board assembly A2.
Step 3. If multimeter indication changes abruptly from −5.54 to 5.54 vdc, replace potentiometer R7.

4. Check switch S16 for continuity.

Step 1. If continuity exists, replace component board assembly A4.
Step 2. If continuity does not exist, replace switch S16.

TABLE NO. 3-19. Multimeter Does Not Indicate 1.0 ± 0.2 Vdc When PITCH RATE GYRO Switch Is Placed To SIM STAB 1, SIM STAB 2, Or SIM STAB 1&2.

TEST OR INSPECTION
CORRECTIVE ACTION

1. Turn PITCH RATE GYRO control for a multimeter indication of 1.0 vdc. Go to 2.

2. Place PITCH RATE GYRO control to SIM STAB 1. Multimeter shall indicate 1.0± 0.2 vdc.

Step 1. If multimeter indication is not correct, replace switch S16.
Step 2. If multimeter indication is correct, go to **3.**

3. Connect multimeter between PITCH RATE GYRO SIM STAB 2 and SIG GND test jacks. Go to 4.

TABLE NO. 3-19. Multimeter Does Not Indicate 1.0 ± 0.2 Vdc When PITCH RATE GYRO Switch Is Placed To SIM STAB 1, SIM STAB 2, Or SIM STAB 1&2. (Cont)

TEST OR INSPECTION
CORRECTIVE ACTION

4. Place PITCH RATE GYRO control to SIM STAB 1&2 and then to SIM STAB 2. Multimeter shall indicate 1.0 ± 0.2 vdc in each position. Go to 5.

5. If multimeter indication is not correct, replace switch S16.

TABLE NO. 3-20. Multimeter Does Not Indicate -0.69 ± 0.08 Vdc When PITCH RATE GYRO Switch Is Placed To SIM SAS 1.

TEST OR INSPECTION
CORRECTIVE ACTION

1. Connect multimeter between PITCH RATE GYRO SIM SAS and SIG GND test jacks. Go to 2.

2. Place PITCH RATE GYRO control to SIM SAS 1. Go to 3.

3. Turn PITCH RATE GYRO control throughout its range from fully counterclockwise (NOSE DN) to fully clockwise (NOSE UP). Multimeter shall indicate -0.69 ± 0.08 when PITCH RATE GYRO control is fully counterclockwise and shall indicate 0.69 ± 0.08 when PITCH RATE GYRO control is fully clockwise. Digital multimeter shall indicate a continuously adjustable voltage from counterclockwise to clockwise position. Go to 4.

4. If multimeter indication is not correct, go to 5.

5. Check switch S16 for continuity.

Step 1. If continuity exists, replace circuit board assembly A2.
Step 2. If continuity does not exist, replace switch S16.

TABLE NO. 3-21. Multimeter Does Not Indicate -0.69 ± 0.08 Vdc With PITCH RATE GYRO Switch Set To SIM SAS (WO).

TEST OR INSPECTION
CORRECTIVE ACTION

1. Turn PITCH RATE GYRO control fully counterclockwise (NOSE DN). Go to 2.

2. Place PITCH RATE GYRO control to SIM SAS (WO). Multimeter shall indicate -0.69± 0.08. Go to 3.

TABLE NO. 3-21. Multimeter Does Not Indicate -0.69 ± 0.08 Vdc With PITCH RATE GYRO Switch Set To SIM SAS (WO). (Cont)

TEST OR INSPECTION
CORRECTIVE ACTION

3. If multimeter indication is not correct, replace switch S16.

TABLE NO. 3-22. Multimeter Does Not Indicate 3.79± 0.41 Vdc When LATL ACCLRM Control Is Turned Fully Counterclockwise And Does Not Indicate −3.79± 0.41 Vdc When LATL ACCLRM Control Is Turned Fully Clockwise.

TEST OR INSPECTION
CORRECTIVE ACTION

1. Connect multimeter between LATL ACCLRM SIM STAB 1 and SIG GND test jacks. Go to 2.

2. Place LATL ACCLRM control to SIM STAB 1&2. Go to 3.

3. Turn LATL ACCLRM control throughout its range from fully counterclockwise (L) to fully clockwise (R). Multimeter shall indicate 3.79± 0.41 when LATL ACCLRM control is fully counterclockwise and shall indicate -3.79± 0.41 when LATL ACCLRM control is fully clockwise. Digital multimeter shall indicate a continuously adjustable voltage from counterclockwise to clockwise position.

Step 1. If multimeter indicates 0.0 vdc, go to **4.**
Step 2. If multimeter indication is not correct, replace component board assembly A4.
Step 3. If multimeter indication changes abruptly from 4.20 to −4.20 vdc, replace potentiometer R6.

4. Check switch S15 for continuity.

Step 1. If continuity exists, replace circuit board assembly A2.
Step 2. If continuity does not exist, replace switch S15.

TABLE NO. 3-23. Multimeter Does Not Indicate 1.0 ± 0.2 Vdc With LATL ACCLRM Switch Place To SIM STAB 1, SIM STAB 1&2, And SIM STAB 2.

TEST OR INSPECTION
CORRECTIVE ACTION

1. Turn LATL ACCLRM control for a multimeter indication of 1.0 vdc. Go to 2.

TABLE NO. 3-23. Multimeter Does Not Indicate 1.0 ± 0.2 Vdc With LATL ACCLRM Switch Place To SIM STAB 1, SIM STAB 1&2, And SIM STAB 2. (Cont)

TEST OR INSPECTION CORRECTIVE ACTION
2. Place LATL ACCLRM control to SIM STAB 1. Multimeter shall indicate 1.0± 0.2 vdc. Step 1. If multimeter indication is not correct, replace switch S15. Step 2. If multimeter indication is correct, go to **3.** **3. Connect multimeter between LATL ACCLRM SIM STAB 2 and SIG GND test jacks. Go to 4.** **4. Place PITCH RATE GYRO control to SIM STAB 1&2 and then to SIM STAB 2. Multimeter shall indicate 1.0 ± 0.2 vdc in each position. Go to 5.** **5. If multimeter indication is not correct, replace switch S15.**

TABLE NO. 3-24. Multimeter Does Not Indicate -3.05 ± 0.33 Vdc When LATL ACCLRM Switch Is Placed To SIM SAS 1.

TEST OR INSPECTION CORRECTIVE ACTION
1. Connect multimeter between LATL ACCLRM SIM SAS and SIG GND test jacks. Go to 2. **2. Place LATL ACCLRM control to SIM SAS 1. Go to 3.** **3. Turn LATL ACCLRM control throughout its range from fully counterclockwise (L) to fully clockwise (R). Multimeter shall indicate -3.05± 0.33 when LATL ACCLRM control is fully counterclockwise and shall indicate 3.05 ± 0.33 when LATL ACCLRM control is fully clockwise. Digital multimeter shall indicate a continuously adjustable voltage from counterclockwise to clockwise position.** Step 1. If multimeter indicates 0.0 vdc, go to **4.** Step 2. If multimeter indication changes abruptly from −3.38 to 3.38 vdc, replace potentiometer R6. **4. Check switch S15 for continuity.** Step 1. If continuity exists, replace circuit board assembly A2. Step 2. If continuity does not exist, replace switch S15.

TABLE NO. 3-25. INDICATORS NO. 1 SLEW UP And NO. 1 HOT SLEW Do Not Go On When MANUAL SLEW 1 Switch Is Pressed And Held At UP.

TEST OR INSPECTION
CORRECTIVE ACTION

NOTE

Test lamps for condition before continuing.
During the following steps, note the status
(on or off) of all lamps.

1. Press and hold MANUAL SLEW 1 control at UP. INDICATORS NO. 1 SLEW UP and NO. 1 HOT SLEW shall light.

Step 1. If indicator lamps do not go on, go to **2.**
Step 2. If indicator lamps go on, go to **3.**

2. Check switch S10 for continuity.

Step 1. If continuity exists, replace component board assembly A3.
Step 2. If continuity does not exist, replace switch S10.

3. Release MANUAL SLEW 1 control. INDICATORS NO. 1 SLEW UP and NO. 1 HOT SLEW shall go off. Go to 4.

4. If indicator lamps do not go off, replace switch S10.

TABLE NO. 3-26. INDICATORS NO. 1 SLEW DN And NO. 1 HOT SLEW Do Not Go On When MANUAL SLEW 1 Switch Is Pressed And Held At DN.

TEST OR INSPECTION
CORRECTIVE ACTION

NOTE

Test lamps for condition before continuing.
During the following steps, note the status
(on or off) of all lamps.

1. Press and hold MANUAL SLEW 1 control at DN. INDICATORS NO. 1 SLEW DN and NO. 1 HOT SLEW shall light.

Step 1. If indicator lamps do not go on, go to **2.**

TABLE NO. 3-26. INDICATORS NO. 1 SLEW DN And NO. 1 HOT SLEW Do Not Go On When MANUAL SLEW 1 Switch Is Pressed And Held At DN. (Cont)

TEST OR INSPECTION
CORRECTIVE ACTION

Step 2. If indicator lamps go on, go to **3.**

2. Check switch S10 for continuity.

Step 1. If continuity exists, replace component board assembly A3.
Step 2. If continuity does not exist, replace switch S10.

3. Release MANUAL SLEW 1 control. INDICATORS NO. 1 SLEW DN and NO. 1 HOT SLEW shall go off. Go to 4.

4. If indicator lamps do not go off, replace switch S10.

TABLE NO. 3-27. INDICATORS NO. 2 SLEW UP And NO. 2 HOT SLEW Do Not Go On When MANUAL SLEW 2 Switch Is Pressed And Held At UP.

TEST OR INSPECTION
CORRECTIVE ACTION

NOTE

Test lamps for condition before continuing. During the following steps, note the status (on or off) of all lamps.

1. Press and hold MANUAL SLEW 2 control at UP. INDICATORS NO. 2 SLEW UP and NO. 2 HOT SLEW shall light.

Step 1. If indicator lamps do not go on, go to **2.**
Step 2. If indicator lamps go on, go to **3.**

2. Check switch S9 for continuity.

Step 1. If continuity exists, replace component board assembly A3.
Step 2. If continuity does not exist, replace switch S9.

3. Release MANUAL SLEW 2 control. INDICATORS NO. 2 SLEW UP and NO. 2 HOT SLEW shall go off. Go to 4.

4. If indicator lamps do not go off, replace switch S9.

TABLE NO. 3-28. INDICATORS NO. 2 SLEW DN And NO. 2 HOT SLEW Do Not Go On When MANUAL SLEW 2 Switch Is Pressed And Held At DN.

TEST OR INSPECTION
CORRECTIVE ACTION

NOTE

Test lamps for condition before continuing. During the following steps, note the status (on or off) of all lamps.

1. Press and hold MANUAL SLEW 2 control to DN. INDICATORS NO. 2 SLEW DN and NO. 2 HOT SLEW shall light.

Step 1. If indicator lamps do not go on, go to **2.**
Step 2. If indicator lamps go on, go to **3.**

2. Check switch S9 for continuity.

Step 1. If continuity exists, replace component board assembly A3.
Step 2. If continuity does not exist, replace switch S9.

3. Release MANUAL SLEW 2 control. INDICATORS NO. 2 SLEW DN and NO. 2 HOT SLEW shall go off. Go to 4.

4. If indicator lamps do not go off, replace switch S9.

TABLE NO. 3-29. INDICATORS NO. 1 RESET And NO. 2 RESET Do Not Go On When RESET Switch Is Pressed And Held.

TEST OR INSPECTION
CORRECTIVE ACTION

NOTE

Test lamps for condition before continuing. During the following steps, note the status (on or off) of all lamps.

1. Press and hold RESET control. INDICATORS NO. 1 RESET and NO. 2 RESET shall light.

Step 1. If indicator lamps do not go on, go to **2.**

TABLE NO. 3-29. INDICATORS NO. 1 RESET And NO. 2 RESET Do Not Go On When RESET Switch Is Pressed And Held. (Cont)

TEST OR INSPECTION
CORRECTIVE ACTION

Step 2. If indicator lamps go on, go to **3.**

2. Check switch S7 for continuity.

Step 1. If continuity exists, replace component board assembly A3.
Step 2. If continuity does not exist, replace switch S7.

3. Release RESET switch. INDICATORS NO. 1 RESET AND NO. 2 RESET shall go off. Go to 4.

4. If indicator lamps do not go off, replace switch S7.

TABLE NO. 3-30. INDICATORS NO. 1 AS SW <60 KNOTS Does Not Go On When POWER +15 VDC Is Applied to TEST POINTS NO. 1 AS SW.

TEST OR INSPECTION
CORRECTIVE ACTION

NOTE

Test lamps for condition before continuing. During the following steps, note the status (on or off) of all lamps.

1. Connect jumper wire between POWER +15 VDC and TEST POINTS NO. 1 AS SW test jacks. INDICATORS NO. 1 AS SW <60 KNOTS shall light.

Step 1. If indicator lamp does not go on, replace circuit board assembly A2 and retest.
Step 2. If trouble remains, replace component board assembly A3.
Step 3. If trouble still remains, replace filter FL4.

2. Remove jumper wire. INDICATORS NO. 1 AS SW <60 KNOTS shall go off. Go to 3.

3. If indicator lamp does not go on during retest, replace circuit board assembly A2. Go to 4.

4. Remove jumper wire from test set.

TABLE NO. 3-31. INDICATORS NO. 2 AS SW <60 KNOTS Does Not Go On When POWER +15 VDC Is Applied To TEST POINTS NO. 2 AS SW.

TEST OR INSPECTION
CORRECTIVE ACTION

NOTE

Test lamps for condition before continuing. During the following steps, note the status (on or off) of all lamps.

1. Connect jumper wire between POWER +15 VDC and TEST POINTS NO. 2 AS SW test jacks. INDICATORS NO. 2 AS SW <60 KNOTS shall light.

Step 1. If indicator lamp does not go on, replace circuit board assembly A2 and retest.
Step 2. If trouble remains, replace component board assembly A3.
Step 3. If trouble still remains, replace filter FL3.

2. Remove jumper wire. INDICATORS NO. 2 AS SW <60 KNOTS shall go off. Go to 3.

3. If indicator lamp does not go on during retest, replace circuit board assembly A2. Go to 4.

4. Remove jumper wire from test set.

TABLE NO. 3-32. SAS SYSTEM AIRSPEED SWITCH <60 KNOTS Indicator Does Not Go On When LATL ACCLRM Control Is Set Above 1.3 Vdc And Does Not Go Off When LATL ACCLRM Control Is Set Below 1.0 Vdc.

TEST OR INSPECTION
CORRECTIVE ACTION

NOTE

Test lamps for condition before continuing. During the following steps, note the status (on or off) of all lamps.

1. Connect yellow banana plug of locally-made cable to LATL ACCLRM SIM SAS test jack. Go to 2.

2. Connect multimeter between LATL ACCLRM SIM SAS and SIG GND test jacks. Go to 3.

TABLE NO. 3-32. SAS SYSTEM AIRSPEED SWITCH $<$60 KNOTS Indicator Does Not Go On When LATL ACCLRM Control Is Set Above 1.3 Vdc And Does Not Go Off When LATL ACCLRM Control Is Set Below 1.0 Vdc. (Cont)

TEST OR INSPECTION
CORRECTIVE ACTION

3. Place SAS SYSTEM AIRSPEED SWITCH to NORM. Go to 4.

4. Place LATL ACCLRM control to SIM SAS 1. Go to 5.

5. Turn LATL ACCLRM control counterclockwise (L) and clockwise (R) to vary multimeter indicator 1.0 $\pm$ 1.0 vdc. SAS AIRSPEED SWITCH $<$60 KNOTS indicator lamp shall light between 1.4 $\pm$ 0.1 vdc and shall remain on above this voltage range; also, SAS AIRSPEED SWITCH $<$60 KNOTS indicator shall go off 1.1 $\pm$ 0.1 vdc and shall remain off below this voltage range.

Step 1. If multimeter indicates 0.0 vdc, go to **6.**
Step 2. If multimeter indication is not correct, replace component board assembly A3.

6. Check switch S23 for continuity.

Step 1. If continuity exists, replace circuit board assembly A2.
Step 2. If continuity does not exist, replace switch S23.

TABLE NO. 3-33. SAS SYSTEM AIRSPEED SWITCH >60 KNOTS Indicator Does Not Go On When LATL ACCLRM Control Is Fully Clockwise And SAS SYSTEM AIRSPEED SWITCH $<$60 KNOTS Does Not Go On When LATL ACCLRM Control Is Fully Counterclockwise.

TEST OR INSPECTION
CORRECTIVE ACTION

NOTE

Test lamps for condition before continuing. During the following steps, note the status (on or off) of all lamps.

1. Place SAS SYSTEM AIRSPEED SWITCH TO >60 KNOTS. Go to 2.

2. Turn LATL ACCLRM control fully clockwise (R). SAS SYSTEM AIRSPEED $<$60 KNOTS indicator lamp shall go on.

Step 1. If indicator lamp does not go on, replace switch S23.
Step 2. If indicator lamp goes on, go to **3.**

TABLE NO. 3-33. SAS SYSTEM AIRSPEED SWITCH >60 KNOTS Indicator Does Not Go On When LATL ACCLRM Control Is Fully Clockwise And SAS SYSTEM AIRSPEED SWITCH <60 KNOTS Does Not Go On When LATL ACCLRM Control Is Fully Counterclockwise. (Cont)

TEST OR INSPECTION
CORRECTIVE ACTION

3. Place SAS SYSTEM AIRSPEED SWITCH TO <60 KNOTS. Go to 4.

4. Turn LATL ACCLRM control fully counterclockwise (L). Indicator lamp SAS SYSTEM AIRSPEED <60 KNOTS shall go on.

Step 1. If indicator lamp does not go on, replace switch S23.
Step 2. If indicator lamp goes on, go to **5.**

5. Place SAS SYSTEM AIRSPEED SWITCH to NORM. Go to 6.

6. Remove yellow banana plug from test set.

TABLE NO. 3-34. Multimeter No. 1 Does Not Indicate 12.0 ± 0.5 Vdc And Multimeter No. 2 Does Not Indicate 12.0 ± 0.7 Vdc When AS SENSOR Switch Is Placed To SIM STAB 1&2.

TEST OR INSPECTION
CORRECTIVE ACTION

1. Connect blue banana plug of locally-made cable to AS SENSOR SIM NO. 1 test jack. Go to 2.

2. Connect multimeter (No. 1) between AS SENSOR SIM NO. 1 and SIG GND test jacks. Go to 3.

3. Connect multimeter (No. 2) between SAS SIG REF PITCH and SIG GND test jacks. Go to 4.

4. Place AS SENSOR control to SIM STAB 1&2. Go to 5.

5. Set AS SENSOR control to a multimeter (No. 1) indication 12.0 ± 0.5 vdc. Multimeter (No. 2) shall indicate 12.0 ± 0.7 vdc.

Step 1. If multimeter indication is not correct, replace circuit board assembly A1 and retest.
Step 2. If trouble remains, replace circuit board assembly A2.
Step 3. If multimeter indication is correct, go to **6.**

TABLE NO. 3-34. Multimeter No. 1 Does Not Indicate 12.0 ± 0.5 Vdc And Multimeter No. 2 Does Not Indicate 12.0 ± 0.7 Vdc When AS SENSOR Switch Is Placed To SIM STAB 1&2. (Cont)

TEST OR INSPECTION
CORRECTIVE ACTION

6. Set AS SENSOR control counterclockwise until multimeter (No. 1) indicates 5.0± 0.5 vdc. Multimeter (No. 2) shall indicate 5.0 ± 0.7 vdc.

Step 1. If multimeter indication is not correct, replace circuit board assembly A1 and retest.
Step 2. If trouble remains, replace circuit board assembly A2.
Step 3. If multimeter indication is correct, go to **7.**

7. Place AS SENSOR control OFF. Go to 8.

8. Remove blue banana plug from AS SENSOR SIM NO. 1 test jack.

TABLE NO. 3-35. Multimeter No. 1 Does Not Indicate −1.3 ± 0.3 VDC When SAS SYSTEM YAW RATE Control Is Turned Fully Counterclockwise And Does Not Indicate 1.3 ± 0.3 Vdc When SAS SYSTEM YAW RATE Control Is Turned Fully Clockwise.

TEST OR INSPECTION
CORRECTIVE ACTION

1. Connect multimeter (No. 1) between YAW RATE SIM (+) and SAS SIG REF YAW (−) test jacks. Go to 2.

2. Place YAW RATE control to SIM 1. Go to 3.

3. Turn SAS SYSTEM YAW RATE control throughout its range from fully counterclockwise (L) to fully clockwise (R). Multimeter shall indicate -1.3 ± 0.3 vdc when SAS SYSTEM YAW RATE control is fully counterclockwise and shall indicate 1.3 ± 0.3 vdc when SAS SYSTEM YAW RATE control is fully clockwise. Multimeter shall indicate a continuously adjustable voltage from counterclockwise to clockwise position.

Step 1. If multimeter indicates 0.0 vdc, go to **4.**
Step 2. If multimeter indication is not correct, replace component board assembly A4.
Step 3. If multimeter indication changes abruptly from −1.6 to 1.6 vdc, replace potentiometer R8.

4. Check switch S20 for continuity.

Step 1. If continuity exists, replace circuit board assembly A2.
Step 2. If continuity does not exist, replace switch S20.

TABLE NO. 3-36. Multimeter No. 2 Does Not Indicate 12.0 ± 0.7 Vdc When AS SENSOR Control is Turned Clockwise To A Multimeter No. 1 Indication Between 12.0 ± 0.5 Vdc.

TEST OR INSPECTION
CORRECTIVE ACTION

1. Connect orange banana plug of locally-made cable to AS SENSOR SIM NO. 1 test jack. Go to 2.

2. Connect multimeter (No. 1) between AS SENSOR SIM NO. 1 and SIG GND test jacks. Go to 3.

3. Connect multimeter (No. 2) between SAS SIG REF ROLL/YAW and SIG GND test jack. Go to 4.

4. Place AS SENSOR control to SIM STAB 1&2. Go to 5.

5. Set AS SENSOR control to a multimeter (No. 1) indication 12.0 ± 0.5 vdc. Multimeter (No. 2) shall indicate 12.0 ± 0.7 vdc.

Step 1. If multimeter indication is not correct, replace circuit board assembly A2.
Step 2. If multimeter indication is correct, go to **6.**

6. Set AS SENSOR control counterclockwise until multimeter (No. 1) indicates 5.0 ± 0.5 vdc. Multimeter (No. 2) shall indicate 5.1 ± 0.6 vdc.

Step 1. If multimeter indication is not correct, replace circuit board assembly A2.
Step 2. If multimeter indication is correct, go to **7.**

7. Place AS SENSOR control to OFF. Go to 8.

8. Place YAW RATE control to NORM. Go to 9.

9. Remove orange banana plug from AS SENSOR SIM NO. 1 test jack. Go to 10.

10. Remove digital multimeters from test set.

TABLE NO. 3-37. Test Set Indicator Lamps Do Not Go On When 28 Vdc Power Is Jumpered To Test Point/Connector Contact Listed.

TEST OR INSPECTION
CORRECTIVE ACTION

1. Pull out POWER 28 VDC circuit breakers CB1 and CB2, and TEST SET circuit breaker CB4. Go to 2.

TABLE NO. 3-37. Test Set Indicator Lamps Do Not Go On When 28 Vdc Power Is Jumpered To Test Point/Connector Contact Listed. (Cont)

TEST OR INSPECTION
CORRECTIVE ACTION

2. Connect jumper between POWER 28 VDC STAB 1 and connector contact and/or test point as listed. INDICATORS, corresponding to connector contact and/or test point, shall light.

Step 1. If INDICATORS corresponding to connector contact and/or test point do not go on, replace malfunctioning lamp and retest.
Step 2. If trouble remains, replace component board assembly A3.

CONNECTOR CONTACT (TEST POINT INDICATORS)

J1-C (NO. 1 INTLK 28 OS)
J2-C (NO. 2 INTLK 28 OS)
J1-A (NO. 1 INTLK 28)
J2-A (NO. 2 INTLK 28)
J1-BB (NO. 1 AUTO ENGA)
J2-BB (NO. 2 AUTO ENGA)
J1-GG (NO. 1 AUTO ENGA OS)
J2-GG (NO. 2 AUTO ENGA OS)
J1-V (NO. 1 DRVR SUPPLY)
J2-V (NO. 2 DRVR SUPPLY)
J1-B (NO. 1 DRVR SUPPLY OS)
J2-B (NO. 2 DRVR SUPPLY OS)
J1-s (NO. 1 UP LIMIT)
J2-s (NO. 2 UP LIMIT)
J1-E (NO. 1 STAB UP)
J2-E (NO. 2 STAB UP)
J1-D (NO. 1 STAB DN)
J2-D (NO. 2 STAB DN)
J1-t (NO. 1 DN LIMIT)
J2-t (NO. 2 DN LIMIT)
J3-E (SAS ENGAGE 2)
J3-G (SAS ENGAGE 1)

TABLE NO. 3-38. API Does Not Indicate From −180.0° To Zero Or From Zero To 179.999° When ROLL ATT Control Is Turned Clockwise One Full Turn From Zero To Zero.

TEST OR INSPECTION
CORRECTIVE ACTION

1. Pull out test set circuit breakers CB1, CB2, CB3, and CB4. Go to 2.

2. Disconnect P1 and P2 of locally-made test cable from test set connectors J1 and J2. Go to 3.

3. Make the following connections between SAS/Stabilator test set and Angle Position Indicator (API). Go to 4.

<u>Test Set Test Points (API Input)</u>
115 VAC 400 HZ SAS (REF. HI)
PWR GND (REF. LO)
ROLL ATT SIM X (S1)
ROLL ATT SIM Y (S3)
ROLL ATT SIM Z (S2)

4. Place API mode select switch to SYNC. Go to 5.

5. Push in POWER 28 VDC circuit breaker CB3. Go to 6.

6. Place test set ROLL ATT control to SIM 1. Go to 7.

7. Slowly turn test set ROLL ATT control clockwise one full turn from zero to zero. API shall indicate from −179.999° to zero and then from zero to 179.999°

Step 1. If API indication is 0°, replace transformer T1.
Step 2. If API indication is not correct, go to **8.**

8. Check switch S19 for continuity.

Step 1. If continuity exists, replace synchro B1.
Step 2. If continuity does not exist, replace switch S19.

TABLE NO. 3-39. API Does Not Indicate 180° ± 0.2° When ROLL ATT Control Is Turned Clockwise One Full Turn From Zero To Zero.

TEST OR INSPECTION
CORRECTIVE ACTION

Slowly turn test set ROLL ATT control counterclockwise one full turn from zero to zero. API shall indicate 180° ± 0.2° with dial at zero.

Step 1. If API indication is not correct, retest.
Step 2. If trouble remains, replace synchro B1.

TABLE NO. 3-40. API Does Not Indicate -90° ± 0.2° When ROLL ATT Control Is Turned Counter-clockwise To 90°.

TEST OR INSPECTION
CORRECTIVE ACTION

1. Slowly turn test set ROLL ATT control clockwise to 90°. API shall indicate between −90°± 0.2°.

Step 1. If API indication is not correct, retest.
Step 2. If trouble remains, replace synchro B1.
Step 3. If API indication is correct, go to **2.**

2. Pull out POWER 28 VDC circuit breaker CB3. Go to 3.

3. Remove 115 Vac and 28 Vdc facility power from test set. Go to 4.

4. Place all test set switches to OFF or NORM. Place AIRSPEED SWITCH to >60 KNOTS. Go to 5.

5. Remove angle position indicator (API) from SAS/stabilator test set.

TABLE NO. 3-41. Multimeter Does Not Indicate 27.5 ± 0.5 Vdc When RATE GYRO TEST PITCH 1 Switch Is Pressed And Held To TEST.

TEST OR INSPECTION
CORRECTIVE ACTION

1. Connect digital multimeter between PITCH 1 TEST MONITOR and PWR GND test jacks. Go to 2.

TABLE NO. 3-41. Multimeter Does Not Indicate 27.5 ± 0.5 Vdc When RATE GYRO TEST PITCH 1 Switch Is Pressed And Held To TEST. (Cont)

TEST OR INSPECTION
CORRECTIVE ACTION

2. Press and hold RATE GYRO TEST PITCH 1 control to TEST. Multimeter shall indicate 27.5 ± 0.5 vdc.

Step 1. If multimeter indication is not correct, go to **3.**
Step 2. If multimeter indication is correct, go to **4.**

3. Check switch S22 for continuity.

Step 1. If continuity exists, replace filter FL4.
Step 2. If continuity does not exist, replace switch S22.

4. Release RATE GYRO TEST PITCH 1 control. Multimeter shall indicate 0.0 vdc. Go to 5.

5. If multimeter indication is not correct, replace switch S22.

TABLE 3-42. Multimeter Does Not Indicate 27.5 ± 0.5 Vdc When RATE GYRO TEST PITCH 2 Switch Is Pressed And Held To TEST.

TEST OR INSPECTION
CORRECTIVE ACTION

1. Connect multimeter between PITCH 2 TEST MONITOR and PWR GND test jacks. Go to 2.

2. Press and hold RATE GYRO TEST PITCH 2 control to TEST. Multimeter shall indicate 27.5 ± 0.5 vdc.

Step 1. If multimeter indication is not correct, go to **3.**
Step 2. If multimeter indication is correct, go to **4.**

3. Check switch S21 for continuity.

Step 1. If continuity exists, replace filter FL4.
Step 2. If continuity does not exist, replace switch S21.

4. Release RATE GYRO TEST PITCH 2 control. Multimeter shall indicate 0.0 vdc. Go to 5.

5. If multimeter indication is not correct, replace switch S21.

TABLE NO. 3-43. Multimeter Does Not Indicate 28 ± 0.15 Vdc When RATE GYRO TEST ROLL Switch is Pressed and Held To TEST.

TEST OR INSPECTION
CORRECTIVE ACTION

1. Connect multimeter between ROLL TEST MONITOR and PWR GND test jacks. Go to 2.

2. Press and hold RATE GYRO TEST ROLL control to TEST. Multimeter shall indicate 28 ± 0.15 vdc.

Step 1. If multimeter indication is not correct, go to **3.**
Step 2. If multimeter indication is correct, go to **4.**

3. Check switch S18 for continuity.

Step 1. If continuity exists, replace filter FL2.
Step 2. If continuity does not exist, replace switch S18.

4. Release RATE GYRO TEST ROLL control. Multimeter shall indicate 0.0 vdc. Go to 5.

5. If multimeter indication is not correct, replace switch S18.

TABLE NO. 3-44. Multimeter Does Not Indicate 28 ± 0.15 Vdc When RATE GYRO TEST YAW Switch is Pressed and Held To TEST.

TEST OR INSPECTION
CORRECTIVE ACTION

1. Connect multimeter between YAW TEST MONITOR and PWR GND test jacks. Go to 2.

2. Press and hold RATE GYRO TEST YAW control to TEST. Multimeter shall indicate 28 ± 0.15 vdc.

Step 1. If multimeter indication is not correct, go to **3.**
Step 2. If multimeter indication is correct, go to **4.**

3. Check switch S17 for continuity.

Step 1. If continuity exists, replace filter FL2.
Step 2. If continuity does not exist, replace switch S17.

TABLE NO. 3-44. Multimeter Does Not Indicate 28 ± 0.15 Vdc When RATE GYRO TEST YAW Switch is Pressed and Held To TEST. (Cont)

TEST OR INSPECTION
CORRECTIVE ACTION

4. Release RATE GYRO TEST YAW control. Multimeter shall indicate 0.0 vdc. Go to 5.

5. If multimeter indication is not correct, replace switch S17.

TABLE NO. 3-45. Multimeter Does Not Indicate Less Than 1.0 Ohm With FAULT MONITOR I LIMIT 1 Switch Placed To INHIBIT And Does Not Indicate Greater Than 100K Ohms With FAULT MONITOR I LIMIT 1 Switch Placed To NORM.

TEST OR INSPECTION
CORRECTIVE ACTION

1. Connect multimeter between NO. 1 I LIMIT SWITCHED and SIG GND test jacks. Go to 2.

2. Place FAULT MONITOR I LIMIT 1 control to INHIBIT. Multimeter shall indicate less than 1.0 ohm.

Step 1. If multimeter indication is not correct, replace switch S12.
Step 2. If multimeter indication is correct, go to **3.**

3. Place FAULT MONITOR I LIMIT 1 control to NORM. Multimeter shall indicate greater than 100K ohms. Go to 4.

4. If multimeter indication is not correct, replace switch S12.

TABLE NO. 3-46. Multimeter Does Not Indicate Less Than 1.0 Ohm With FAULT MONITOR I LIMIT 2 Switch Placed To INHIBIT And Does Not Indicate Greater Than 100K Ohms With FAULT MONITOR I LIMIT 2 Switch Placed To NORM.

TEST OR INSPECTION
CORRECTIVE ACTION

1. Connect multimeter between NO. 2 I LIMIT SWITCHED and SIG GND test jacks. Go to 2.

2. Place FAULT MONITOR I LIMIT 2 control to INHIBIT. Multimeter shall indicate less than 1.0 ohm.

TABLE NO. 3-46. Multimeter Does Not Indicate Less Than 1.0 Ohm With FAULT MONITOR I LIMIT 2 Switch Placed To INHIBIT And Does Not Indicate Greater Than 100K Ohms With FAULT MONITOR I LIMIT 2 Switch Placed To NORM. (Cont)

TEST OR INSPECTION
CORRECTIVE ACTION

Step 1. If multimeter indication is not correct, replace switch S11.
Step 2. If multimeter indication is correct, go to **3.**

3. Place FAULT MONITOR I LIMIT 2 control to NORM. Multimeter shall indicate greater than 100K ohms. Go to 4.

4. If multimeter indication is not correct, replace switch S11.

SECTION III.

MAINTENANCE PROCEDURES

SECTION OVERVIEW

3.6. REPAIR.

Refer to TM 55-1500-323-25 for repair of test set cable assemblies.

3.7. CLEANING.

a. Remove dust and loose dirt with cheesecloth (item 1, Appendix C).

WARNING

Observe all cautions and warnings on the containers when using consumables. When applicable, wear necessary protective gear during handling and use. If a consumable is flammable or explosive, MAKE SURE consumable and its vapors are kept away from heat, spark, and flame. MAKE SURE equipment is properly grounded and firefighting equipment is readily available prior to use.

b. Remove grease, fungus, and ground-in-dirt with cheesecloth (item 1, Appendix C), dampened with dry-cleaning solvent (item 2, Appendix C).

c. Remove moisture with machinery towel (item 4, Appendix C).

CHAPTER 4

UNIT MAINTENANCE

CHAPTER OVERVIEW

SECTION

MAINTENANCE PROCEDURES

SECTION OVERVIEW

4.1. SCOPE OF MAINTENANCE.

The scope of corrective maintenance is the replacement of knobs, indicator lamps, lenses, and cable assemblies.

4.2. KNOB REPLACEMENT.

a. Loosen screw holding knob to shaft.

b. Slide knob off shaft.

c. When placing new knob on shaft, make sure knob is fully on shaft before tightening screw.

4.3. INDICATOR LAMP REPLACEMENT.

a. Make sure no power is applied to test set.

b. Unscrew lens cover.

c. Remove lamp.

4.4. CABLE ASSEMBLIES.

Remove cable assembly from cable case assembly and send to higher maintenance.

CHAPTER 5

DIRECT SUPPORT MAINTENANCE

CHAPTER OVERVIEW

SECTION I.

MAINTENANCE PROCEDURES

SECTION OVERVIEW

5.1. SCOPE OF MAINTENANCE.

The scope of corrective maintenance is to functionally determine the malfunction area by performing the troubleshooting procedures in Chapter 3, section II. Disassemble test set, stabilator system only as far as necessary to remove malfunctioning or damaged components using the procedures below.

5.2. UPPER PANEL DISASSEMBLY.

a. Remove 12 screws (1, Figure 5-1) fastening upper panel assembly (2) to carrying case (5).

b. Remove upper panel assembly from case.

5.3. LOWER PANEL DISASSEMBLY.

a. Remove 12 screws (3, Figure 5-1), fastening lower panel assembly (4) to carrying case (5).

b. Remove lower panel assembly from carrying case.

c. Remove six screws and washers (75, Figure 5-2) from bracket (76).

d. Remove four screws, washers, and nuts (45) from bracket (76) and panel (1).

e. Remove bracket (76).

f. Remove 12 screws and washers (61) from bracket (54).

g. Remove 20 screws and washers (52) from bracket (53).

h. Remove remaining screws and washers (51 and 68) fastening support assembly (46) to panel assemblies (50 and 70).

i. Fold down support assembly (46).

5.4. CIRCUIT BOARD ASSEMBLY A1 REPLACEMENT.

a. Do paragraph 5.3.

b. Remove two screws (74, Figure 5-2) fastening circuit board assembly A1 (43) to guide assembly (72).

c. Pull out ejectors fastening circuit board assembly A1 to guide assembly and remove circuit board assembly.

d. Slide replacement circuit board assembly into guide assembly (72).

e. Lock circuit board assembly into guide assembly by fastening ejectors.

f. Install screws (74) fastening circuit board assembly to guide assembly.

g. Do paragraph 5.20.

5.5. CIRCUIT BOARD ASSEMBLY A2 REPLACEMENT.

a. Do paragraph 5.3.

b. Remove two screws (73, Figure 5-2) fastening circuit board assembly A2 (44) to guide assembly (72).

c. Pull out ejectors fastening circuit board assembly A2 to guide assembly and remove circuit board assembly.

d. Slide replacement circuit board assembly into guide assembly (72).

e. Lock circuit board assembly into guide assembly by fastening ejectors.

f. Install screws (73) fastening circuit board assembly to guide assembly.

g. Do paragraph 5.20.

5.6. COMPONENT BOARD ASSEMBLY A3 REPLACEMENT.

a. Do paragraph 5.3.

b. Remove screws, spacers, washers, and nuts (48, Figure 5-2) fastening component board assembly A3 (47) to support assembly (46).

c. Tag and unsolder wires from component board assembly A3.

d. Solder (item 7, Appendix C) wires to replacement component board assembly. Remove tags.

e. Install component board assembly to support assembly (47) using screws, spacers, washers, and nuts (48).

f. Do paragraph 5.20.

5.7. COMPONENT BOARD ASSEMBLY A4 REPLACEMENT.

a. Do paragraph 5.3.

b. Remove screws, spacers, washers, and nuts (71, Figure 5-2) fastening component board assembly A4 (77) to panel assembly (70).

c. Tag and unsolder wires from component board assembly A4.

d. Solder (item 7, Appendix C) wires to replacement component board assembly. Remove tags.

e. Install component board assembly to panel assembly (70) using screws, spacers, washers, and nuts (71).

f. Do paragraph 5.20.

5.8. SYNCHRO REPLACEMENT.

a. Do paragraph 5.3.

b. Loosen setscrews in gear mechanism of synchro dial to free synchro B1 (36, Figure 5-2) control shaft from dial.

c. Loosen synchro mounting hardware on back of dial holding synchro B1 in place.

d. Remove synchro B1 from dial.

e. Tag and unsolder synchro B1 wires from panel assembly wiring.

f. Install replacement synchro B1 to back of synchro dial using mounting hardware provided with dial.

g. Solder (item 7, Appendix C) synchro B1 wires to panel assembly wiring. Remove tags.

h. Clamp dial to synchro B1 control shaft by tightening setscrews.

i. Do paragraph 5.20.

5.9. CIRCUIT BREAKERS CB1 THROUGH CB4 REPLACEMENT.

a. Do paragraph 5.3.

b. Tag and disconnect wires to circuit breaker CB1 (29, Figure 5-2).

c. Remove nut and washer fastening circuit breaker to panel (1).

d. Connect wires to replacement circuit breaker. Remove tags.

e. Install circuit breaker to panel using washer and nut provided with circuit breaker.

f. Do paragraph 5.20.

5.10. LAMPS DS1 THROUGH DS9 AND DS16 THROUGH DS45 REPLACEMENT.

NOTE

Procedure is typical.

a. Do paragraph 5.3.

b. Unscrew lens from light XDS1.

c. Remove damaged lamp DS1 (26, Figure 5-2) from light XDS1.

d. Install replacement lamp into light. Install lens.

5.11. RELAY K1 REPLACEMENT.

a. Do paragraph 5.3.

b. Remove screws, washers, and nuts (55, Figure 5-2) fastening bracket (56) to support assembly (46).

c. Tag and unsolder wires from relay K1 (60) terminals.

d. Remove screws, washers, and nuts (57) fastening relay K1 to bracket (56).

e. Install replacement relay to bracket (56) using screws, washers, and nuts (57).

f. Solder (item 7, Appendix C) wires to relay K1 terminals. Remove tags.

g. Install bracket (56) to support assembly (46) using screws, washers, and nuts (55).

h. Do paragraph 5.20.

5.12. POWER SUPPLY PS1 REPLACEMENT.

a. Do paragraph 5.3.

b. Tag and disconnect wires to power supply PS1 (67, Figure 5-2).

c. Remove screws and washers (69) fastening power supply PS1 to support assembly (46).

d. Install replacement power supply to support assembly (46) using screws and washers (69).

e. Connect wires to power supply. Remove tags.

f. Do paragraph 5.20.

5.13. POTENTIOMETERS R1 THROUGH R8 REPLACEMENT.

NOTE

Procedure is typical.

a. Do paragraph 5.3.

b. Tag and unsolder wires from potentiometer R5 (3, Figure 5-2).

c. Loosen Allen-head screw fastening knob to potentiometer shaft.

d. d. Remove nut and washer fastening potentiometer to panel (1).

e. Install replacement potentiometer to panel using washer and nut provided with potentiometer. MAKE SURE that antirotation tab on potentiometer is lined up with small hole in panel next to potentiometer mounting hole.

f. Solder (item 7, Appendix C) wires to potentiometer. Remove tags.

g. Install knob to potentiometer shaft by tightening Allen-head screw on knob.

h. Do paragraph 5.20.

5.14. ROTARY SWITCHES S1, S15, AND S16 REPLACEMENT.

NOTE

Procedure is typical.

a. Do paragraph 5.3.

b. Tag and unsolder wires from rotary switch S1 (17, Figure 5-2).

c. Loosen screw fastening knob to switch shaft.

d. Remove nut and washer fastening switch to panel (1).

e. Install replacement switch to panel using washer and nut provided with switch. Make sure that antirotation tab on switch is lined up with small hole in panel next to switch mounting hole.

f. Solder (item 7, Appendix C) wires to switch. Remove tags.

g. Turn switch shaft fully counterclockwise.

h. Install knob to switch shaft by tightening screw on knob.

i. Do paragraph 5.20.

5.15. SWITCHES S2 THROUGH S5, S19, S20, AND S23 REPLACEMENT.

NOTE

Procedure is typical.

a. Do paragraph 5.3.

b. Tag and unsolder wires from rotary switch S2 (14, Figure 5-2).

c. Loosen screws fastening knob to switch S2 shaft.

d. Remove nut and washer fastening switch to panel (1).

e. Install replacement switch to panel using washer, and nut provided with switch. Make sure that antirotation tab on switch is lined up with small hole in panel next to switch mounting hole.

f. Solder (item 7, Appendix C) wires to switch. Remove tags.

g. Turn switch shaft fully counterclockwise.

h. Install knob to switch shaft by tightening screw on knob.

i. Do paragraph 5.20.

5.16. SWITCHES S6, S7, S9 THROUGH S14, S17, S18, S21, AND S22 REPLACEMENT.

NOTE

Procedure is typical.

a. Do paragraph 5.3.

b. Tag and unsolder wires from rotary switch S6 (10, Figure 5-2).

c. Remove nut and washer fastening switch to panel (1).

d. Install replacement switch to panel using washer and nut provided with switch. Make sure that antirotation tab on switch is lined up with small hole in panel next to switch mounting hole.

e. Solder (item 7, Appendix C) wires to switch. Remove tags.

f. Do paragraph 5.20.

5.17. SWITCH S24 REPLACEMENT.

a. Do paragraph 5.3.

b. Tag and unsolder wires from switch S24 (34, Figure 5-2).

c. Remove nut, washer, and keywasher fastening switch to panel (1).

d. Install replacement switch to panel using keywasher, washer, and nut, provided with switch. Make sure that antirotation tab on switch is lined up with small hole in panel next to switch mounting hole.

e. Solder (item 7, Appendix C) wires to switch. Remove tags.

f. Do paragraph 5.20.

5.18. TRANSFORMER T1 REPLACEMENT.

a. Do paragraph 5.3.

b. Remove screws, washers, and nuts (55) fastening bracket (56, Figure 5-2) to support assembly (46).

c. Tag and unsolder wires from transformer T1 (59) terminals.

d. Remove washers and nuts (58) fastening transformer T1 to bracket (56).

e. Install replacement transformer T1 to bracket using washers and nuts (58).

f. Solder (item 7, Appendix C) wires to terminals of transformer. Remove tags.

g. Install screws, washers, and nuts (55) fastening bracket to support assembly.

h. Do paragraph 5.20.

5.19. FILTERS FL1 THROUGH FL4 REPLACEMENT.

NOTE

Procedure is typical.

a. Do paragraph 5.3.

b. Remove screws, washers, and nuts (49, Figure 5-2) fastening bracket (62) to panel assembly (50).

c. Tag and unsolder wires from filter FL1 (63).

d. Remove washer and nut fastening filter FL1 (63) to bracket (62).

e. Install replacement filter to bracket using washer and nut provided with filter.

f. Solder (item 7, Appendix C) wires to terminals of filter. Remove tags.

g. Install bracket (62) to panel assembly (50) using screws, washers, and nuts (49).

h. Do paragraph 5.20.

5.20. LOWER PANEL ASSEMBLY.

a. Install support assembly (46, Figure 5-2) to panel assemblies (50 and 70) using screws and washers (51 and 68).

b. Install bracket (53) using 20 screws and washers (52).

c. Install bracket (54) using 12 screws and washers (61).

d. Install bracket (76) to bracket (54) using six screws and washers (75).

e. Install bracket (76) to panel (1) using four screws, washers, and nuts (45).

f. Install lower panel assembly (4, Figure 5-1) into case (5) using 12 screws (3).

g. If synchro B1 (36, Figure 5-2) has been replaced, refer to Section II., CALIBRATION PROCEDURES.

5.21. UPPER PANEL ASSEMBLY.

a. Install upper panel assembly (2, Figure 5-1) into carrying case (5).

b. Install 12 screws (1) fastening upper panel assembly (2) to carrying case (5).

5.22. CABLE ASSEMBLIES.

If cable sleeve is damaged, repair cable sleeve with polyethylene spiral wrap (item 8, Appendix C).

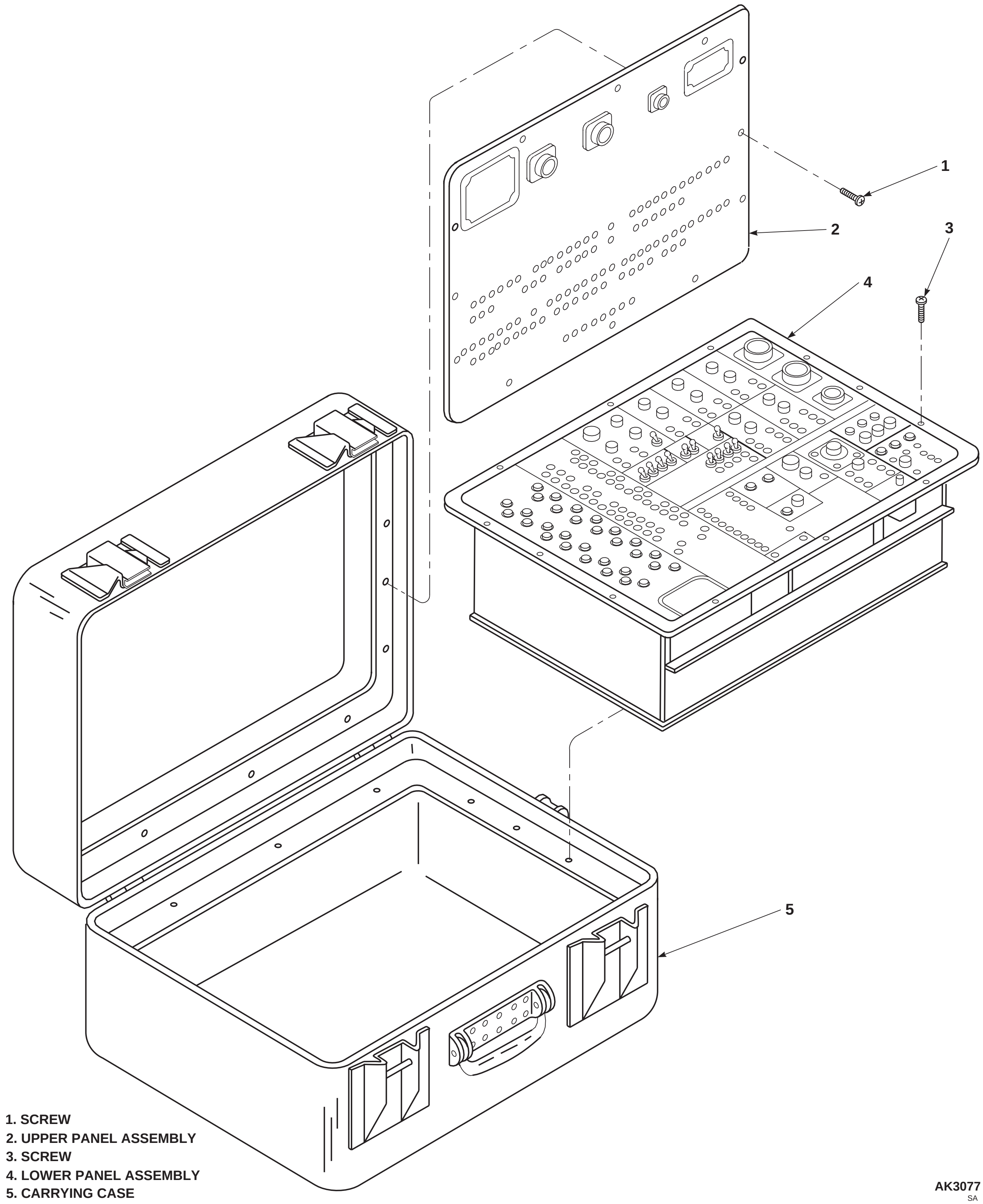

Figure 5-1. Test Set, Stabilization System Disassembly

KEY TO FIGURE 5−2

1. PANEL
2. LAMPS DS7 THROUGH DS9, DS16 THROUGH DS45
3. POTENTIOMETER R5
4. ROTARY SWITCH S5
5. SWITCH S14
6. POTENTIOMETER R4
7. ROTARY SWITCH S4
8. SWITCH S13
9. POTENTIOMETER R3
10. SWITCH S6
11. ROTARY SWITCH S3
12. POTENTIOMETER R2
13. SWITCH S11
14. ROTARY SWITCH S2
15. POTENTIOMETER R1
16. SWITCH S10
17. ROTARY SWITCH S1
18. SWITCH S7
19. POTENTIOMETER R7
20. POTENTIOMETER R6
21. ROTARY SWITCH S16
22. ROTARY SWITCH S15
23. SWITCH S17
24. LAMP DS3
25. LAMP DS2
26. LAMP DS1
27. CIRCUIT BREAKER CB3
28. CIRCUIT BREAKER CB2
29. CIRCUIT BREAKER CB1
30. LAMP DS4
31. LAMP DS5
32. LAMP DS6
33. CIRCUIT BREAKER CB4
34. SWITCH S24
35. ROTARY SWITCH S19
36. SYNCHRO B1
37. ROTARY SWITCH S20
38. POTENTIOMETER R8
39. ROTARY SWITCH S23
40. SWITCH S18
41. SWITCH S9
42. SWITCH S12
43. CIRCUIT BOARD ASSEMBLY A1
44. CIRCUIT BOARD ASSEMBLY A2
45. SCREWS, WASHERS, AND NUTS
46. SUPPORT ASSEMBLY
47. COMPONENT BOARD ASSEMBLY A3
48. SCREWS, SPACERS, WASHERS, AND NUTS
49. SCREWS, WASHERS, AND NUTS
50. PANEL ASSEMBLY
51. SCREWS AND WASHERS
52. SCREWS AND WASHERS
53. BRACKET
54. BRACKET
55. SCREWS, WASHERS, AND NUTS
56. BRACKET
57. SCREWS, WASHERS, AND NUTS
58. WASHERS AND NUTS
59. TRANSFORMER T1
60. RELAY K1
61. SCREWS AND WASHERS
62. BRACKET
63. FILTER FL1
64. FILTER FL2
65. FILTER FL3
66. FILTER FL4
67. POWER SUPPLY PS1
68. SCREWS AND WASHERS
69. SCREWS AND WASHERS
70. PANEL ASSEMBLY
71. SCREWS, SPACERS, WASHERS, AND NUTS
72. GUIDE ASSEMBLY
73. SCREWS
74. SCREWS
75. SCREWS AND WASHERS
76. BRACKET
77. COMPONENT BOARD ASSEMBLY A4
78. SWITCH S22
79. SWITCH S21

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SA

Figure 5-2. Test Set, Lower Panel Assembly (Sheet 1 of 5)

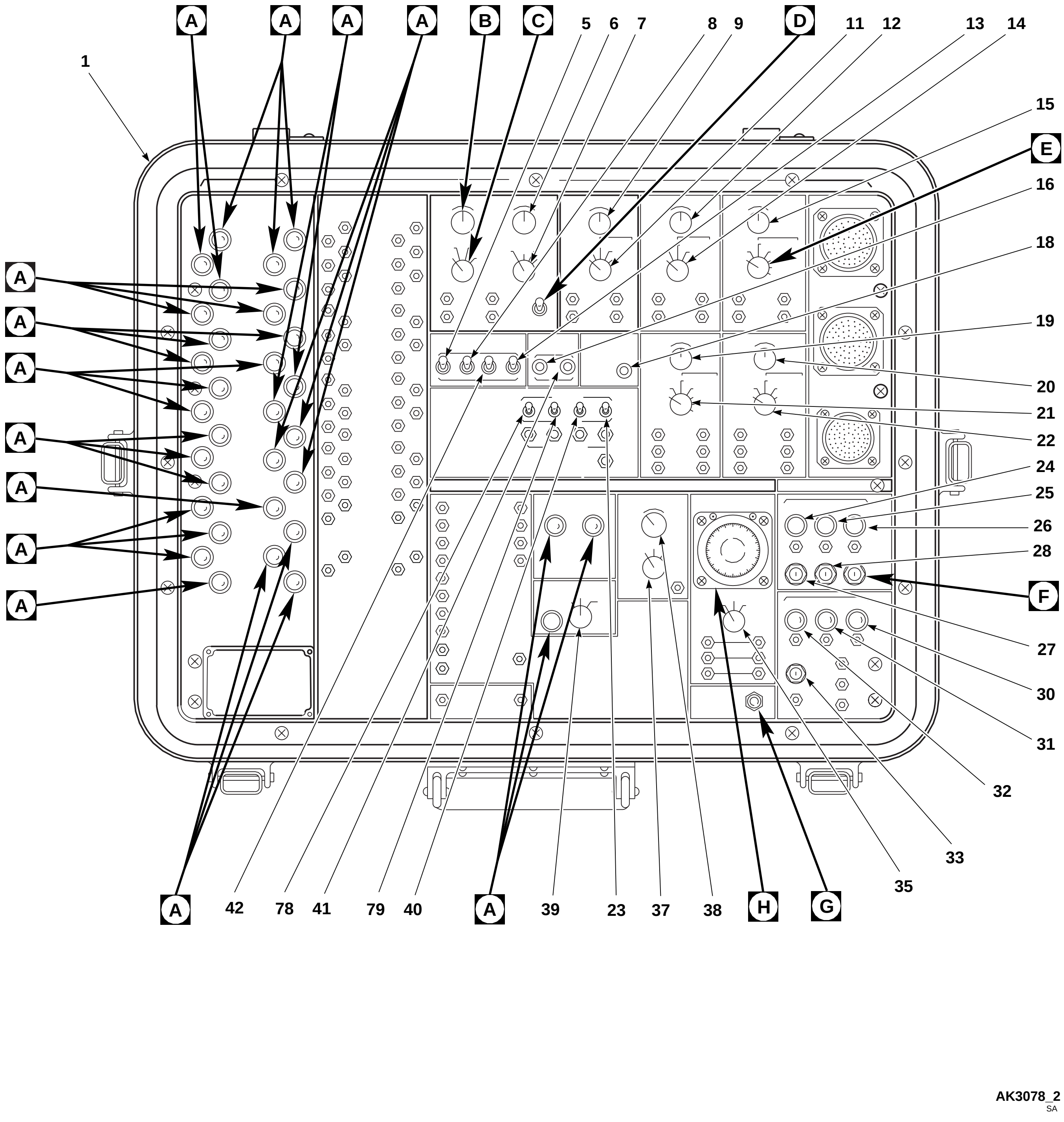

Figure 5-2. Test Set, Lower Panel Assembly (Sheet 2)

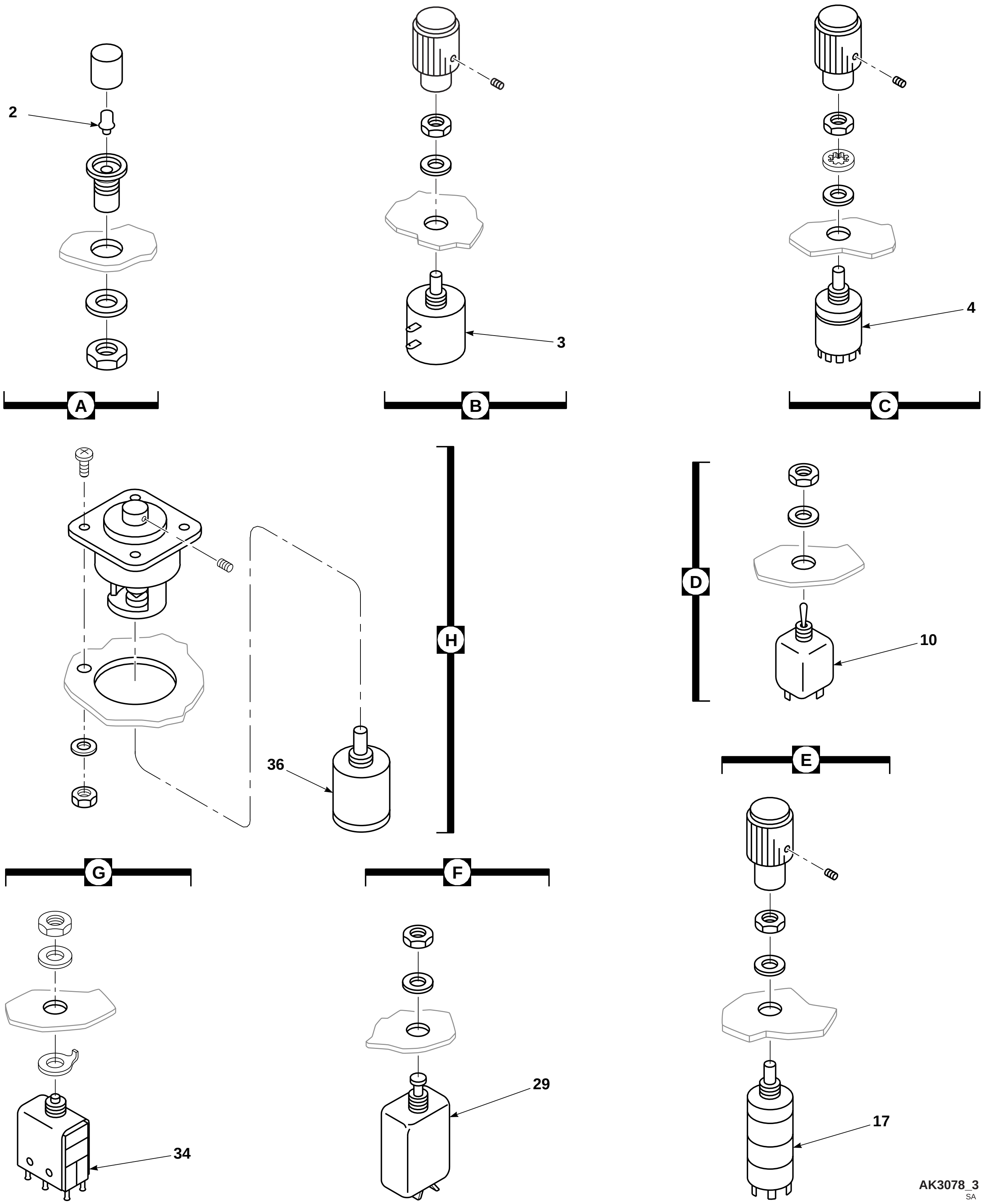

Figure 5-2. Test Set, Lower Panel Assembly (Sheet 3)

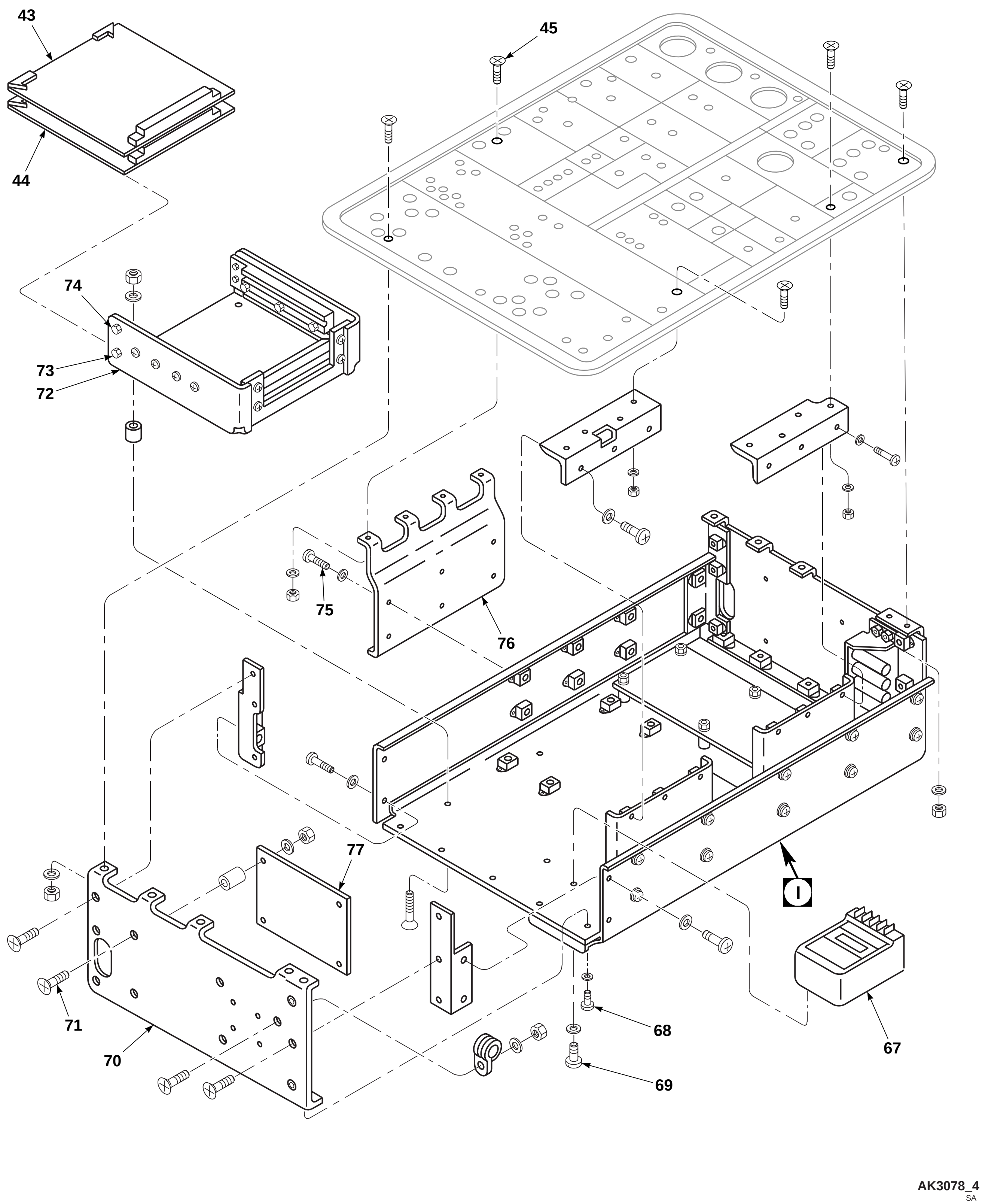

Figure 5-2. Test Set, Lower Panel Assembly (Sheet 4)

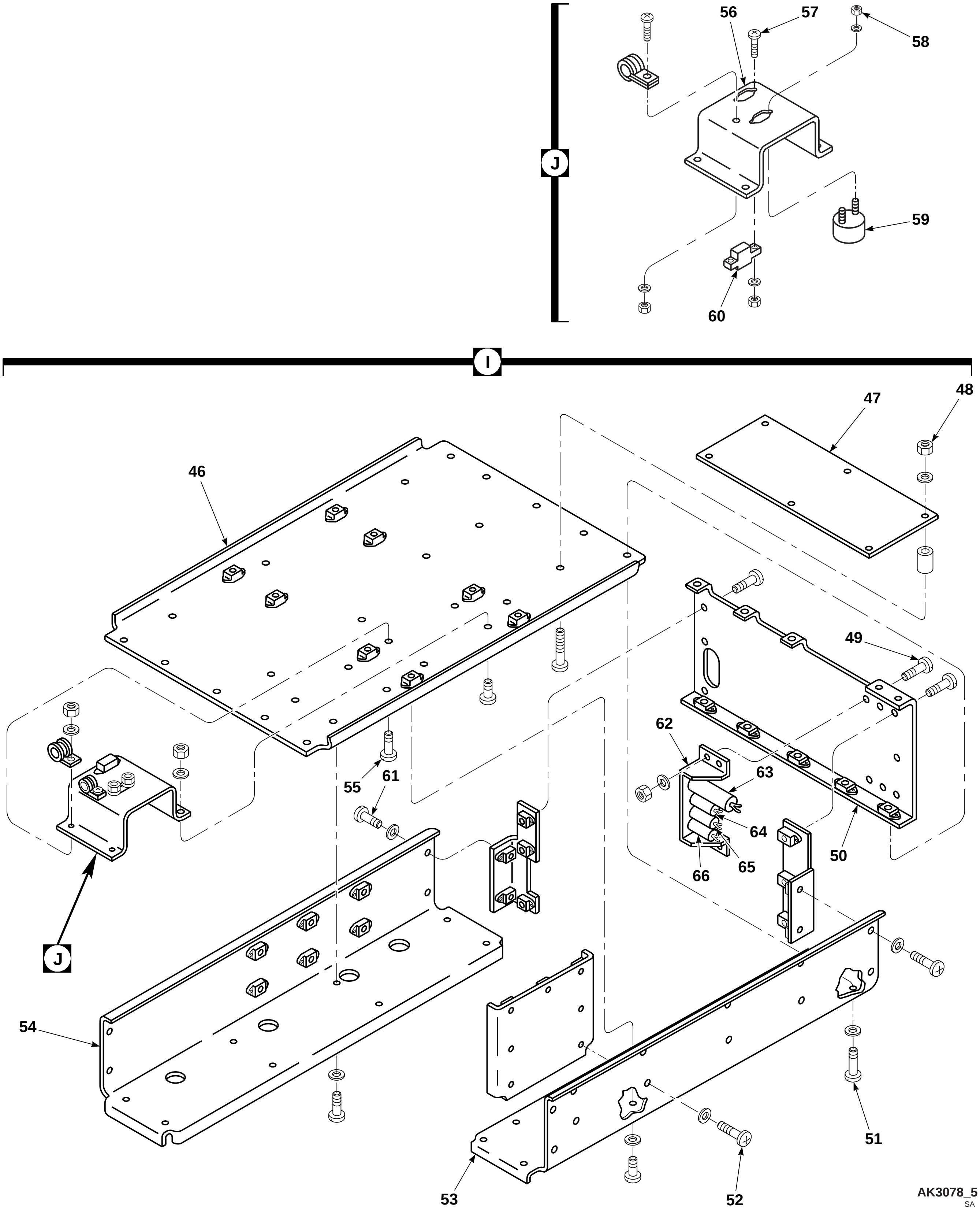

Figure 5-2. Test Set, Lower Panel Assembly (Sheet 5)

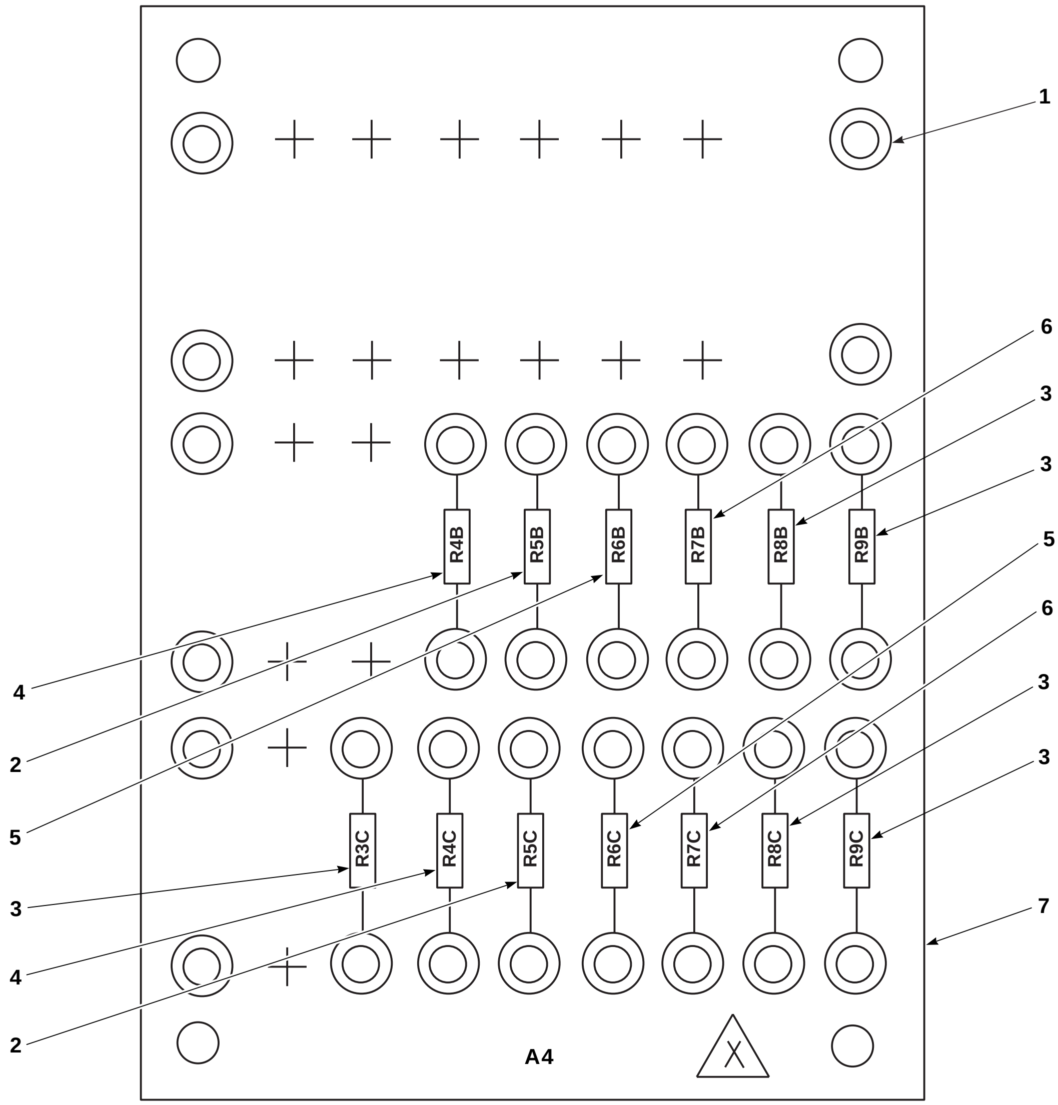

FIGURE & INDEX NO.	PART NUMBER	DESCRIPTION 1 2 3 4 5 6 7	QTY PER ASSY	USABLE ON CODE
5–3		COMPONENT BOARD ASSEMBLY	REF	
–1		. TERMINAL	54	
–2		. RESISTOR	2	
–3		. RESISTOR	5	
–4		. RESISTOR	2	
–5		. RESISTOR	2	
–6		. RESISTOR	2	
–7		. COMPONENT BOARD	1	

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Figure 5-3. Component Board Assemblies A3 and A4 (Sheet 1 of 3)

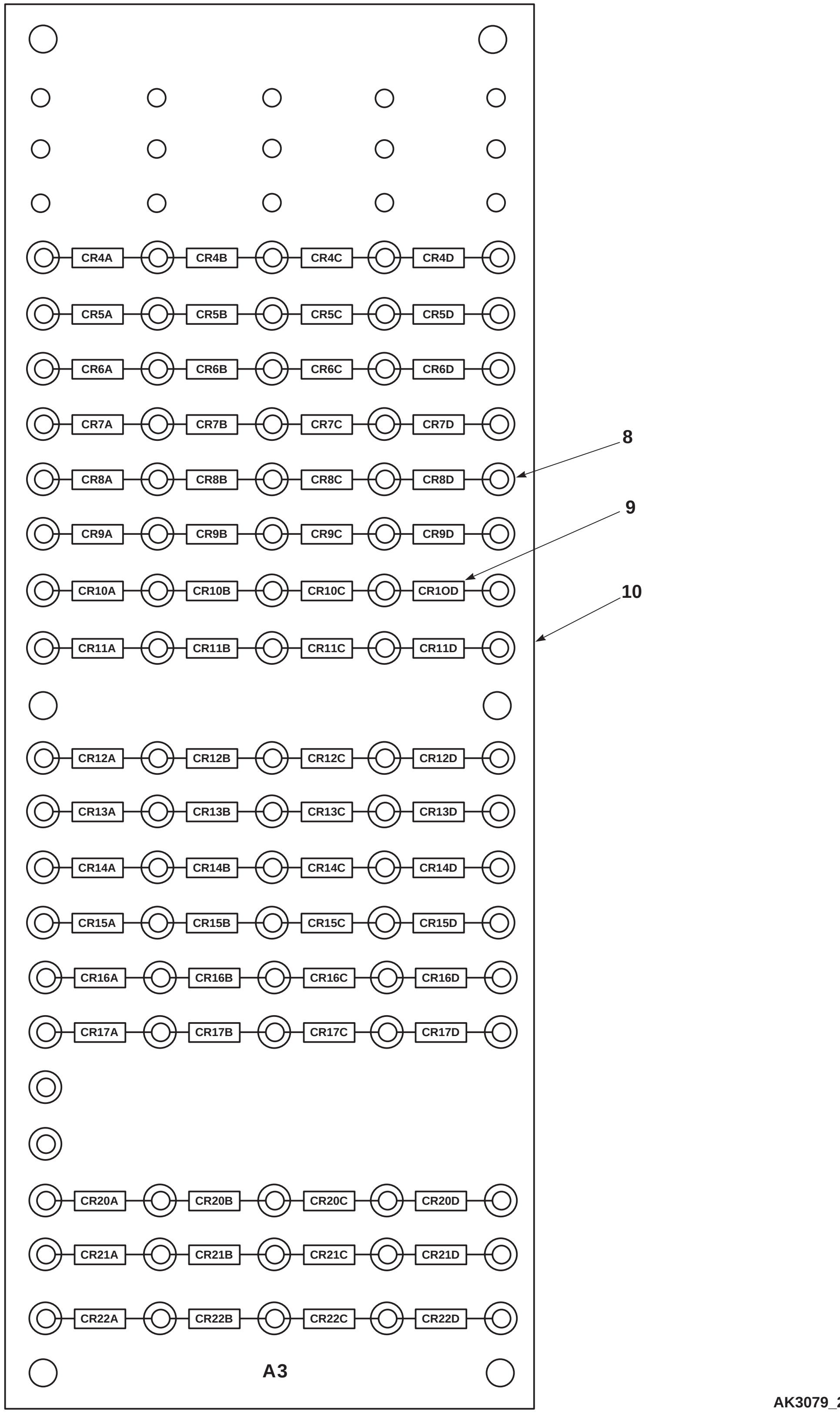

Figure 5-3. Component Board Assemblies A3 and A4 (Sheet 2)

FIGURE & INDEX NO.	PART NUMBER	DESCRIPTION 1 2 3 4 5 6 7	QTY PER ASSY	USABLE ON CODE
5−3		COMPONENT BOARD ASSEMBLY	REF	
−8		. TERMINAL	110	
−9		. DIODE	68	
−10		. COMPONENT BOARD	1	

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SA

Figure 5-3. Component Board Assemblies A3 and A4 (Sheet 3)

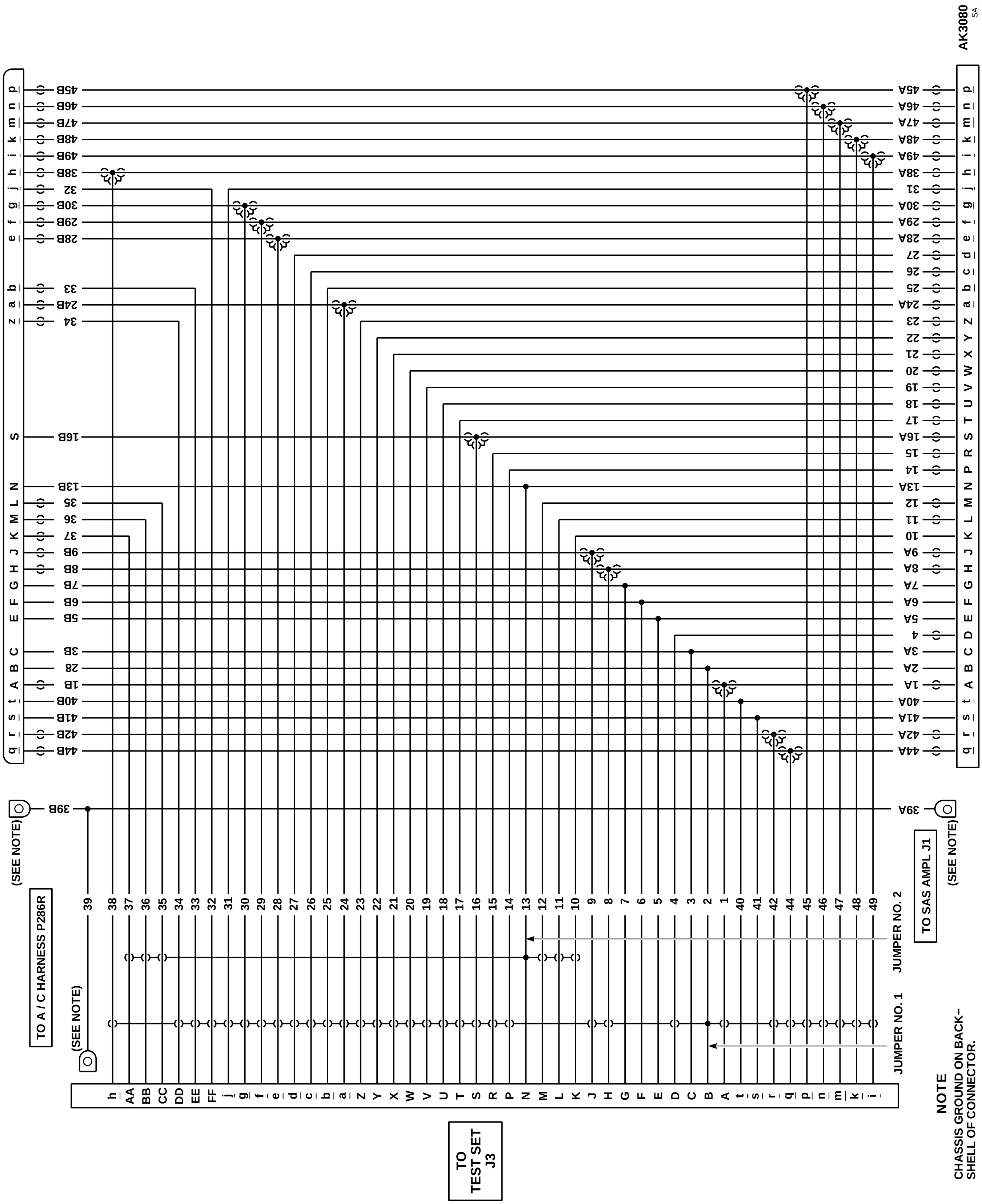

Figure 5-4. MH60K Cable W1 Wiring Diagram

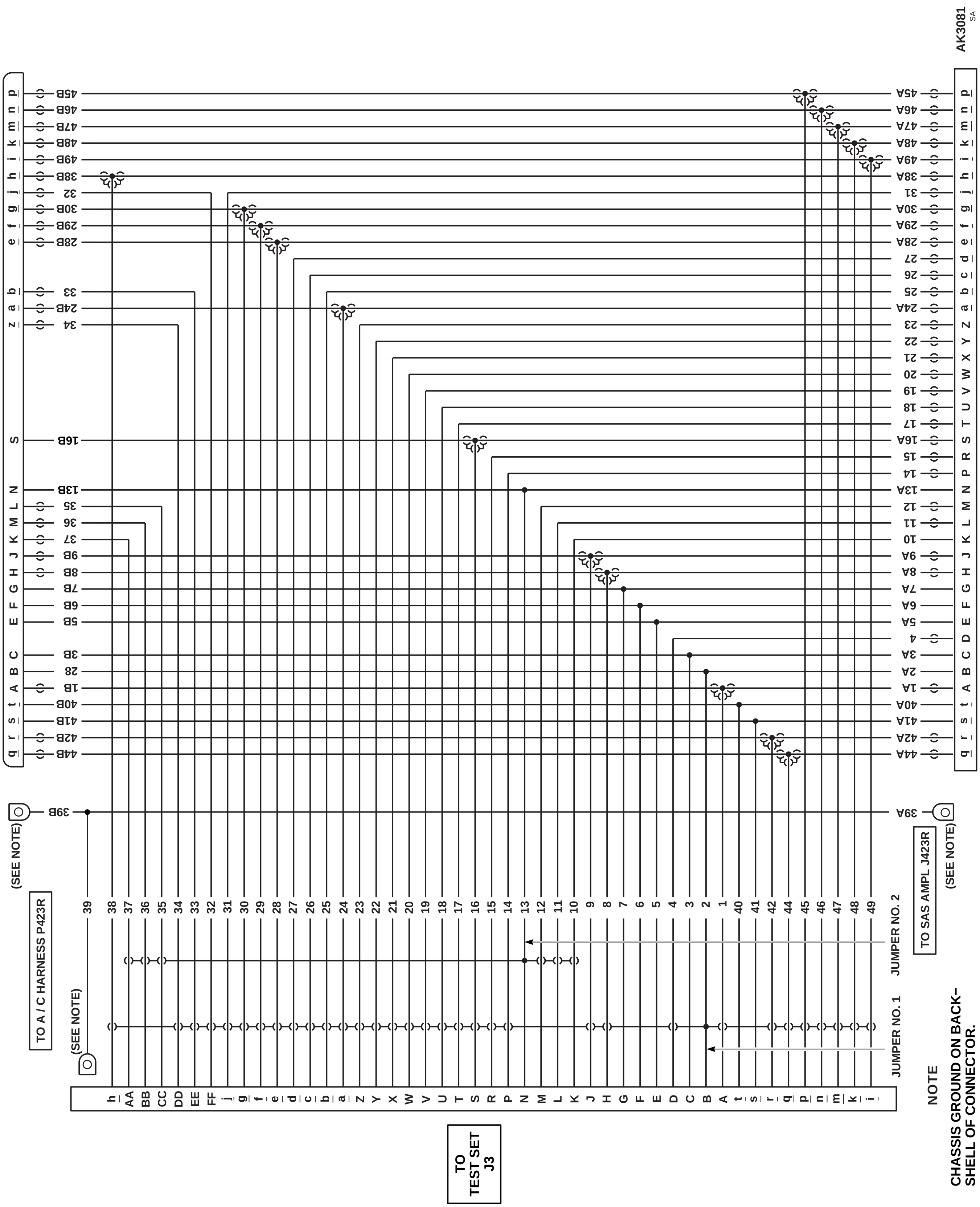

Figure 5-5. UH60A UH60L EH60A Cable W1 Wiring Diagram

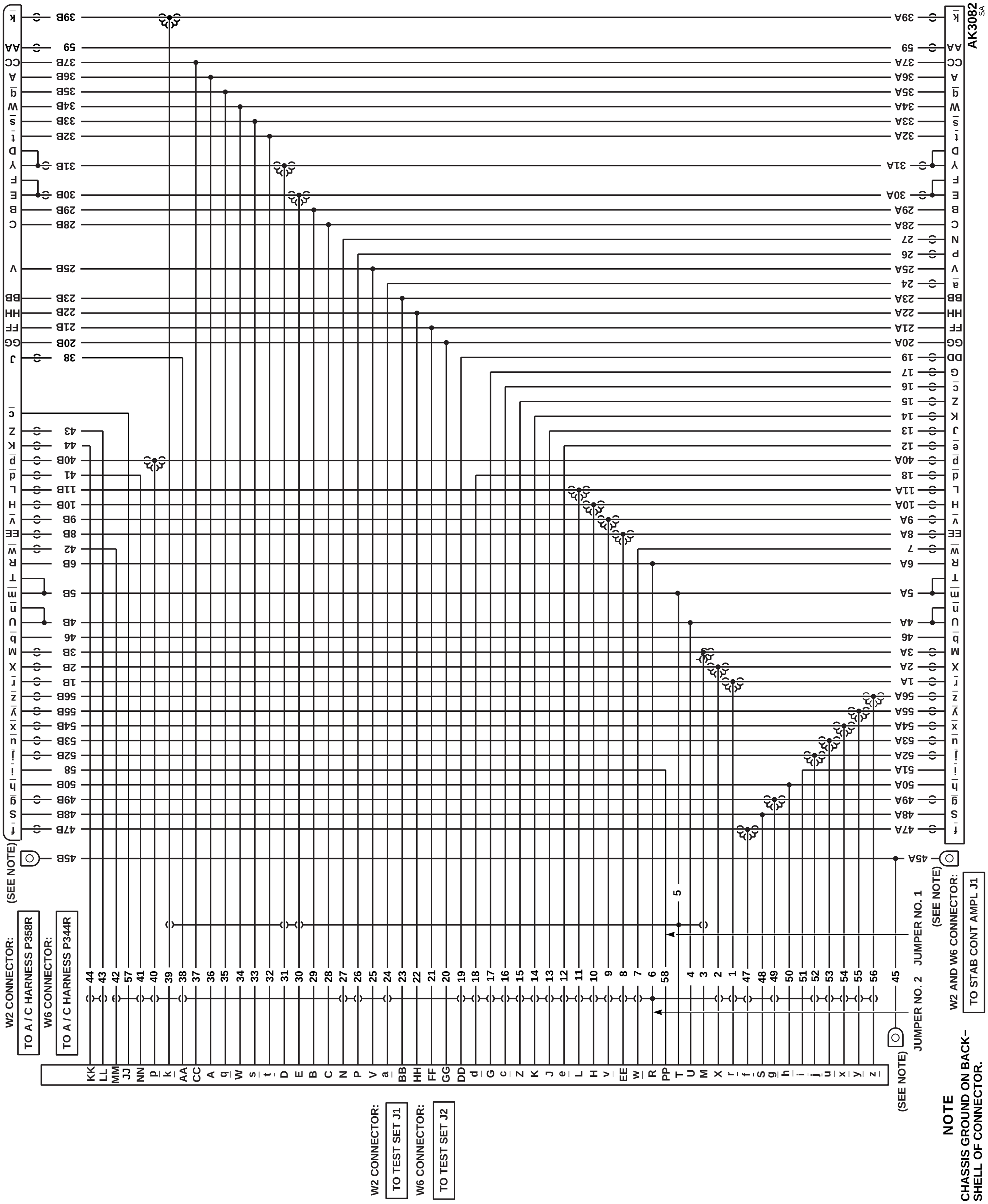

Figure 5-6. MH60K Cables W2 and W6 Wiring Diagram

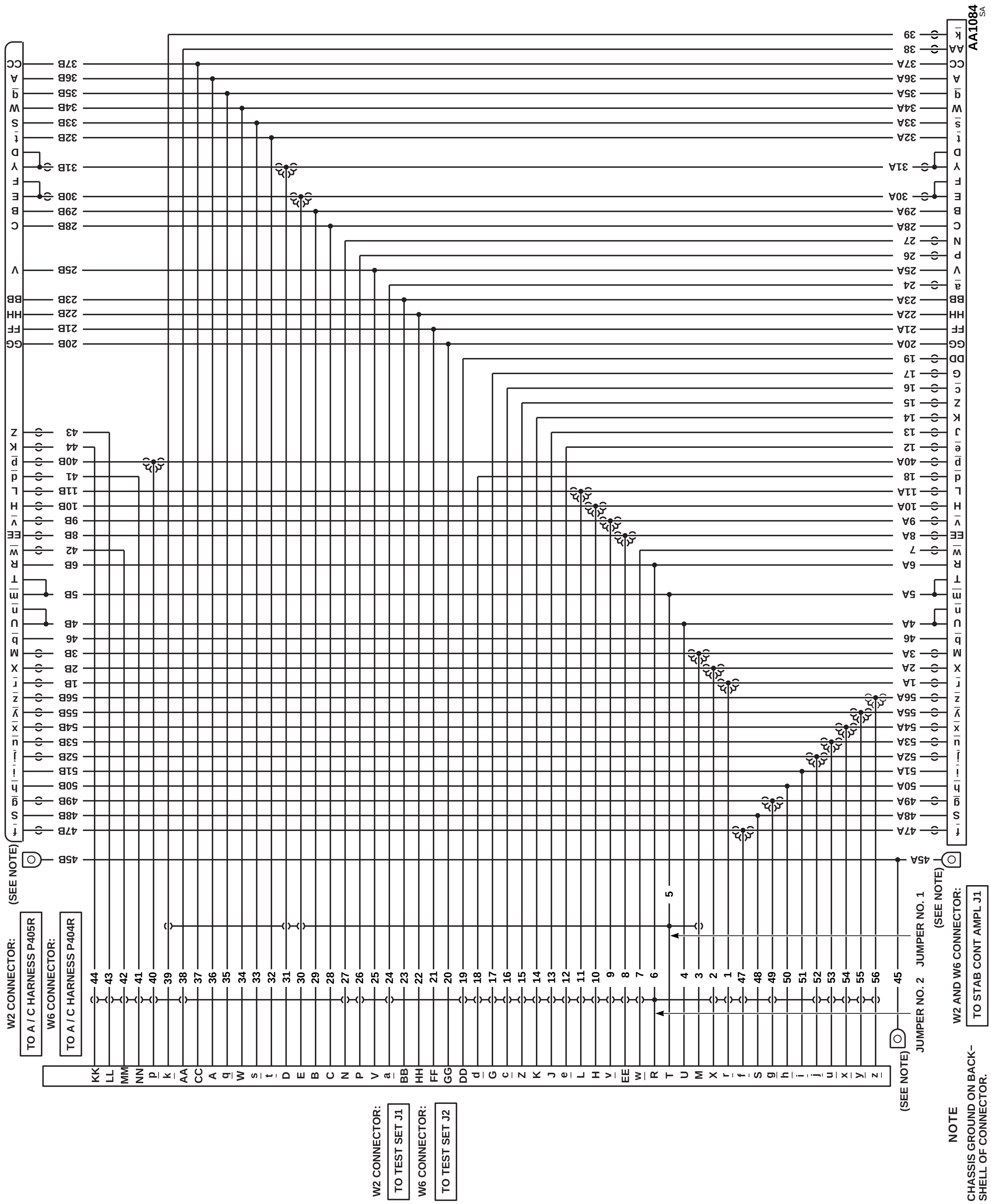

Figure 5-7. UH60A UH60L EH60A Cables W2 and W6 Wiring Diagram

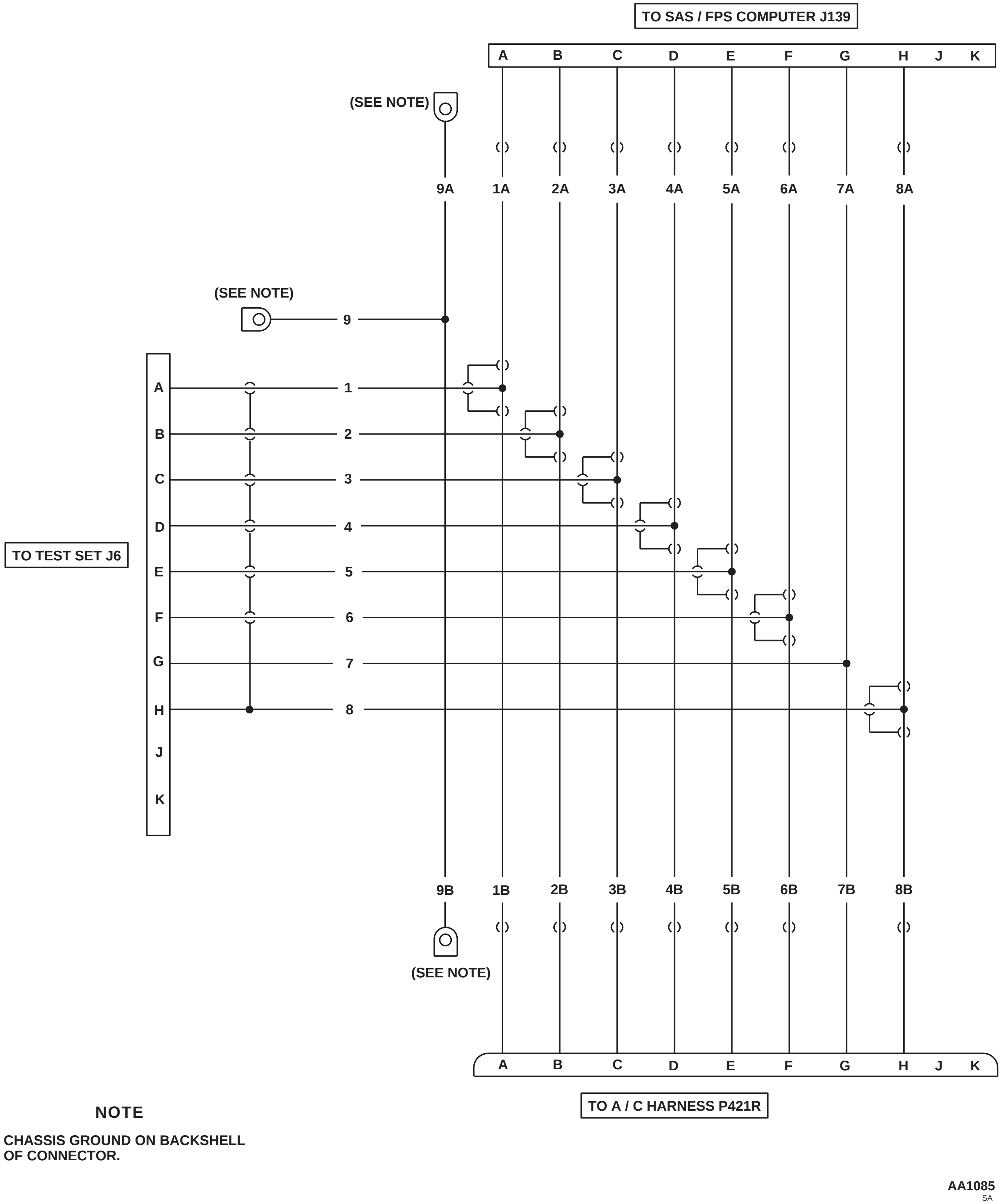

Figure 5-8. UH60A UH60L EH60A Cable W3 Wiring Diagram

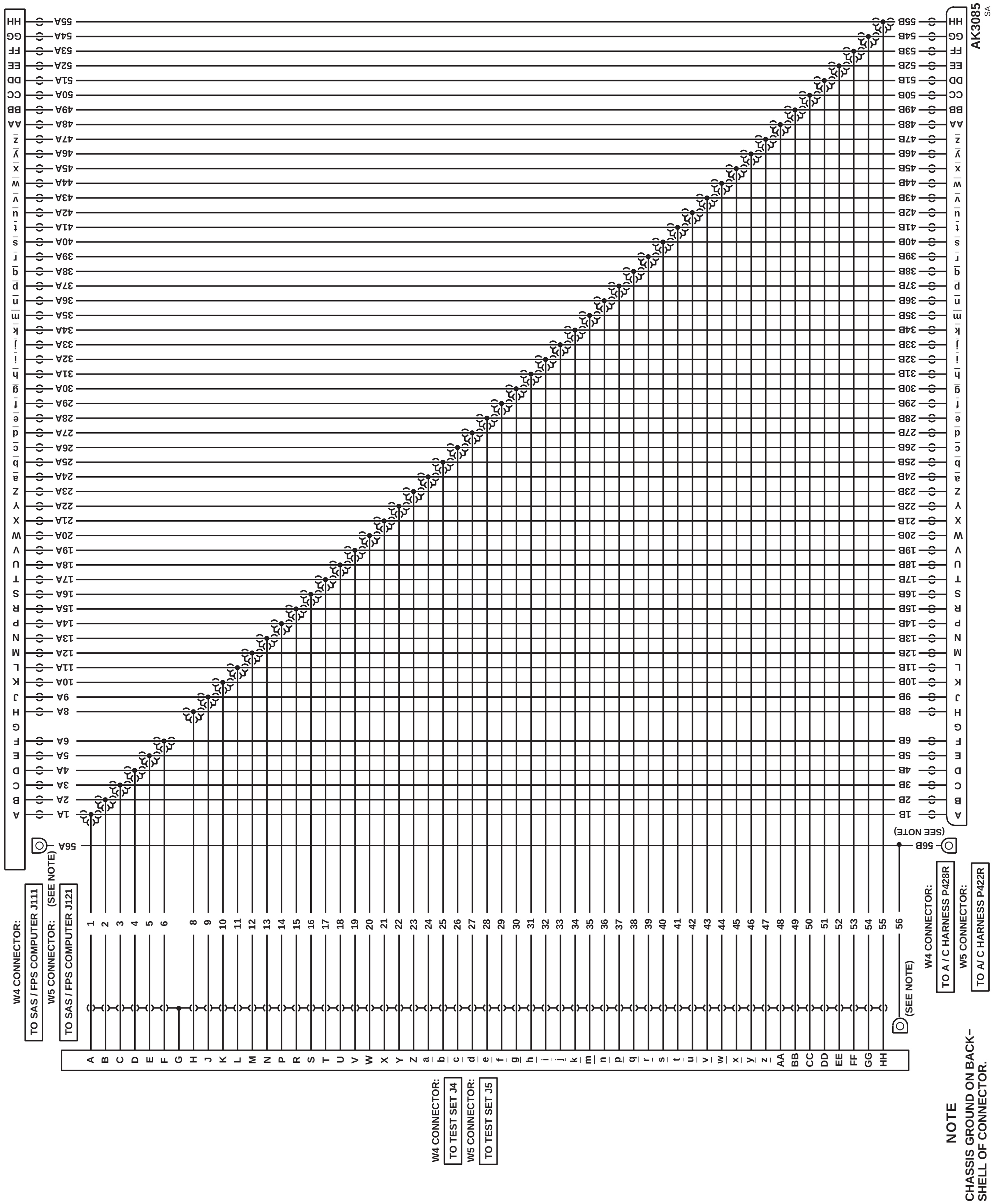

Figure 5-9. UH60A UH60L EH60A Cables W4 and W5 Wiring Diagram

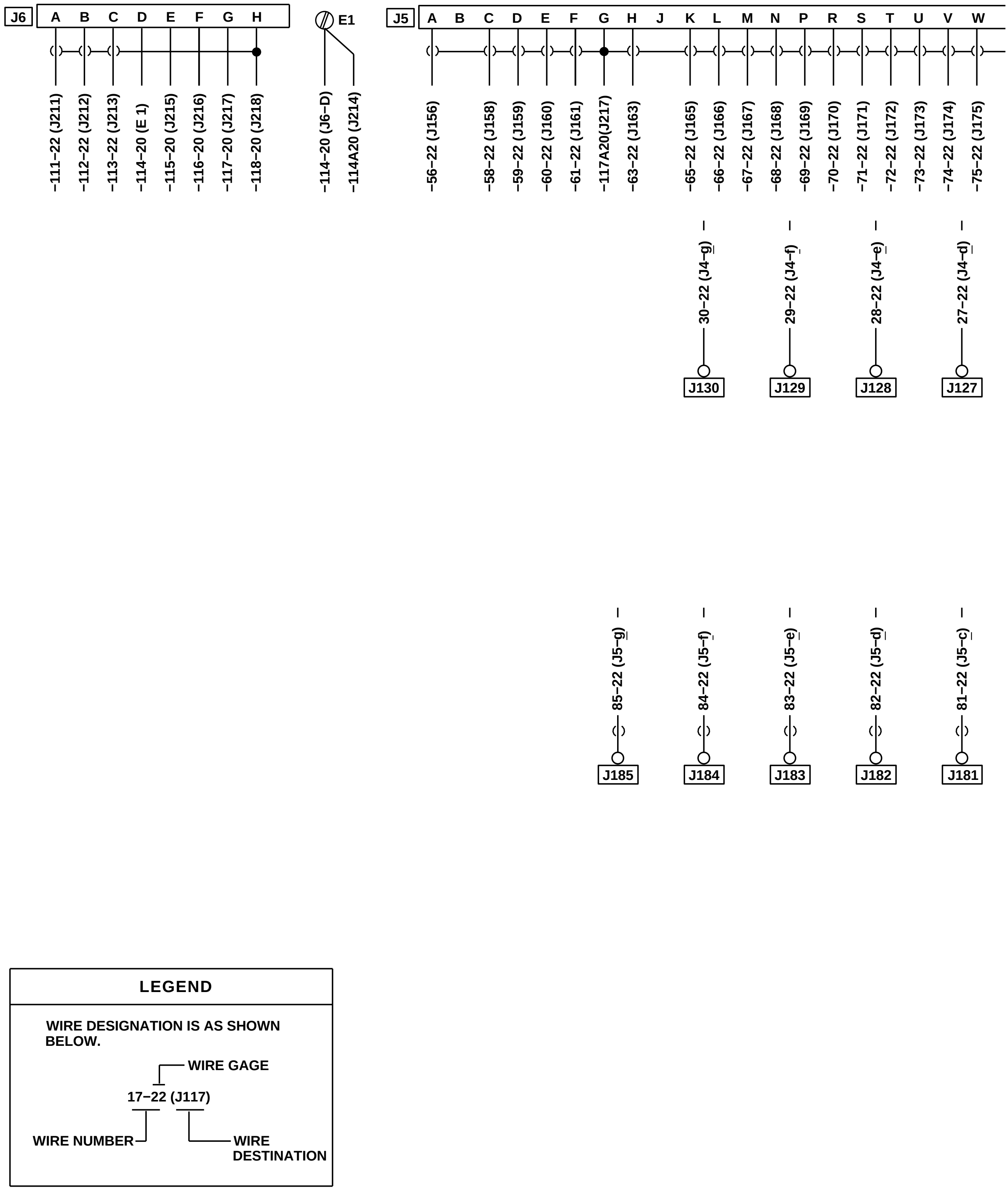

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Figure 5-10. Test Set, Upper Panel Assembly Wiring Diagram (Sheet 1 of 4)

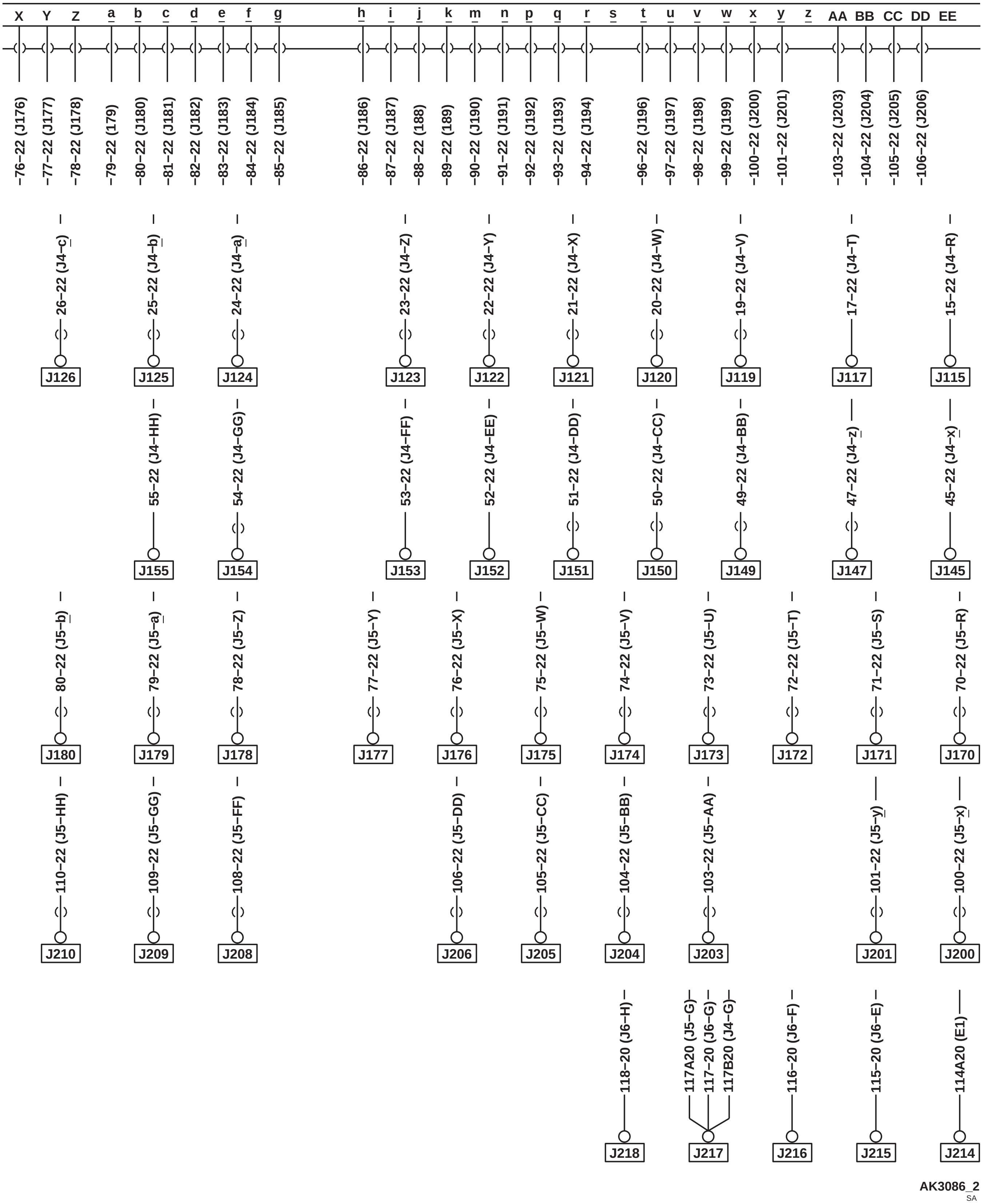


Figure 5-10. Test Set, Upper Panel Assembly Wiring Diagram (Sheet 2)

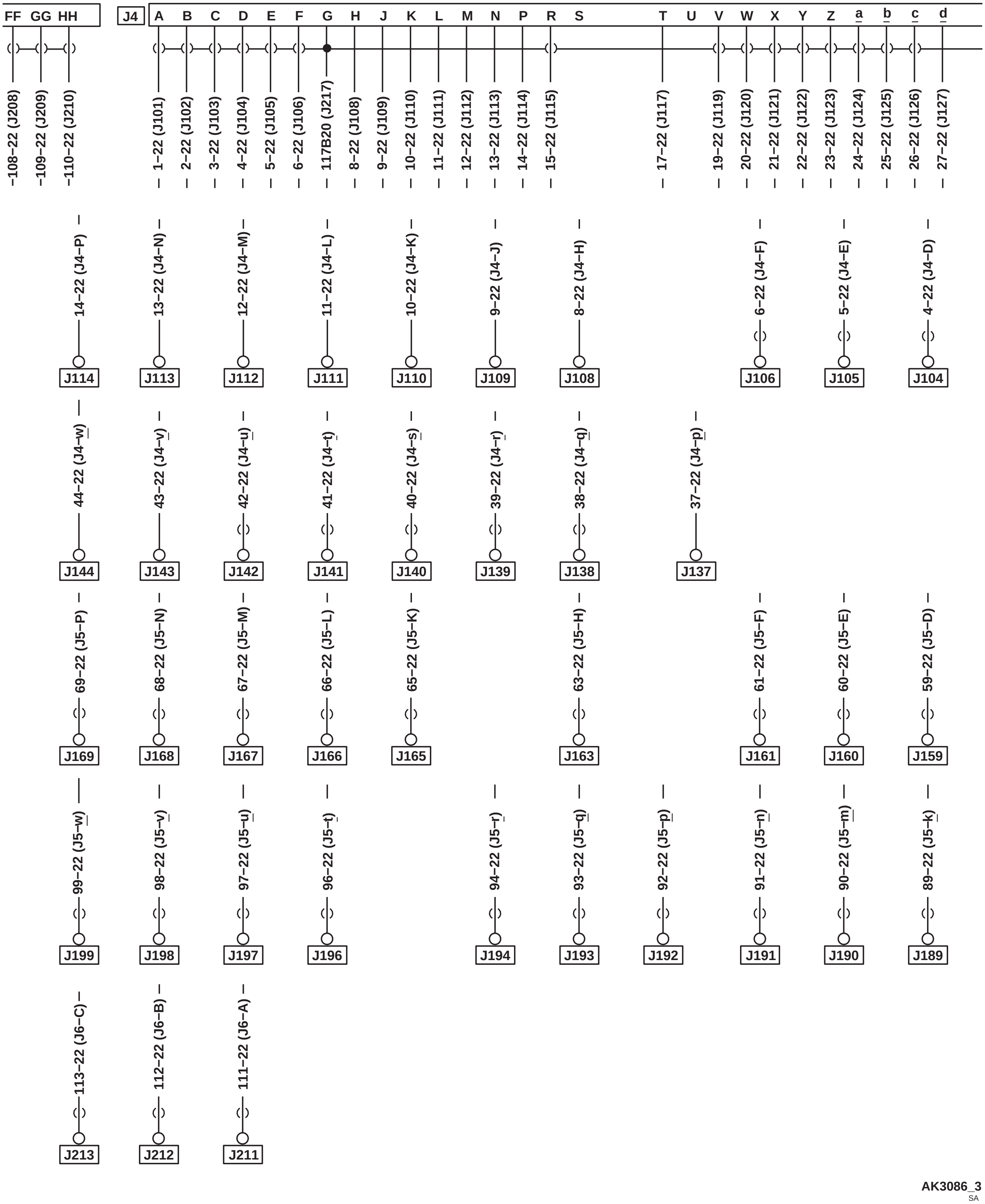


Figure 5-10. Test Set, Upper Panel Assembly Wiring Diagram (Sheet 3)

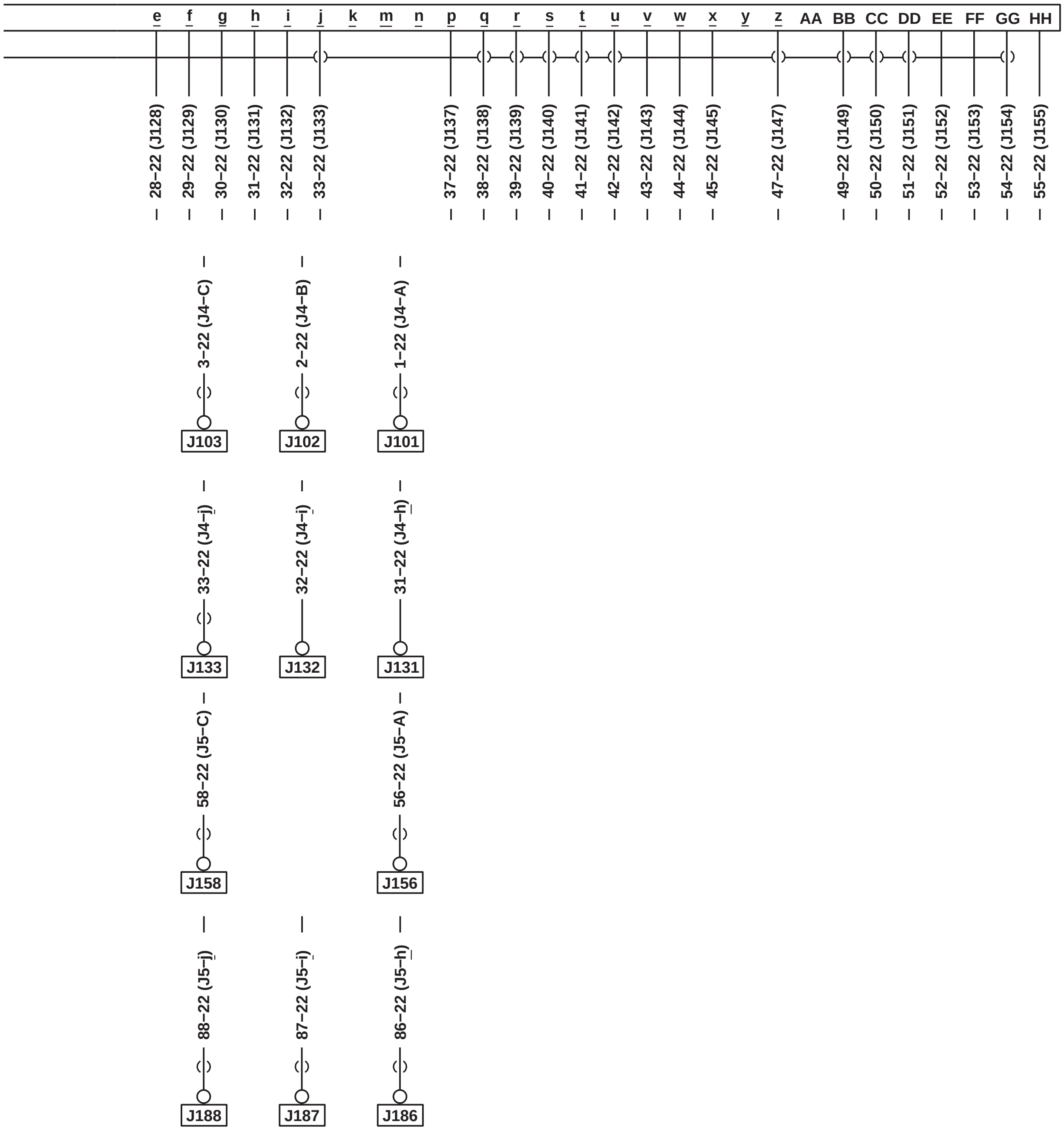


Figure 5-10. Test Set, Upper Panel Assembly Wiring Diagram (Sheet 4)

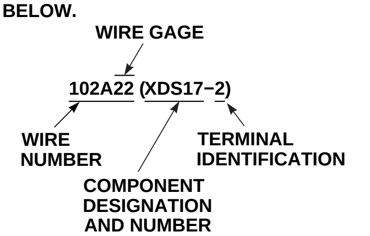
JUMPER LIST			
JUMPER NO.	AWG	TERMINATIONS	
		FROM	TO
1	22	S3−2	S3−5
2	22	S3−3	S3−4
3	22	S3−4	S3−9
4	22	S3−9	S3−11
5	22	S3−10	S3−8
6			
7	22	S10−6	S10−4
8	22	S10−4	S10−2
9			
10	22	S9−6	S9−4
11	22	S9−4	S9−2
12			
13	22	S7−2	S7−5
14			
15	22	S20−2	S20−3
16	22	S20−3	S20−9
17			
18	22	S19−2	S19−3
19	22	S19−5	S19−6
20	22	S19−8	S19−9
21			
22	22	S16−A2	S16−A5
23	22	S16−A5	S16−A6
24	22	S16−A6	S16−A7
25	22	S16−A3	S16−A4
26	22	S16−A4	S16−B5
27	22	S16−B2	S16−B4
28	22	S16−B4	S16−B6

JUMPER LIST			
JUMPER NO.	AWG	TERMINATIONS	
		FROM	TO
29	22	S16−B6	S16−B7
30	22	S16−B3	S16−B5
31	22	S16−A2	S16−C2
32	22	S16−C1	S16−C4
33	22	S16−C2	S16−C3
34	22	S16−C3	S16−C5
35	22	S16−C6	S16−C7
36			
37	22	S15−A1	S15−A5
38	22	S15−A6	S15−A2
39	22	S15−A2	S15−B2
40	22	S15−B2	S15−B3
41	22	S15−B3	S15−B5
42	22	S15−A4	S15−A3
43	22	S15−A3	S15−A11
44	22	S15−A11	S15−A9
45	22	S15−A7	S15−A10
46	22	S15−B1	S15−B4
47	22	S15−A8	S15−A12
48			
49	22	S2−3	S2−4
50	22	S2−4	S2−9
51	22	S2−9	S2−11
52	22	S2−5	S2−10
53	22	S1−A2	S1−A3
54	22	S1−A3	S1−A4
55	22	S1−A4	S1−A5
56	22	S1−A5	S1−CC1
57	22	S1−B2	S1−B4
58	22	S1−B3	S1−B5
59	22	S1−B5	S1−C4
60	22	S1−C4	S1−C3
61	22	S1−C2	S1−C5
62	22	S1−D2	S1−D3
63	22	S1−D3	S1−D4
64	22	S1−D4	S1−D5
65	22	S1−D5	S1−BC1
66	22	A4−G4	A4−G5
67	22	A4−G5	A4−G6
68	22	A4−G6	A4−G7
69	22	A4−G7	A4−G8
70	22	A4−G8	A4−G9
71	22	A4−H3	A4−H4
72	22	A4−H4	A4−H5
73	22	A4−H5	A4−H6
74	22	A4−H6	A4−H7
75	22	A4−H7	A4−H8

JUMPER LIST			
JUMPER NO.	AWG	TERMINATIONS	
		FROM	TO
76	22	A4−H8	A4−H9
77			
78	22	K1−B1	K1−X2
79			
80	22	A3−G4	A3−G5
81	22	A3−G5	A3−G6
82	22	A3−G6	A3−G7
83	22	A3−G7	A3−G8
84	22	A3−G8	A3−G9
85	22	A3−G9	A3−G10
86	22	A3−G10	A3−G11
87	22	A3−G11	A3−G12
88	22	A3−G12	A3−G13
89	22	A3−G13	A3−G14
90	22	A3−G14	A3−G15
91	22	A3−G15	A3−G16
92	22	A3−G16	A3−G17
93	22	A3−G17	A3−G20
94	22	A3−G21	A3−G22
95			
96	22	T1−2	T1−5

LEGEND

WIRE DESIGNATION IS AS SHOWN BELOW.



NOTES

1. ALL ROTARY SWITCHES ARE SHOWN AS VIEWED FROM THE REAR.
2. GANGED SWITCHES HAVE SECTION NEAREST KNOB IDENTIFIED BY LETTER "A", OTHER SECTIONS IN SEQUENCE "B", "C", ETC.

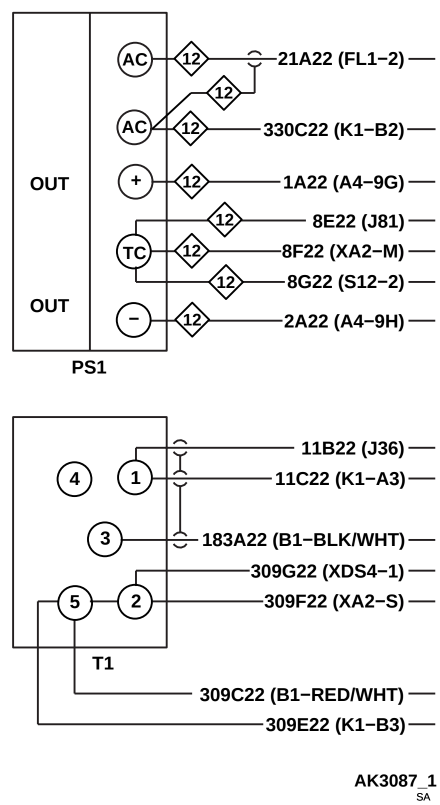


Figure 5-11. Test Set, Lower Panel Assembly Wiring Diagram (Sheet 1 of 15)

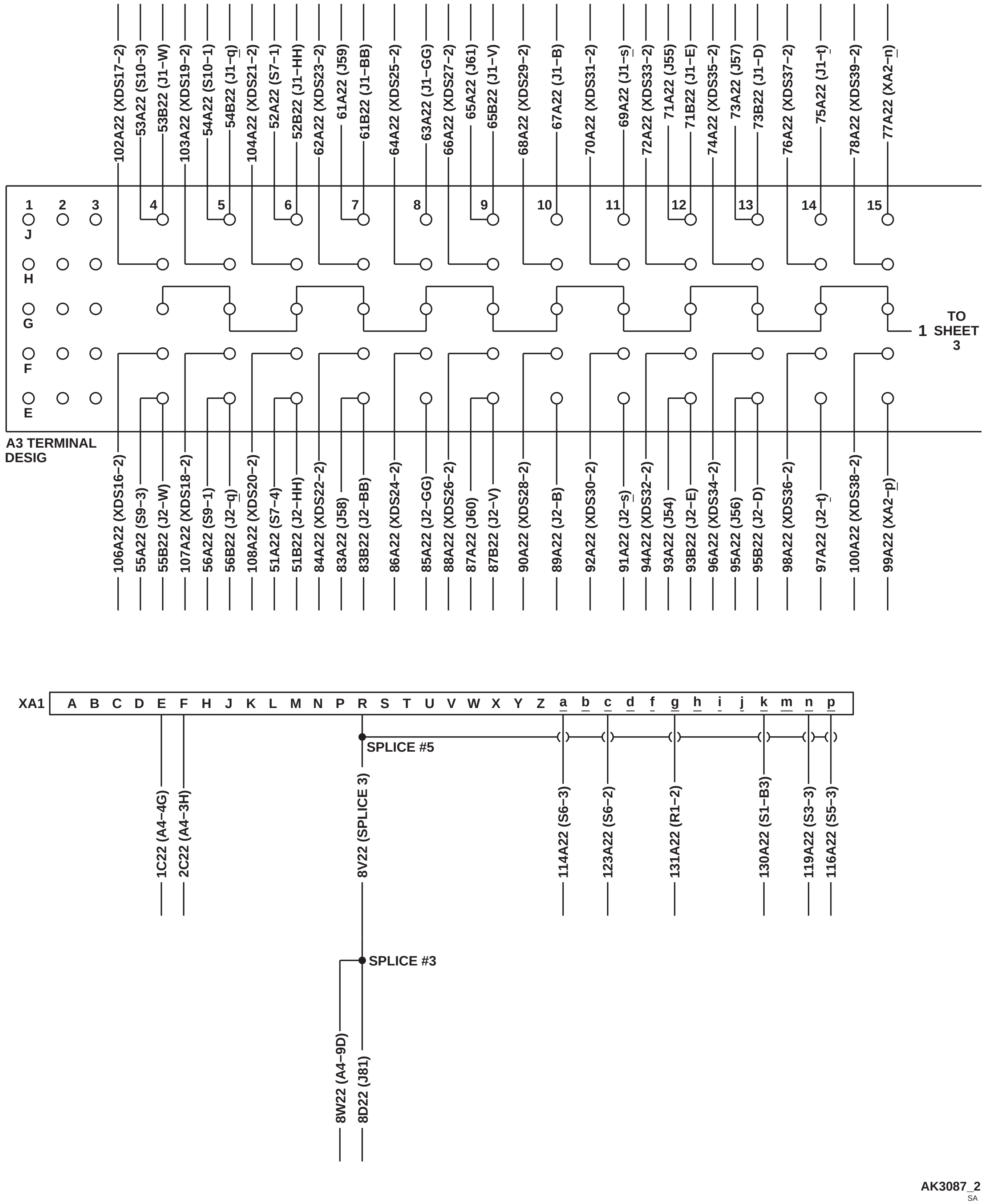


Figure 5-11. Test Set, Lower Panel Assembly Wiring Diagram (Sheet 2)

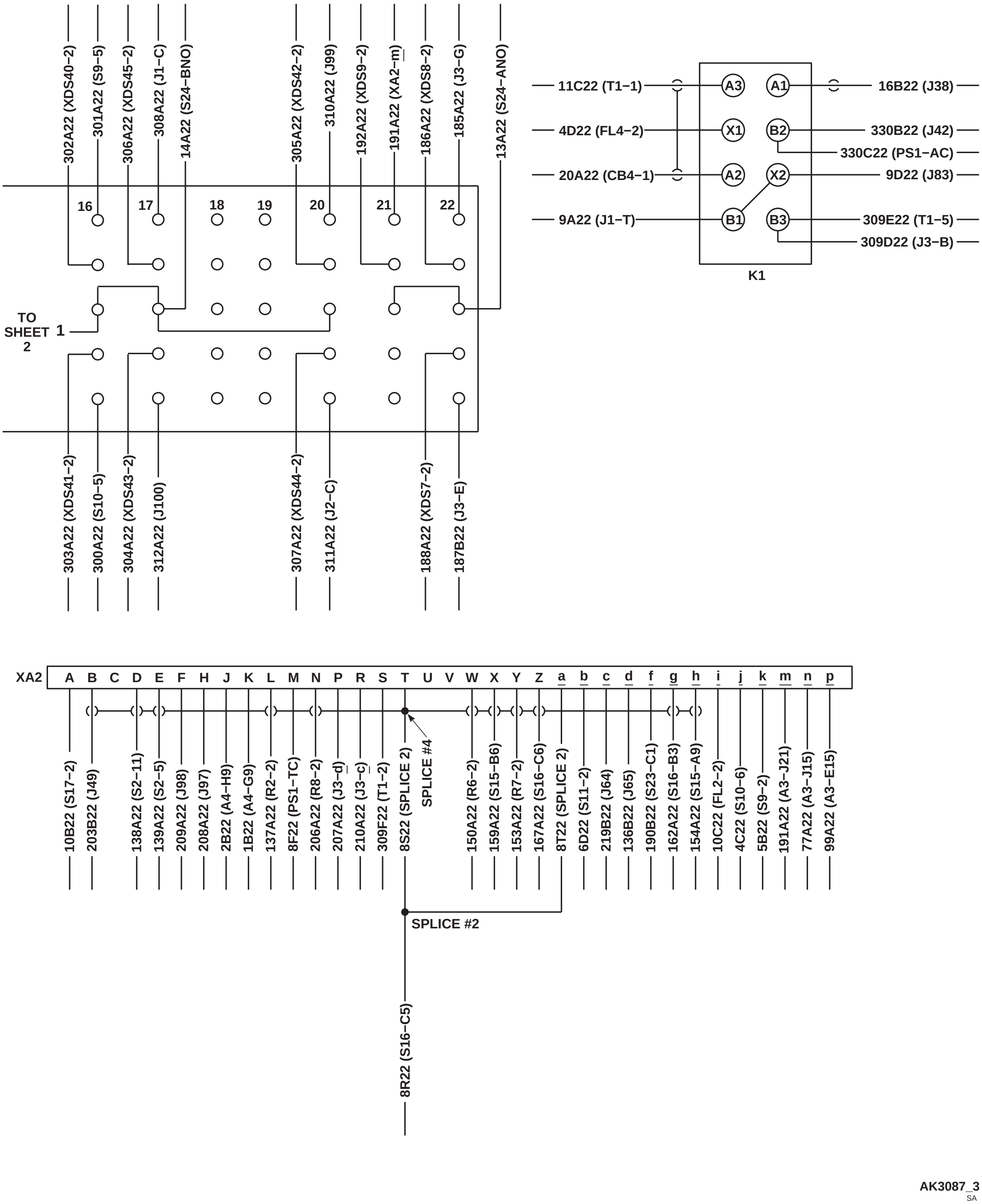


Figure 5-11. Test Set, Lower Panel Assembly Wiring Diagram (Sheet 3)

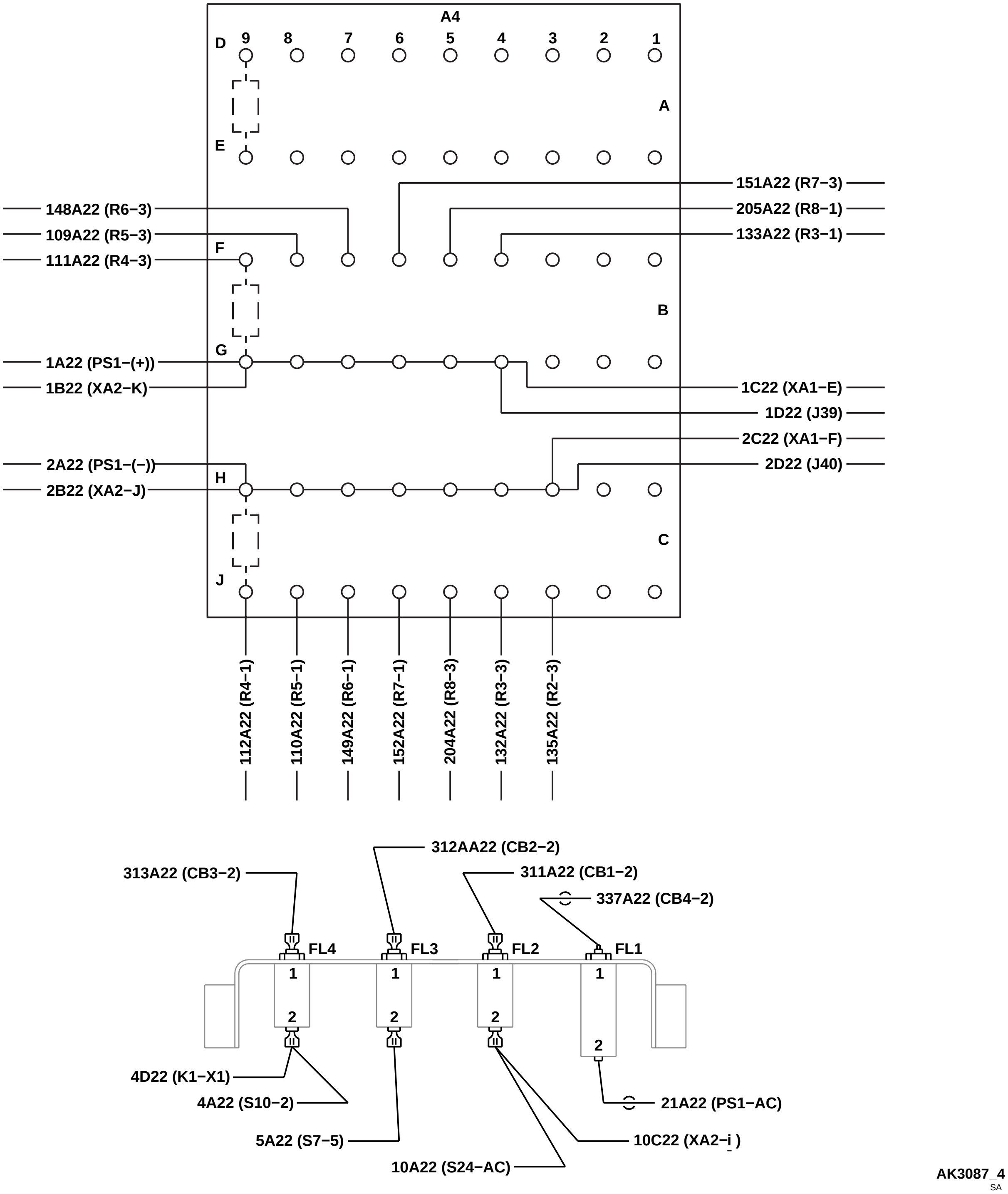


Figure 5-11. Test Set, Lower Panel Assembly Wiring Diagram (Sheet 4)

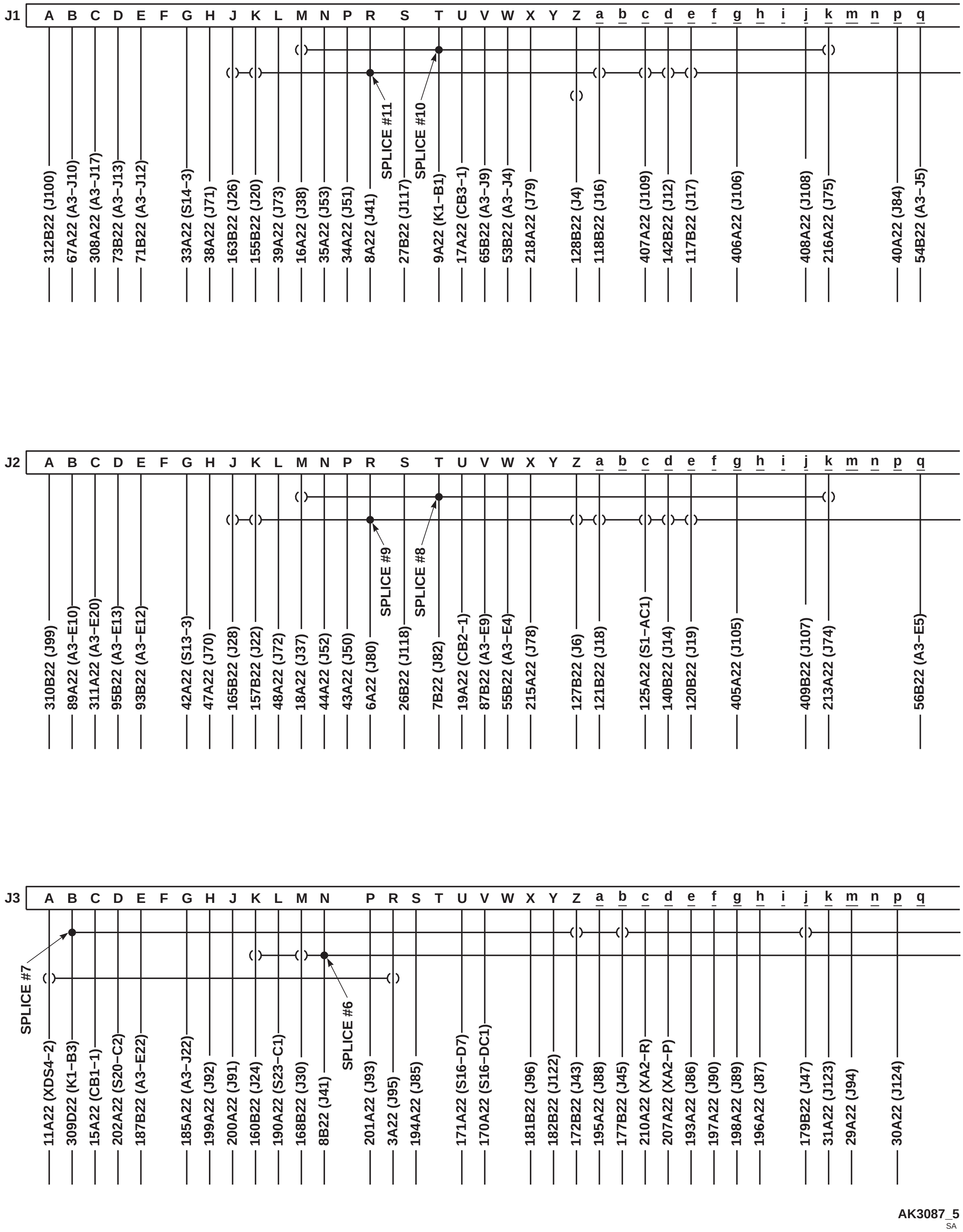


Figure 5-11. Test Set, Lower Panel Assembly Wiring Diagram (Sheet 5)

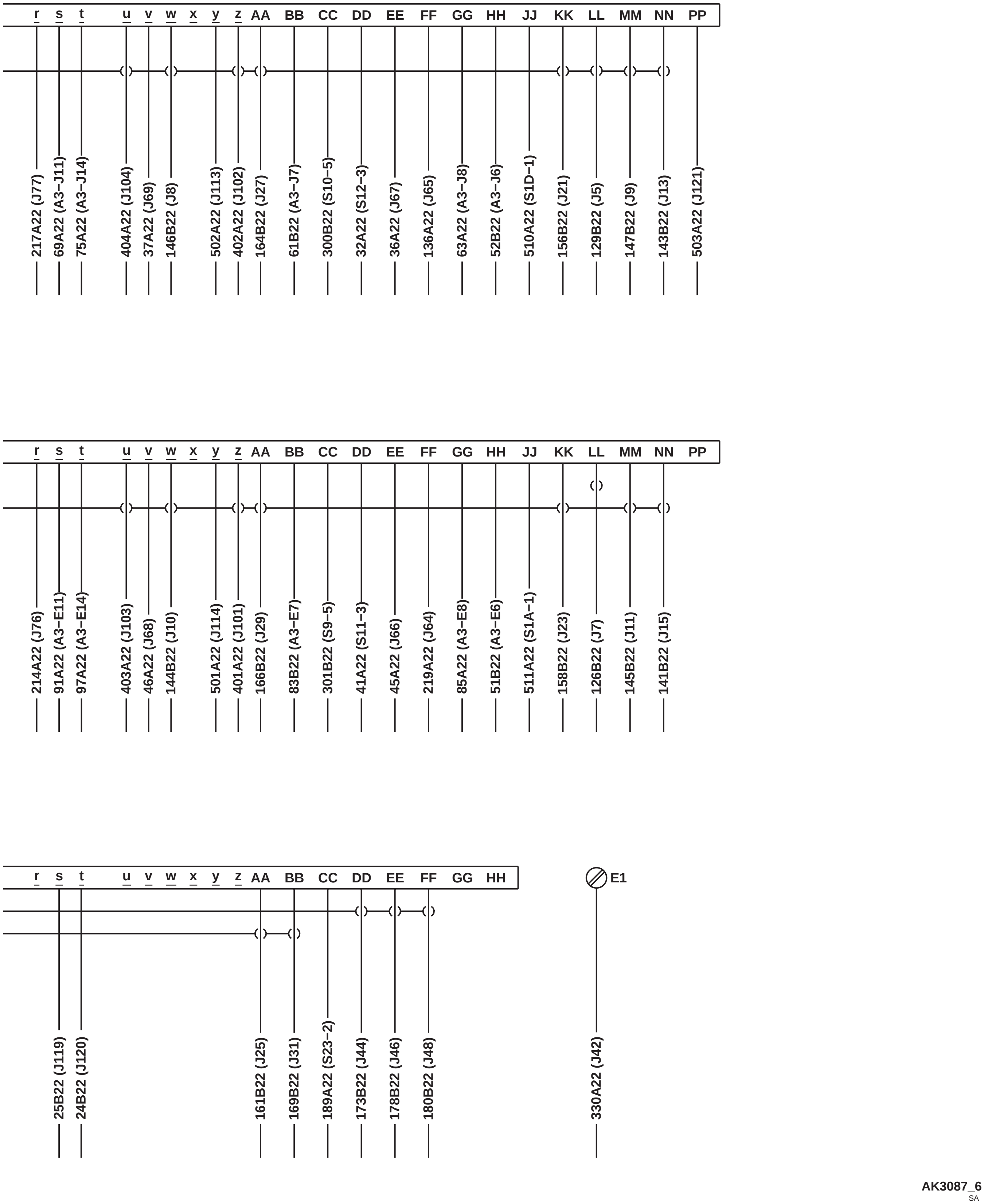


Figure 5-11. Test Set, Lower Panel Assembly Wiring Diagram (Sheet 6)

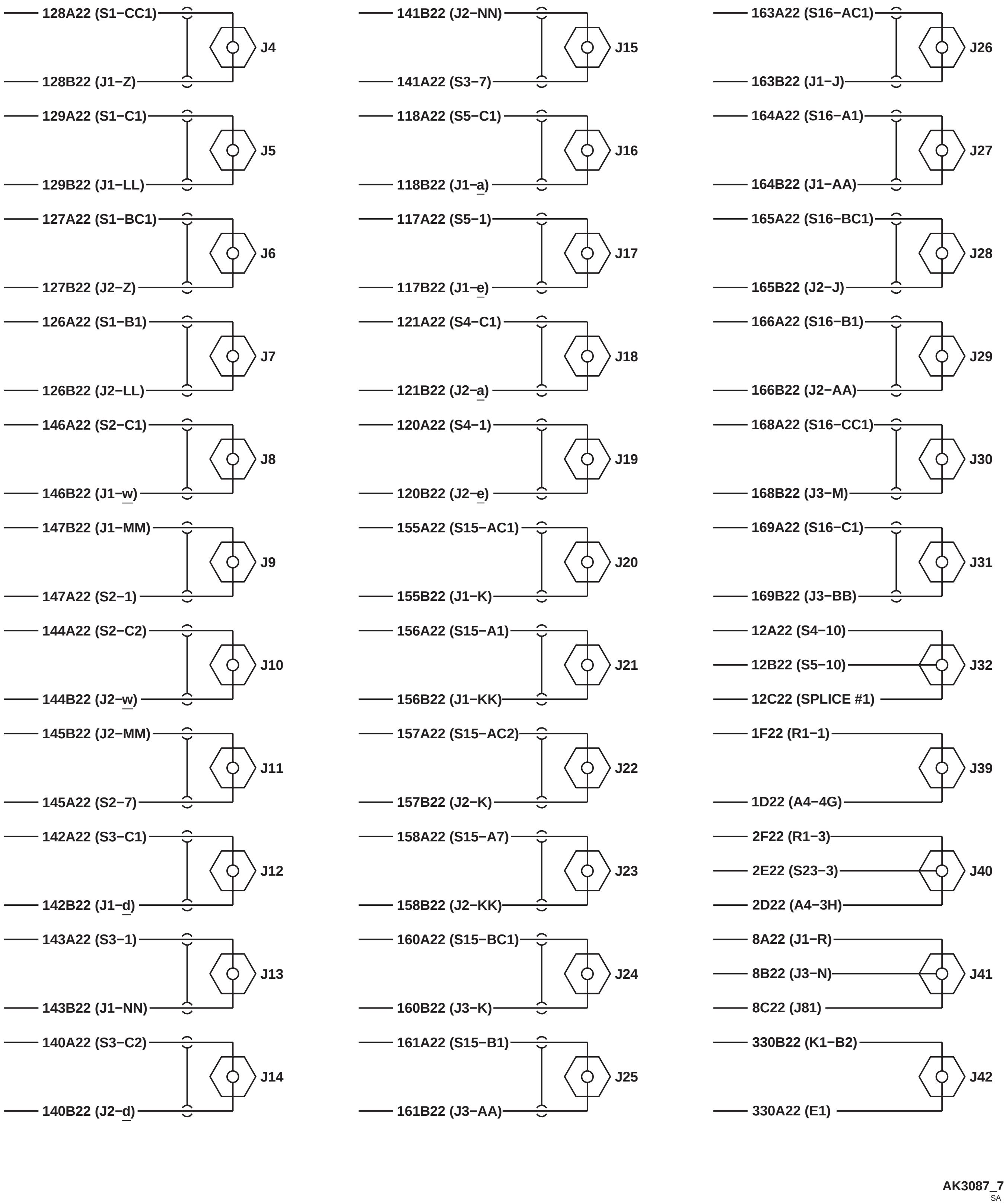


Figure 5-11. Test Set, Lower Panel Assembly Wiring Diagram (Sheet 7)

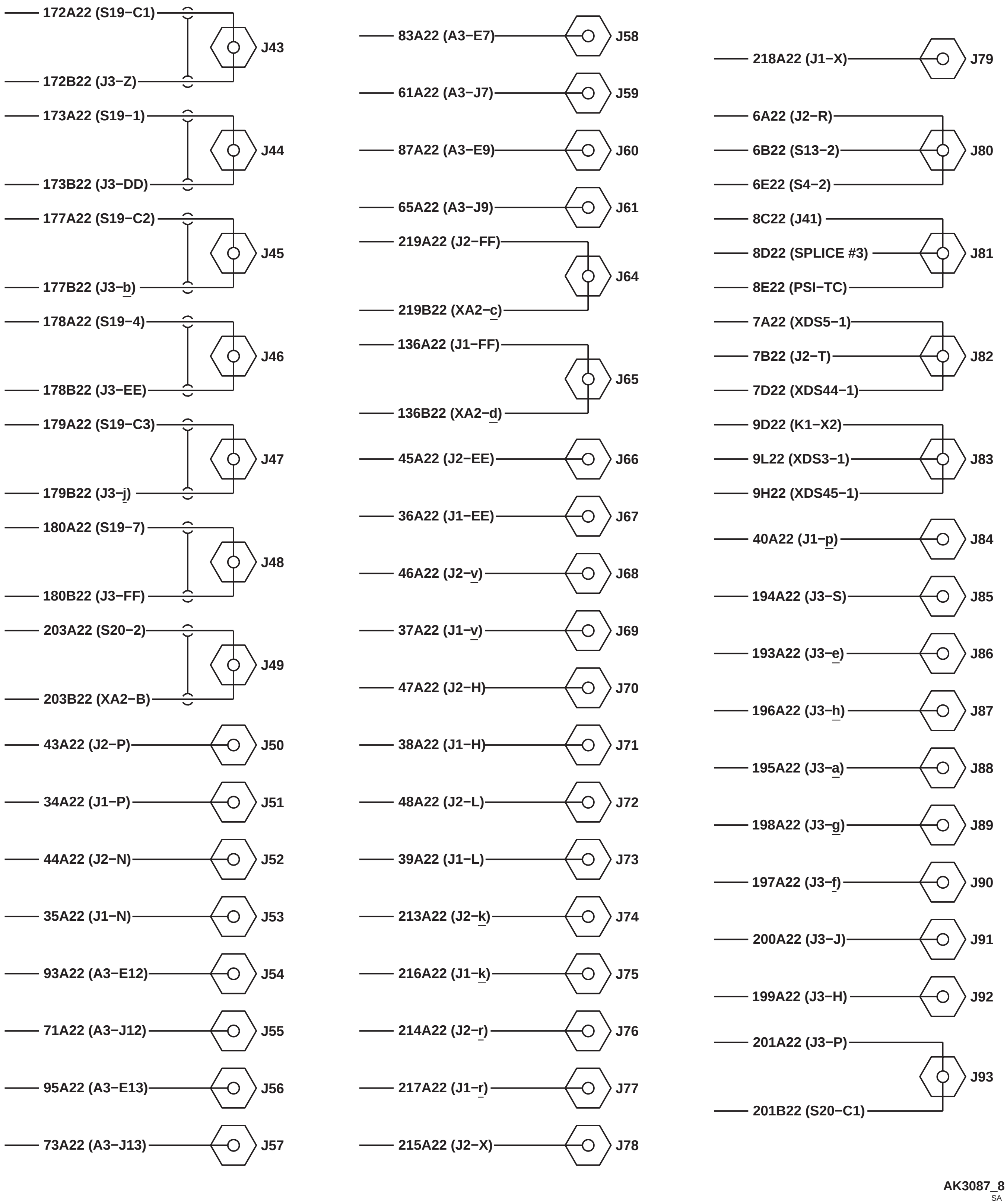


Figure 5-11. Test Set, Lower Panel Assembly Wiring Diagram (Sheet 8)

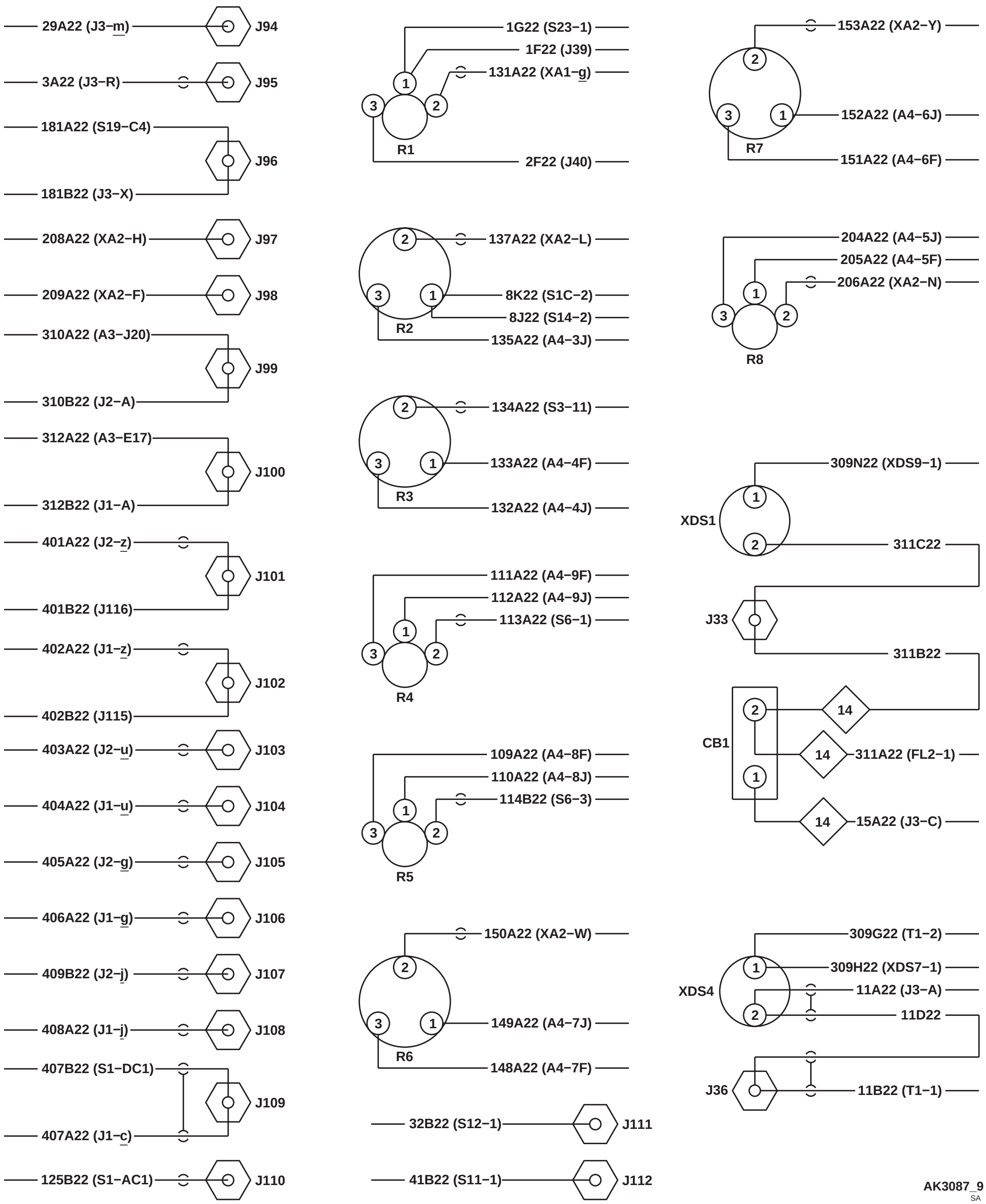


Figure 5-11. Test Set, Lower Panel Assembly Wiring Diagram (Sheet 9)

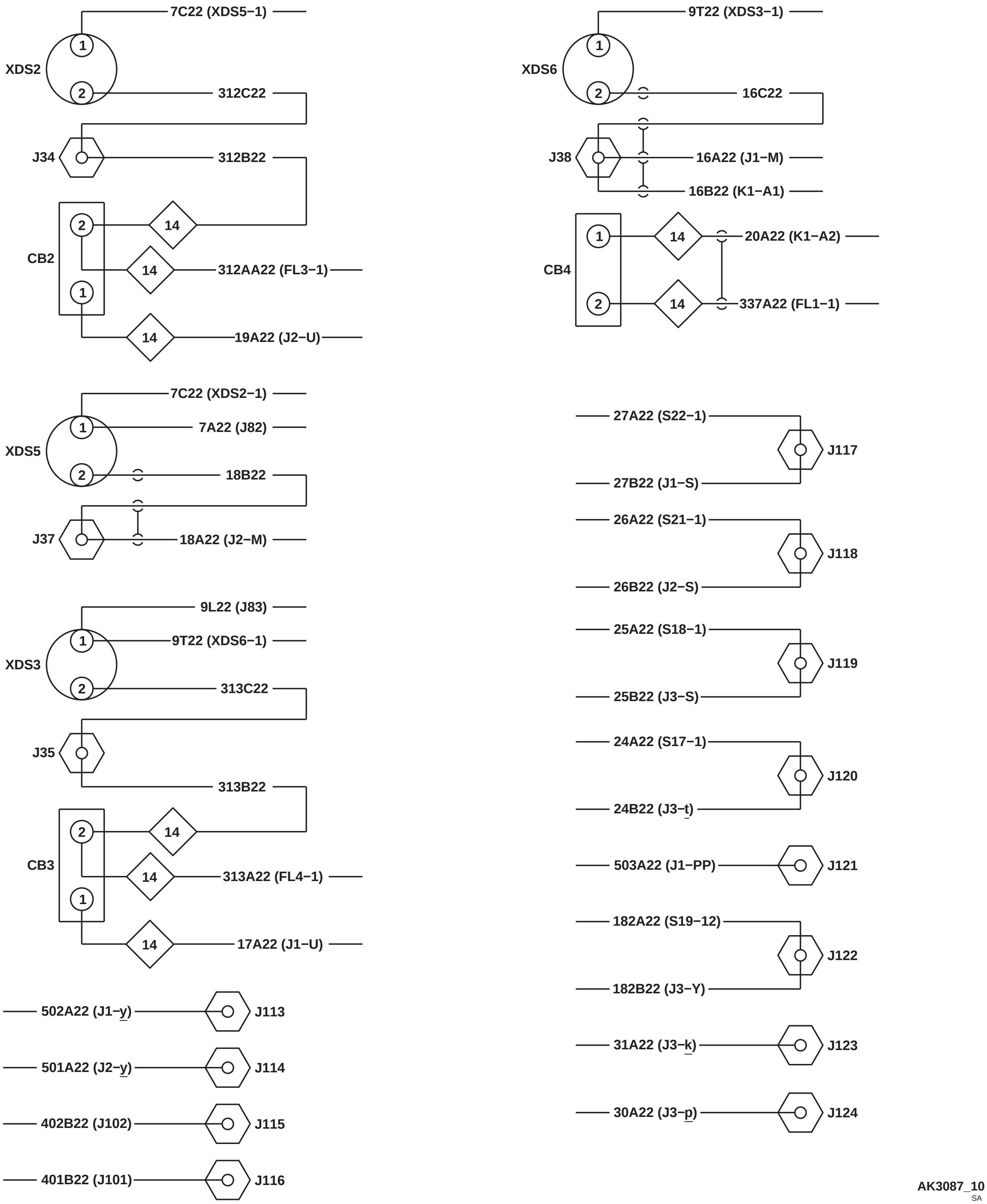


Figure 5-11. Test Set, Lower Panel Assembly Wiring Diagram (Sheet 10)

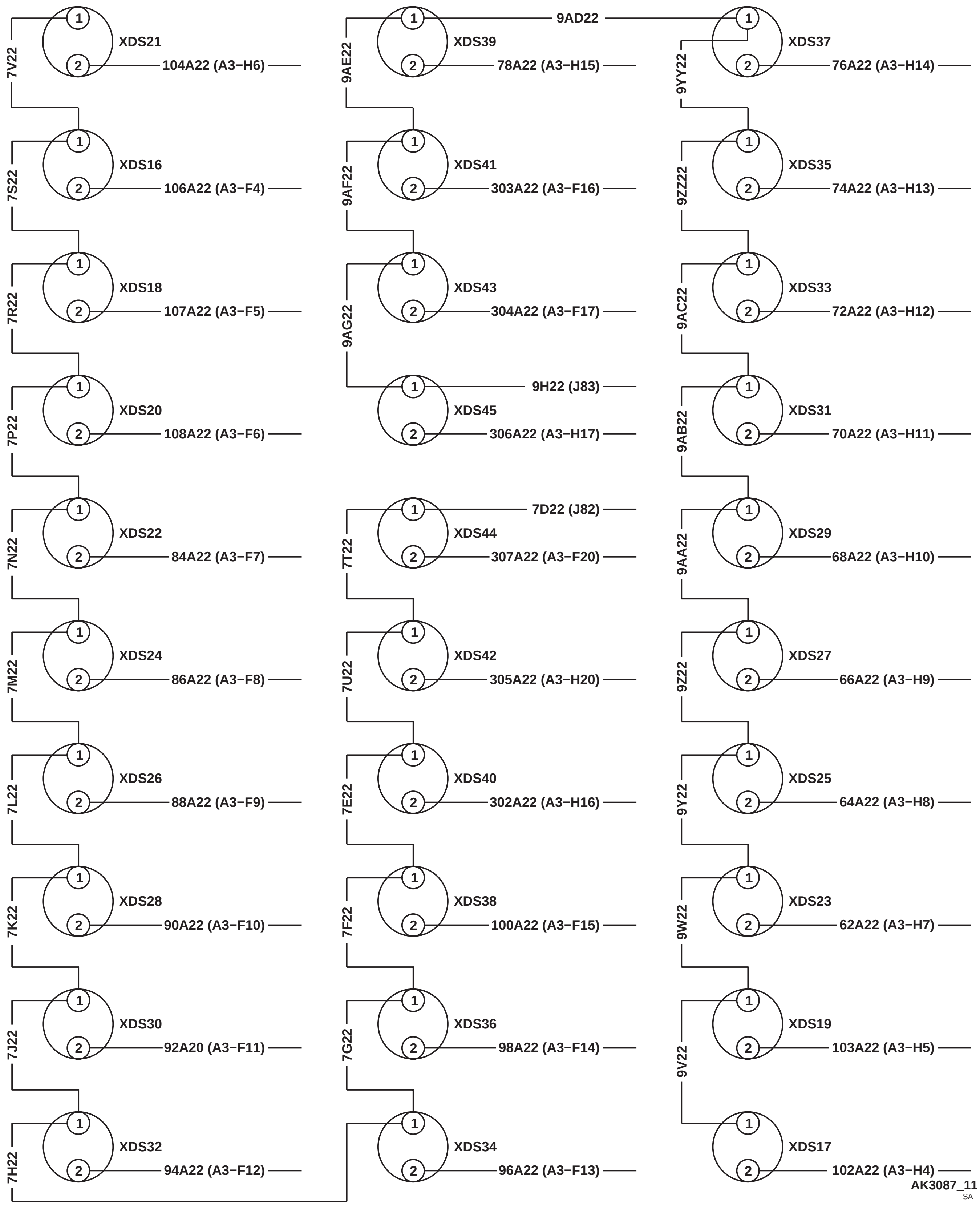


Figure 5-11. Test Set, Lower Panel Assembly Wiring Diagram (Sheet 11)

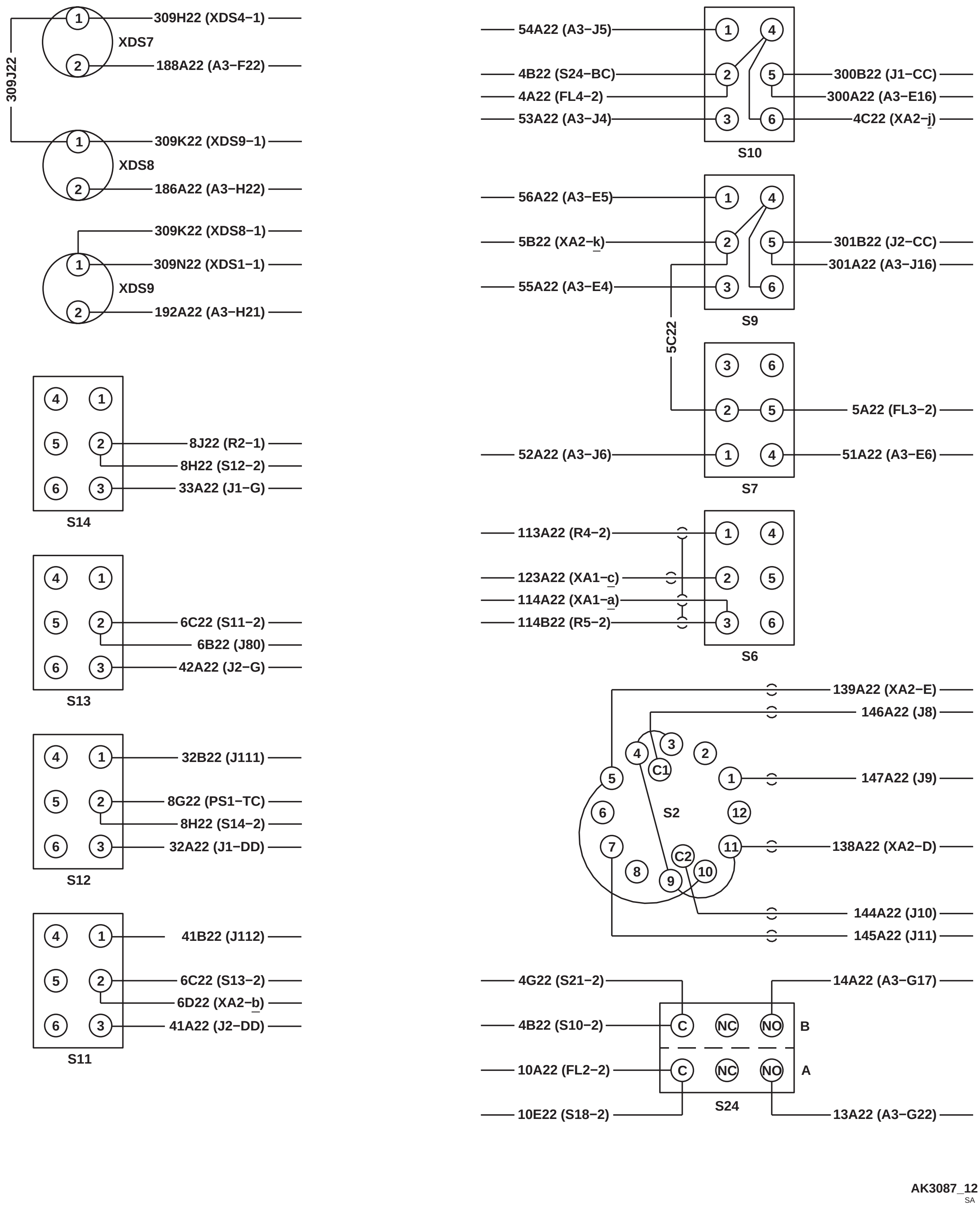


Figure 5-11. Test Set, Lower Panel Assembly Wiring Diagram (Sheet 12)

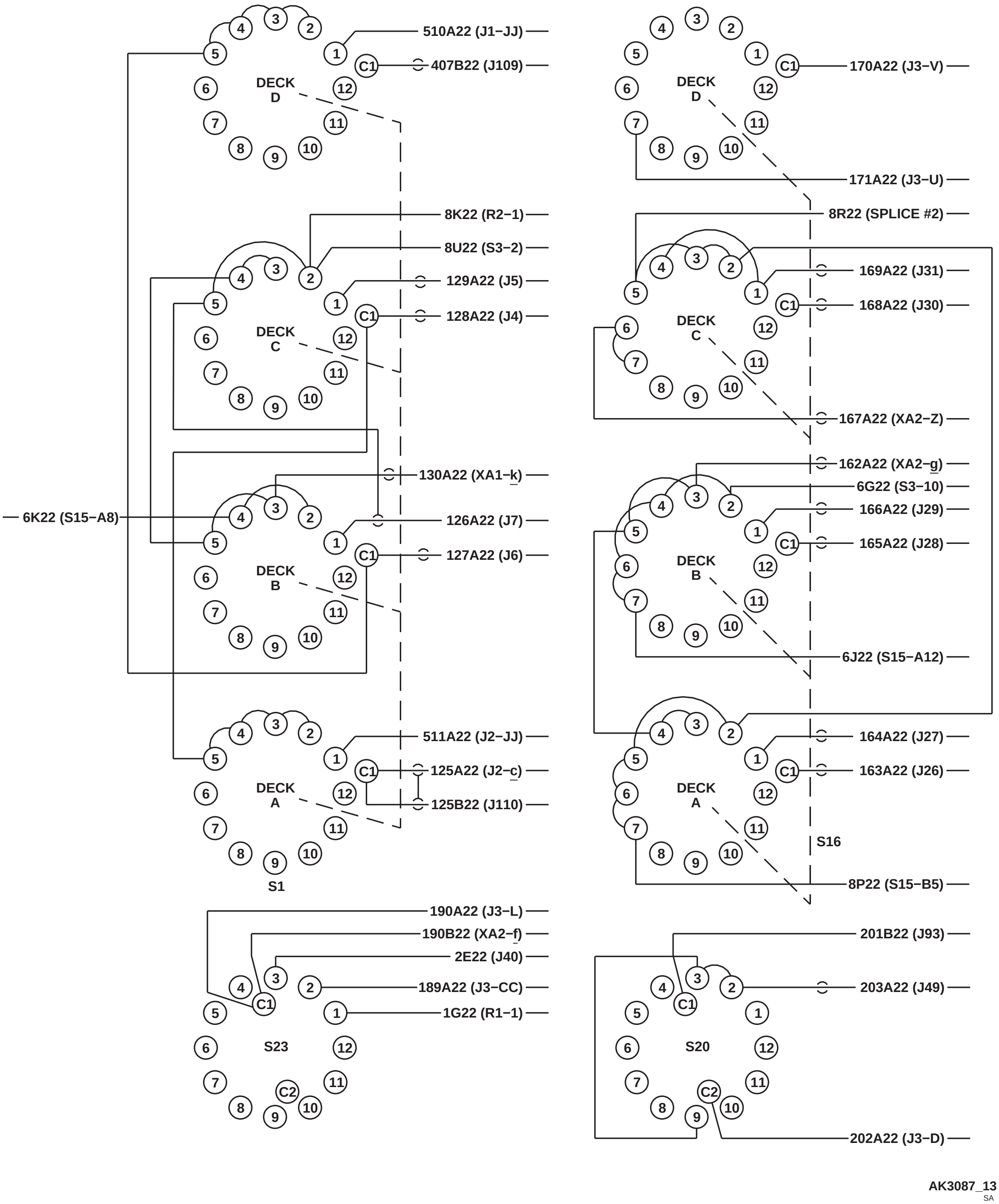


Figure 5-11. Test Set, Lower Panel Assembly Wiring Diagram (Sheet 13)

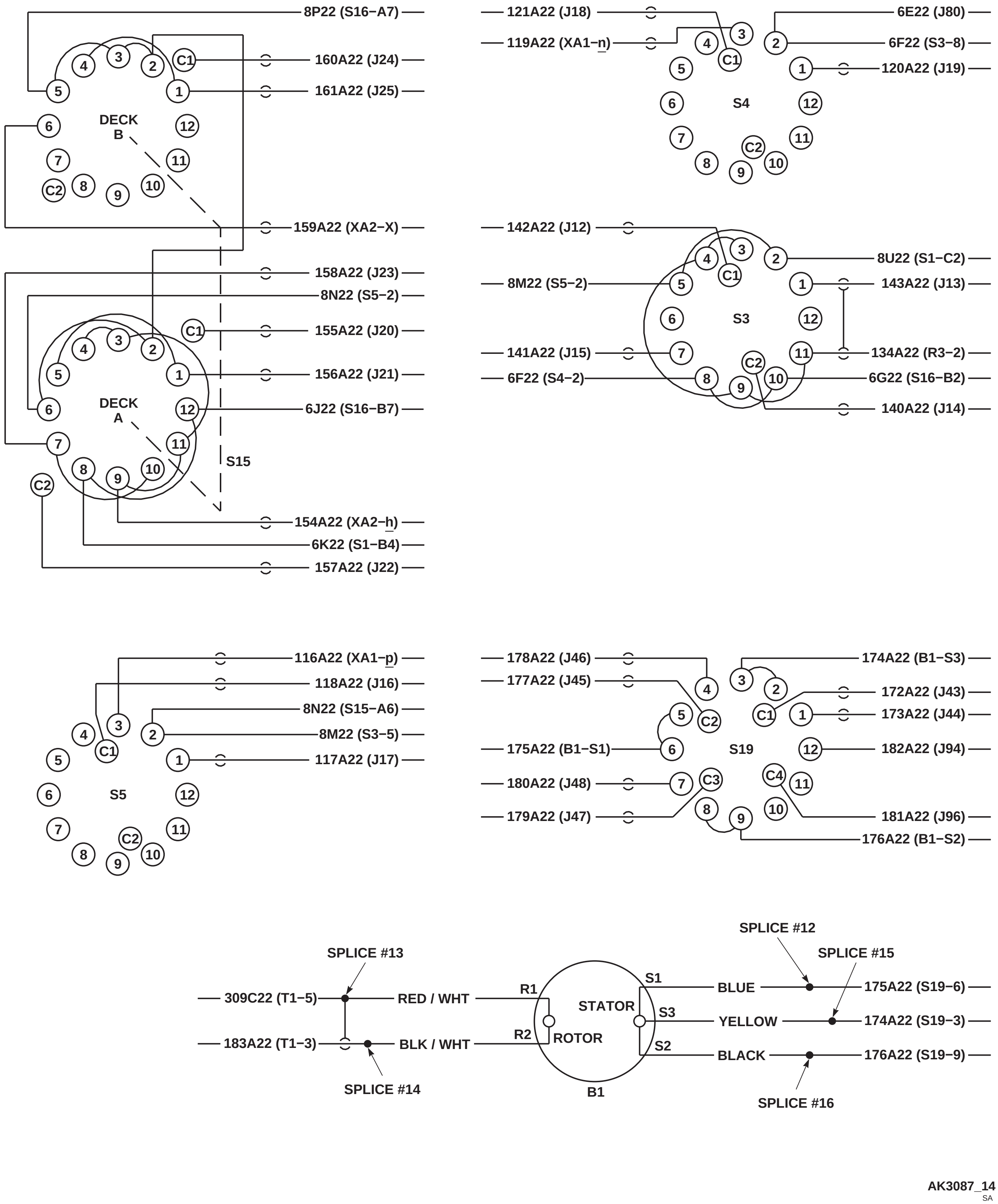


Figure 5-11. Test Set, Lower Panel Assembly Wiring Diagram (Sheet 14)

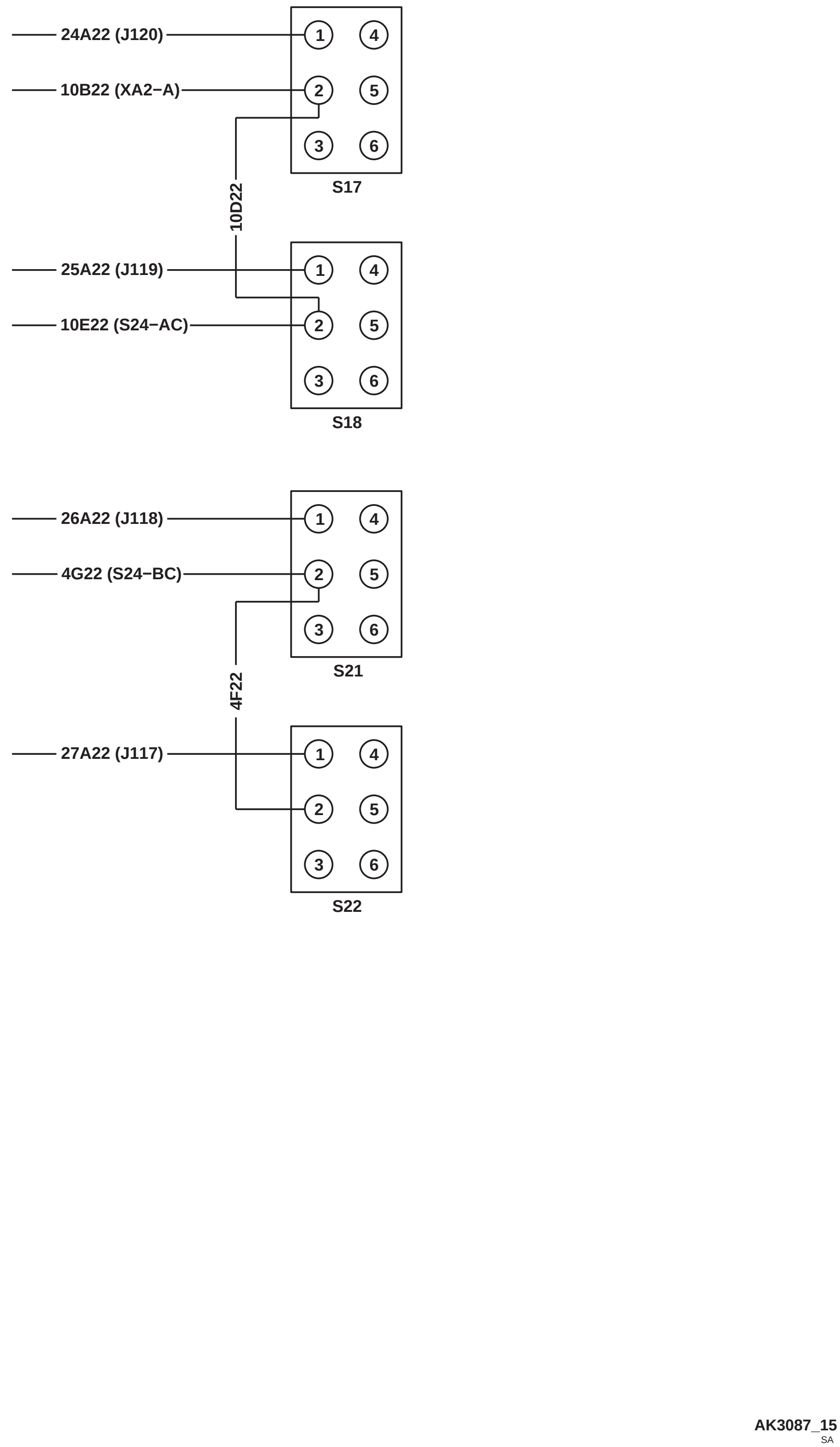


Figure 5-11. Test Set, Lower Panel Assembly Wiring Diagram (Sheet 15)

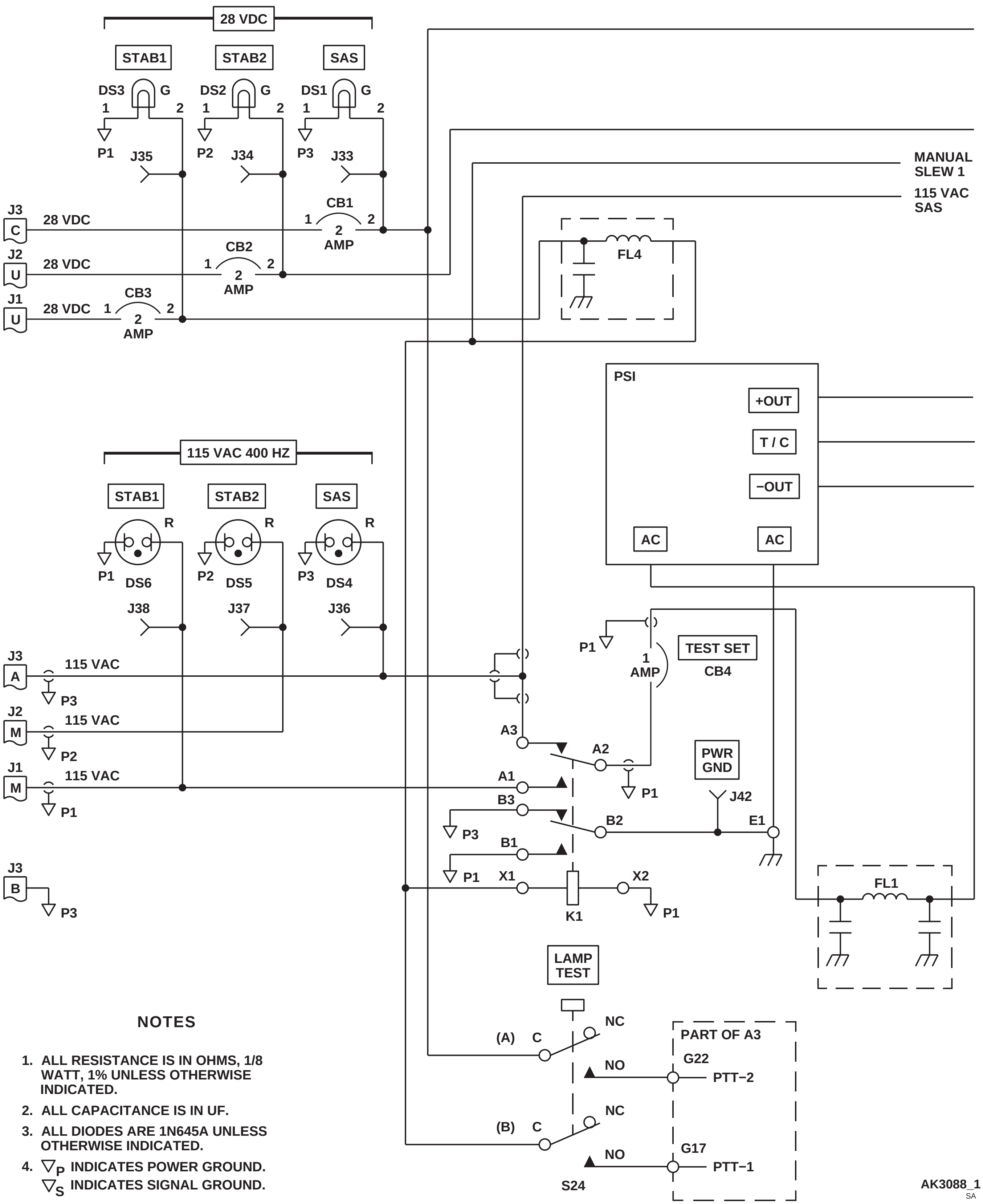


Figure 5-12. Test Set, Lower Panel Assembly Schematic Diagram (Sheet 1 of 18)

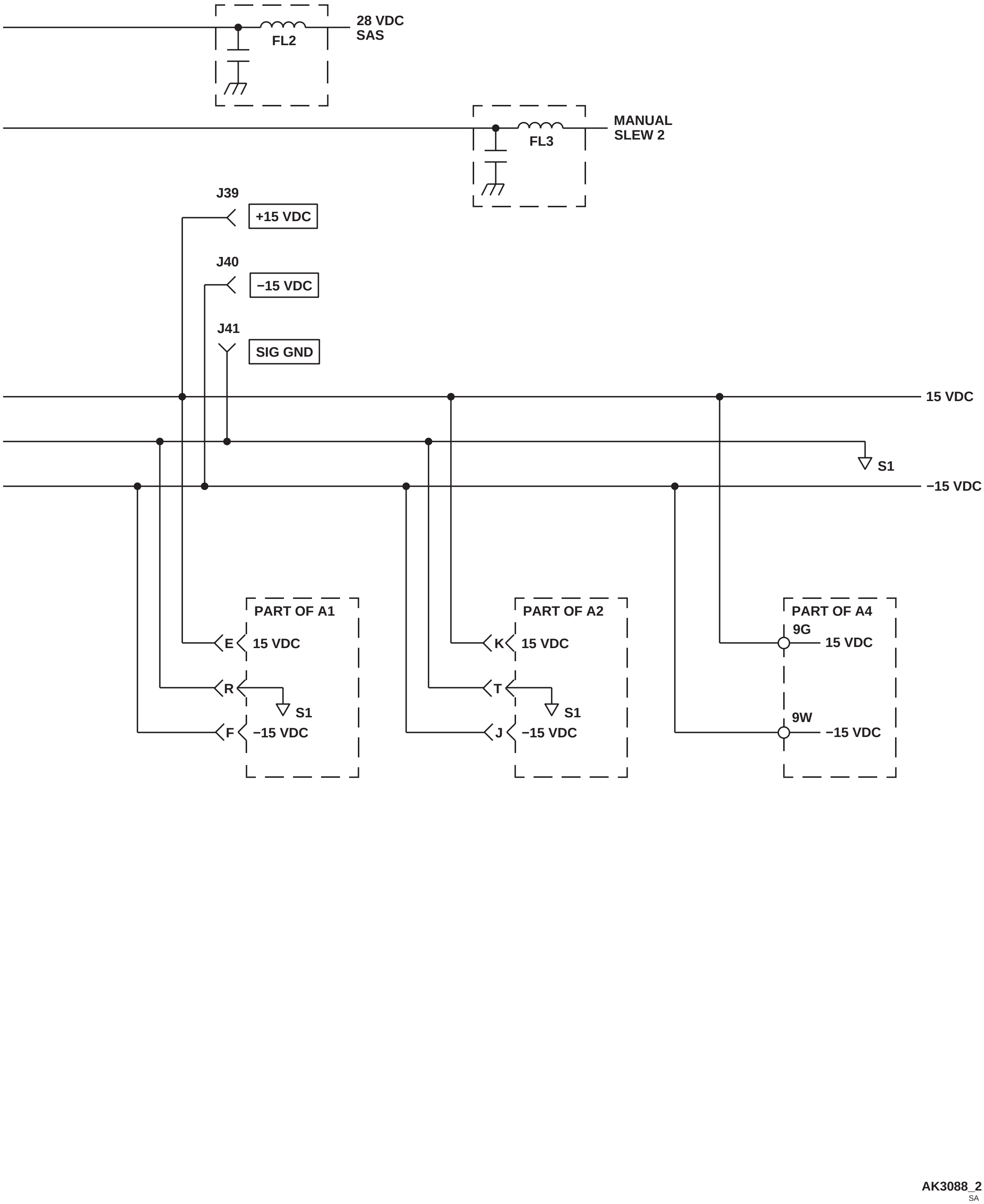


Figure 5-12. Test Set, Lower Panel Assembly Schematic Diagram (Sheet 2)

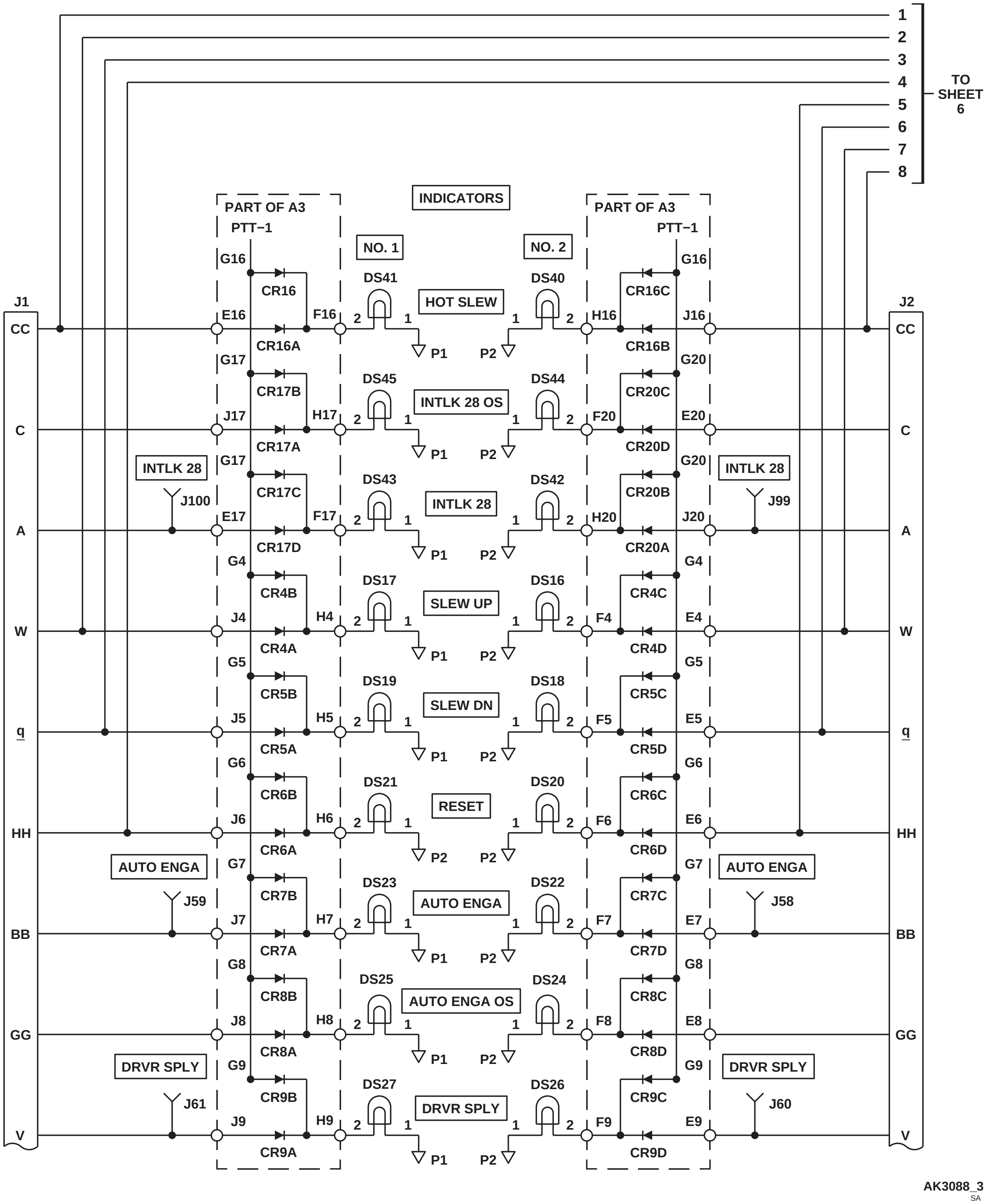


Figure 5-12. Test Set, Lower Panel Assembly Schematic Diagram (Sheet 3)

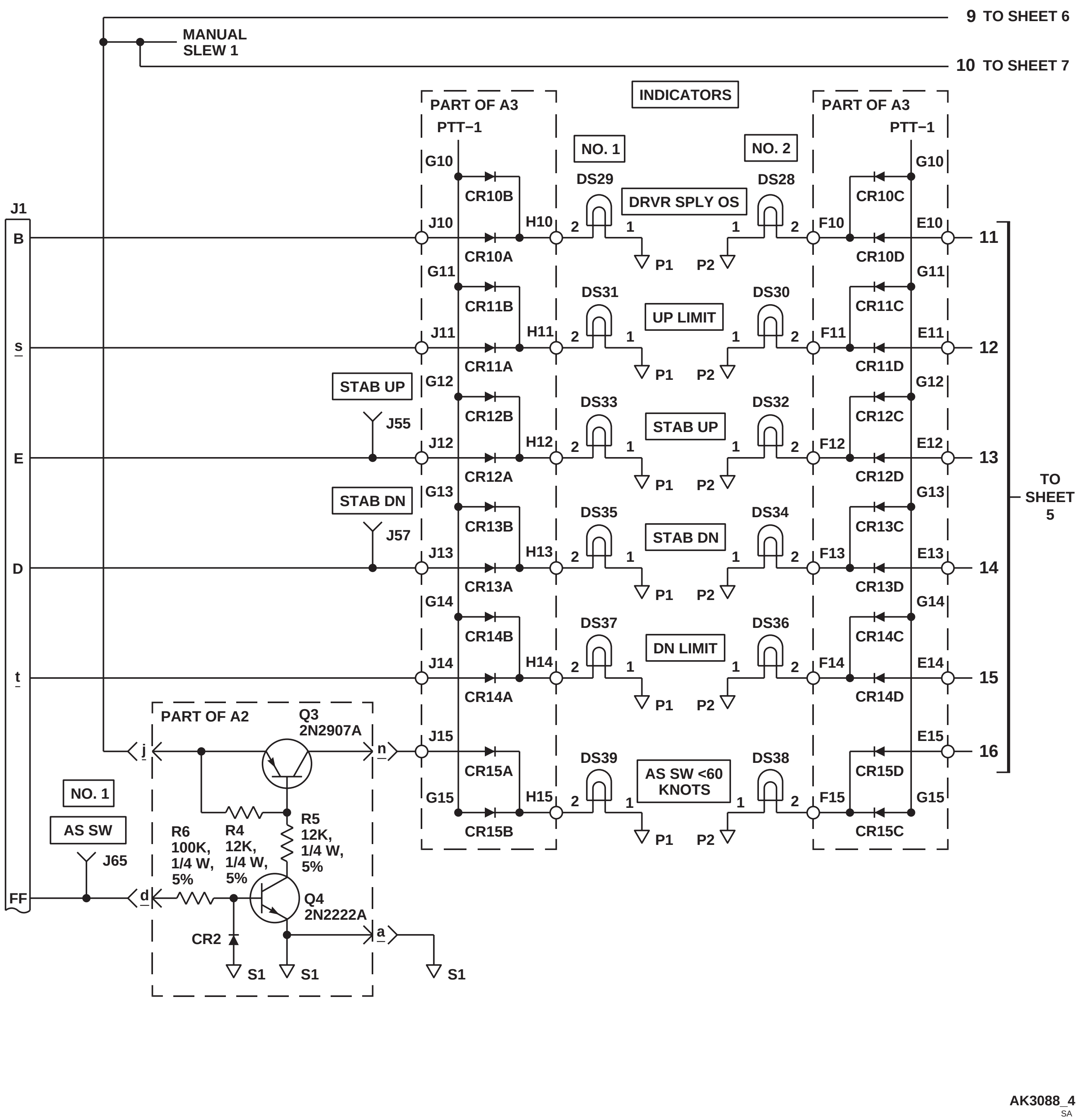


Figure 5-12. Test Set, Lower Panel Assembly Schematic Diagram (Sheet 4)

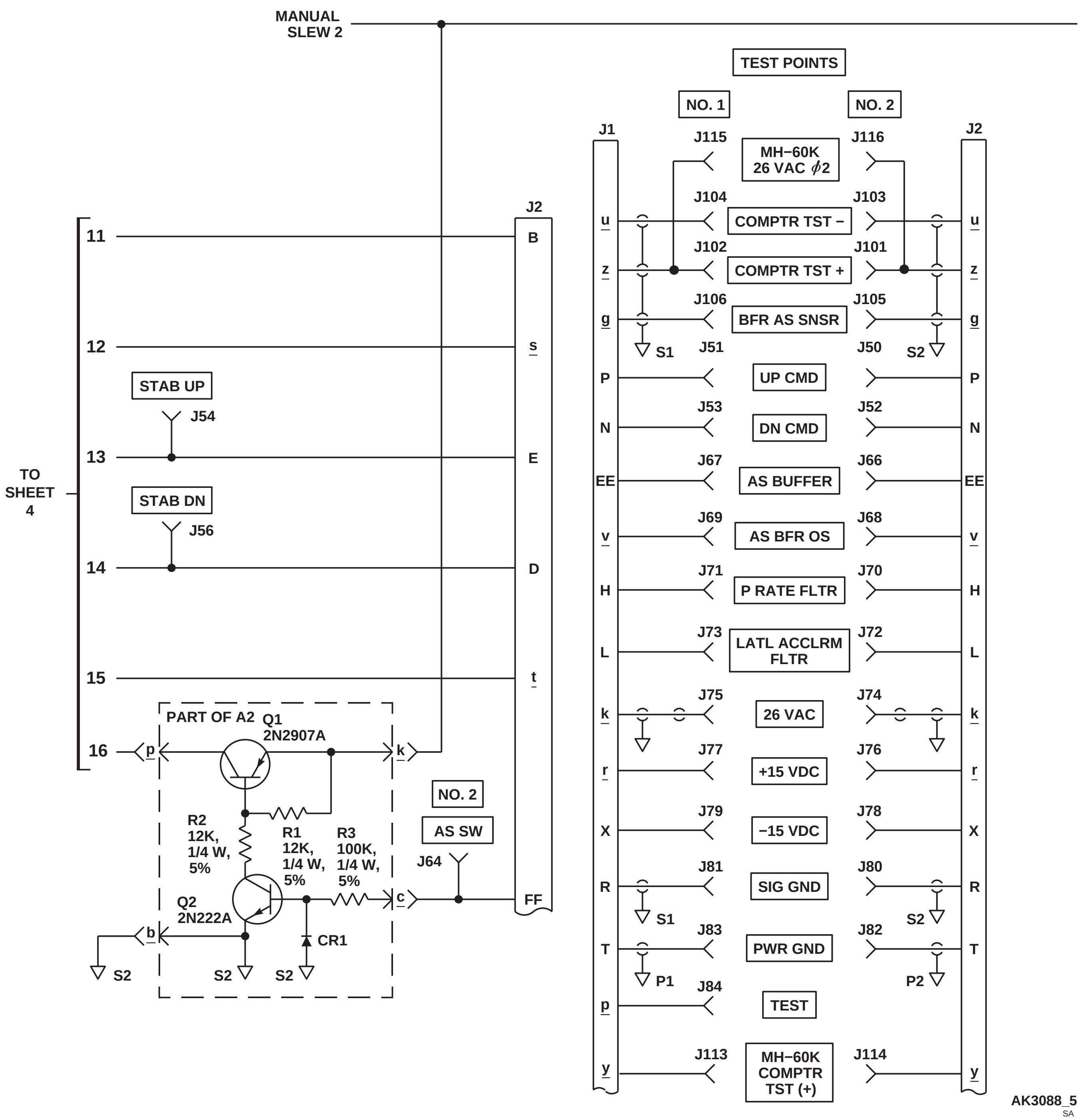


Figure 5-12. Test Set, Lower Panel Assembly Schematic Diagram (Sheet 5)

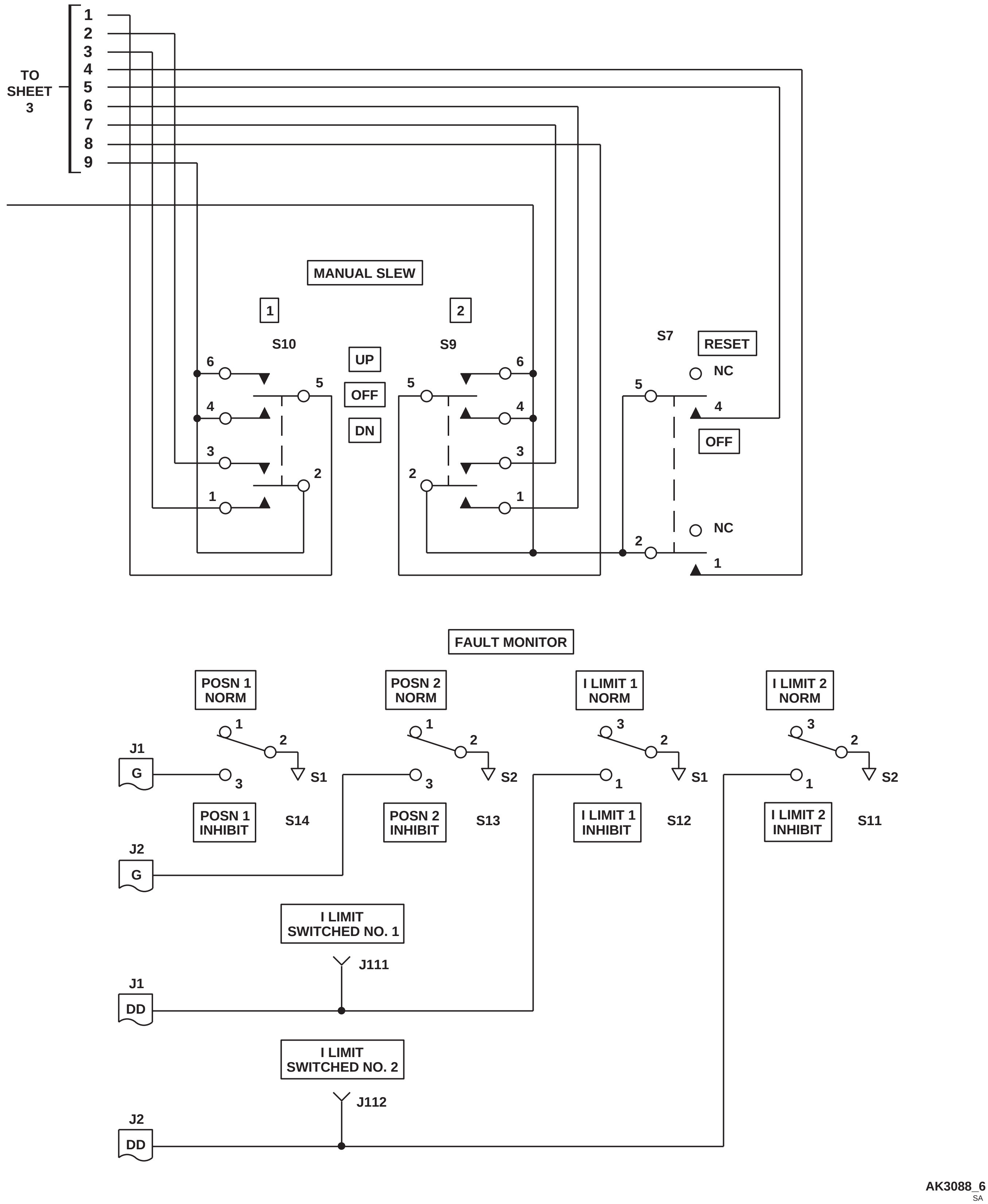


Figure 5-12. Test Set, Lower Panel Assembly Schematic Diagram (Sheet 6)

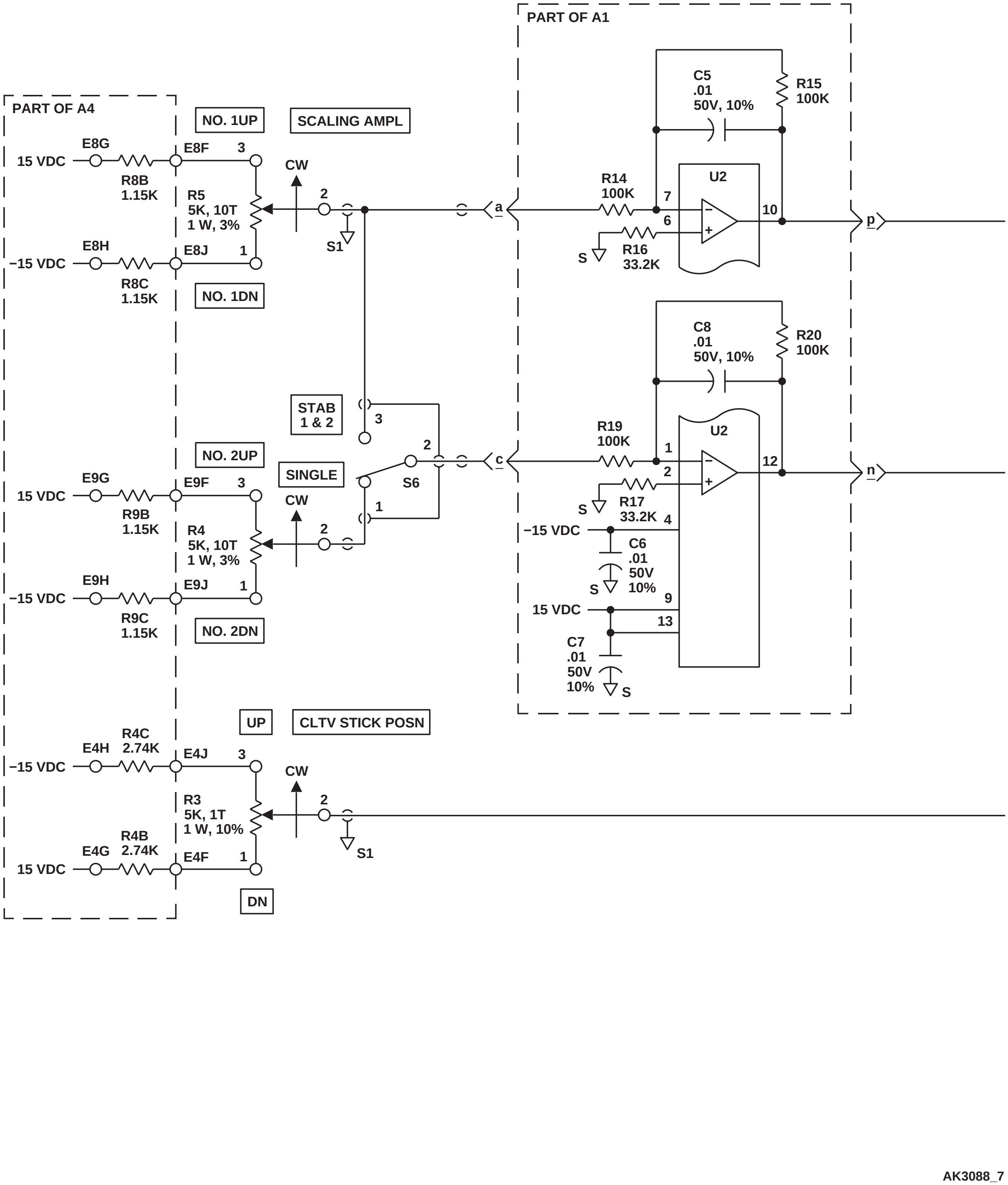


Figure 5-12. Test Set, Lower Panel Assembly Schematic Diagram (Sheet 7)

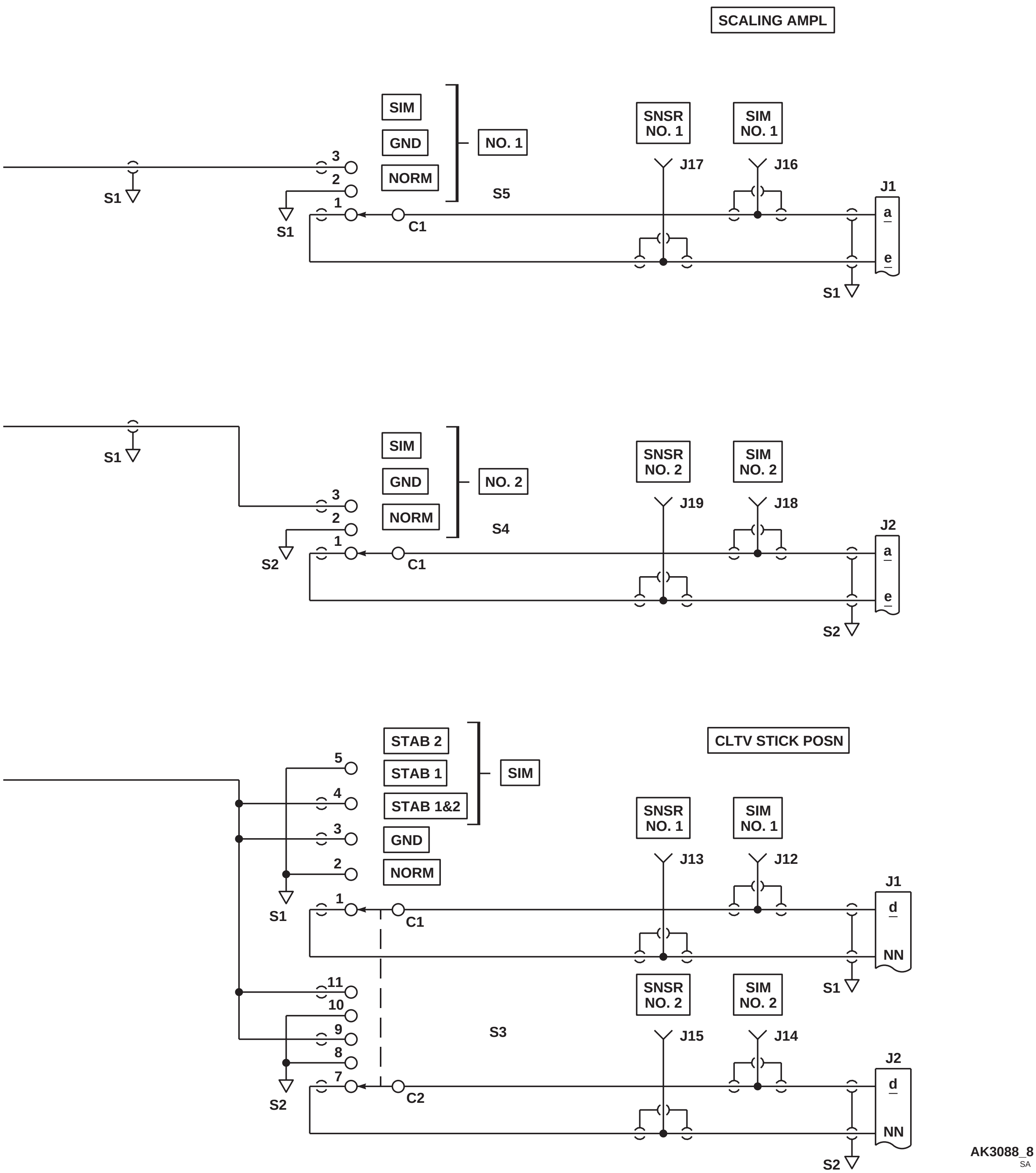


Figure 5-12. Test Set, Lower Panel Assembly Schematic Diagram (Sheet 8)

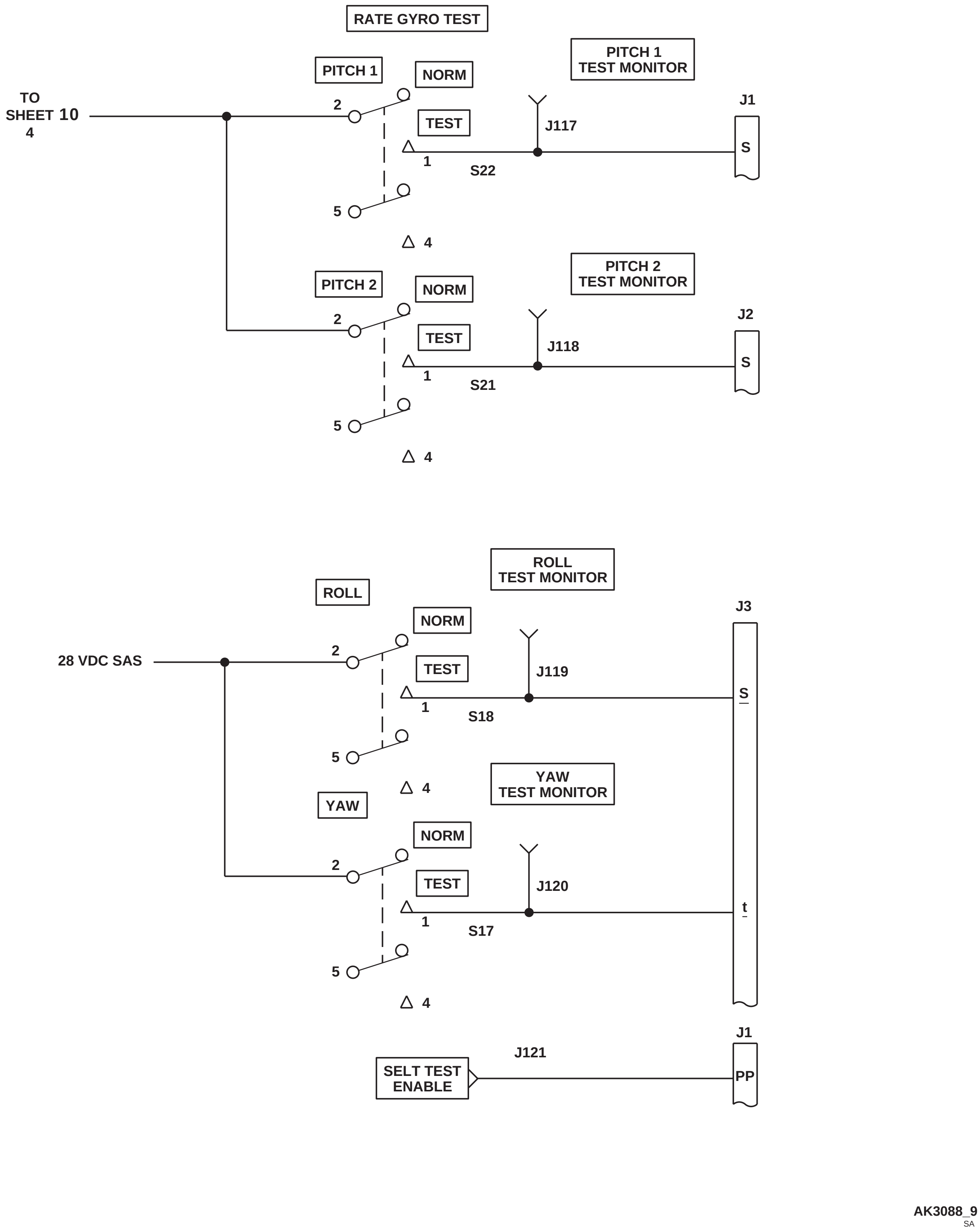


Figure 5-12. Test Set, Lower Panel Assembly Schematic Diagram (Sheet 9)

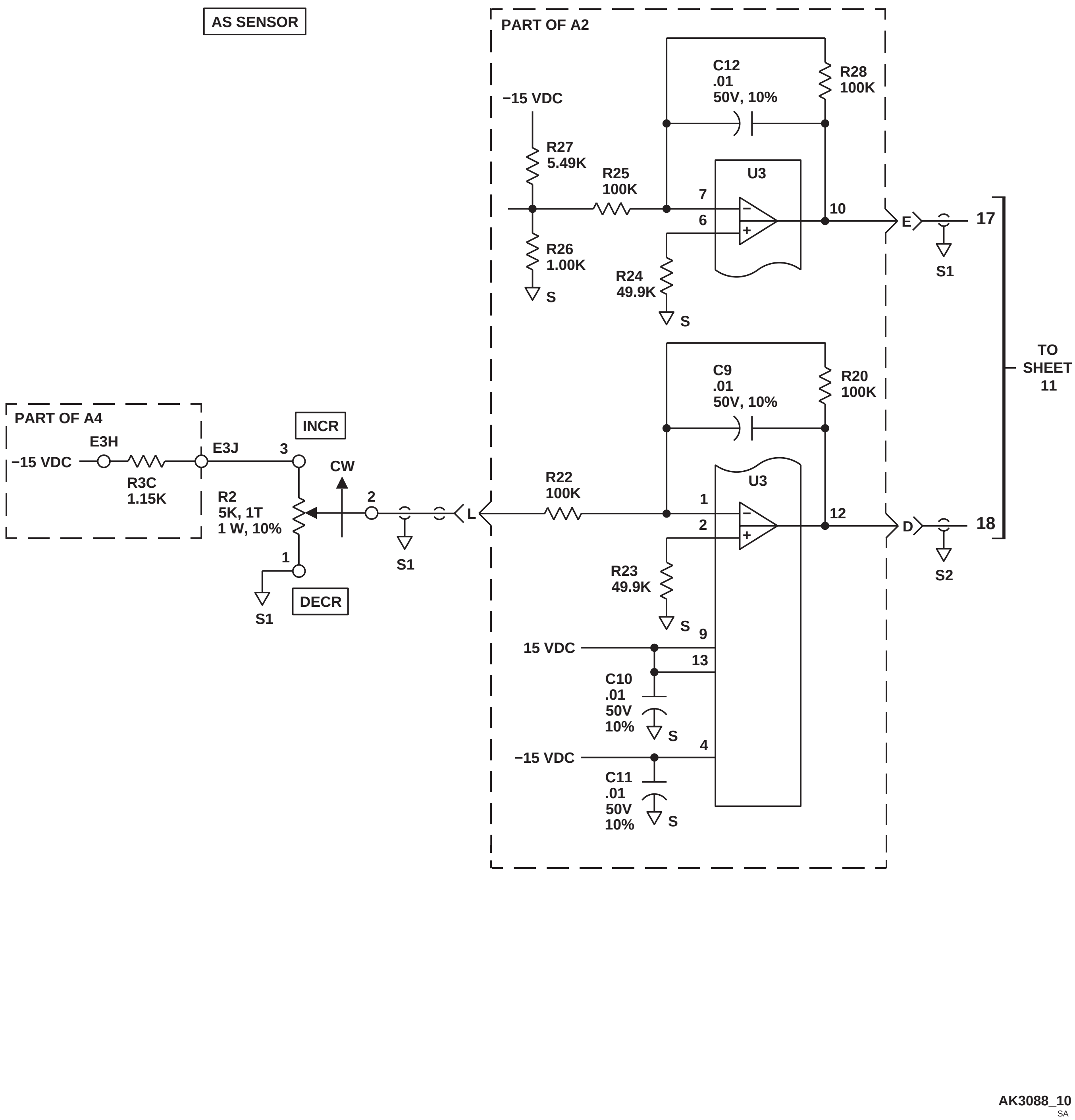


Figure 5-12. Test Set, Lower Panel Assembly Schematic Diagram (Sheet 10)

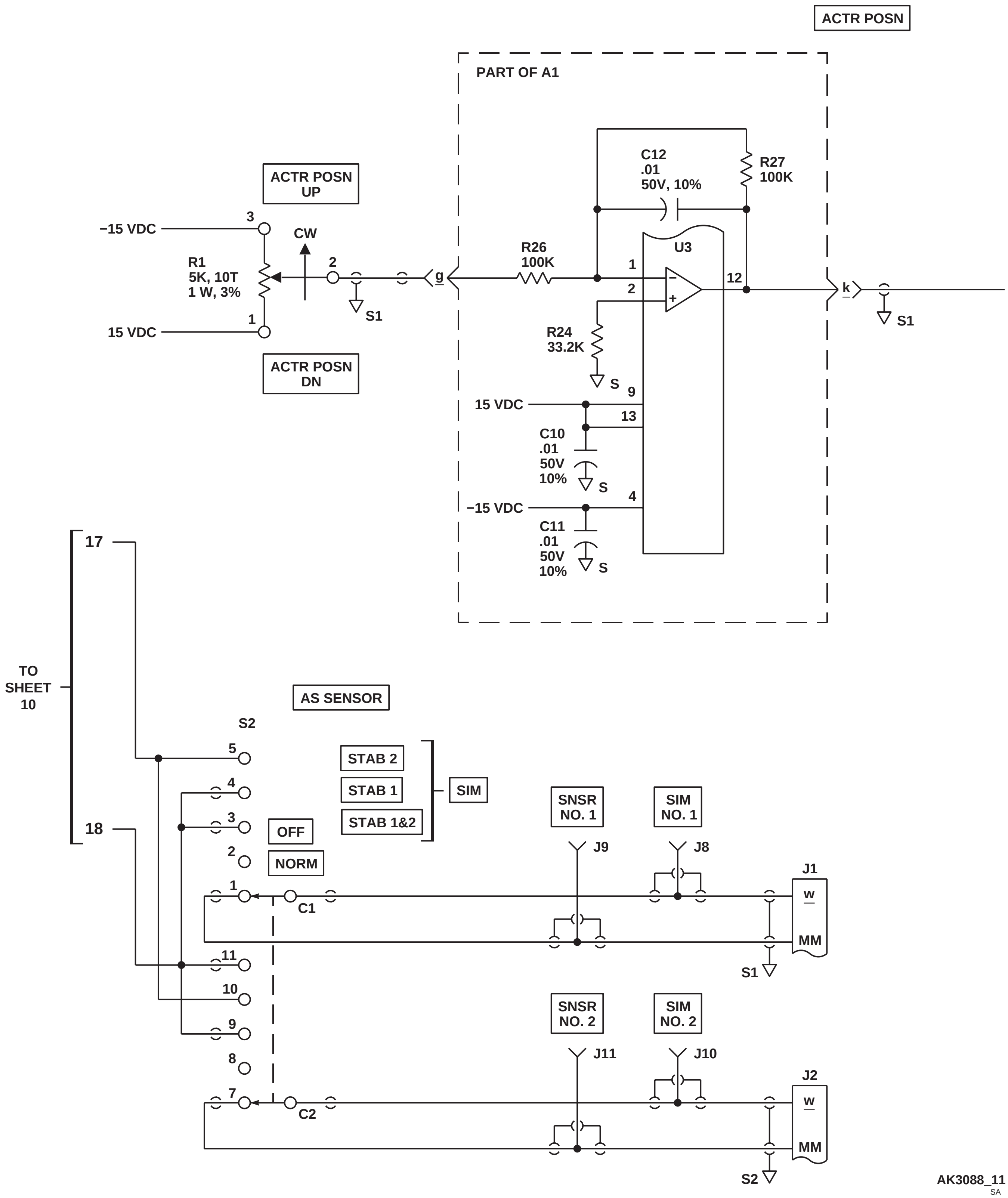


Figure 5-12. Test Set, Lower Panel Assembly Schematic Diagram (Sheet 11)

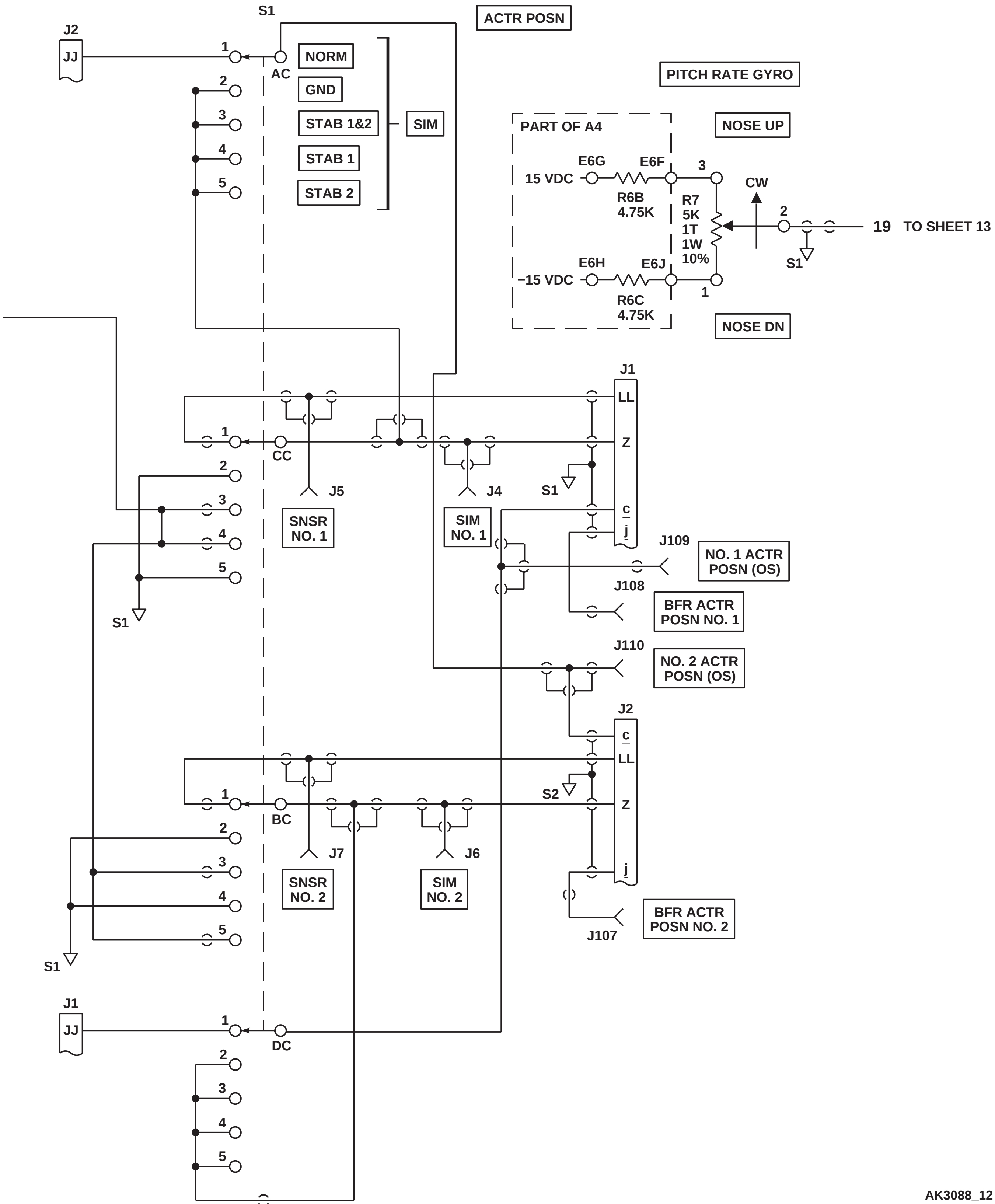


Figure 5-12. Test Set, Lower Panel Assembly Schematic Diagram (Sheet 12)

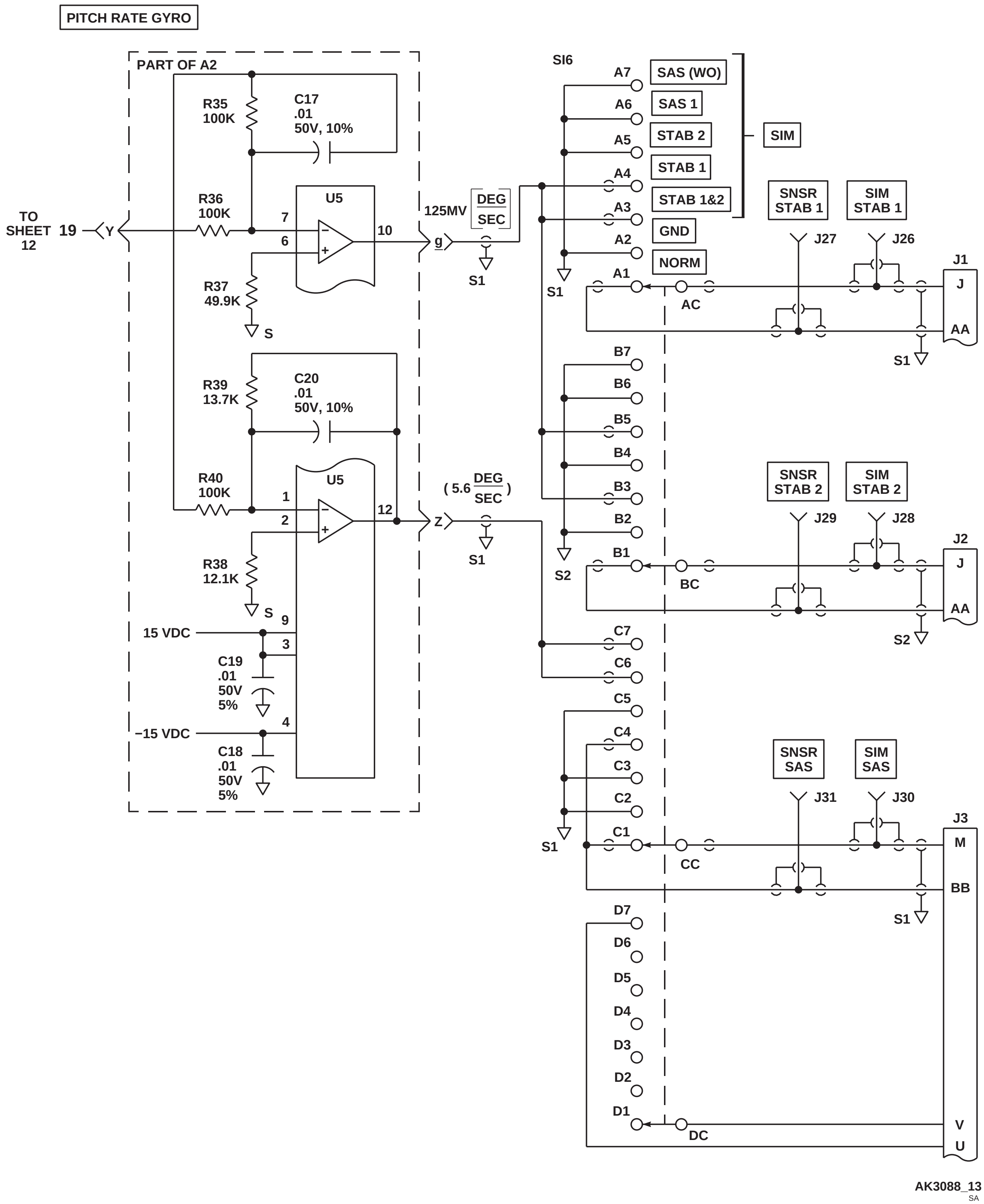


Figure 5-12. Test Set, Lower Panel Assembly Schematic Diagram (Sheet 13)

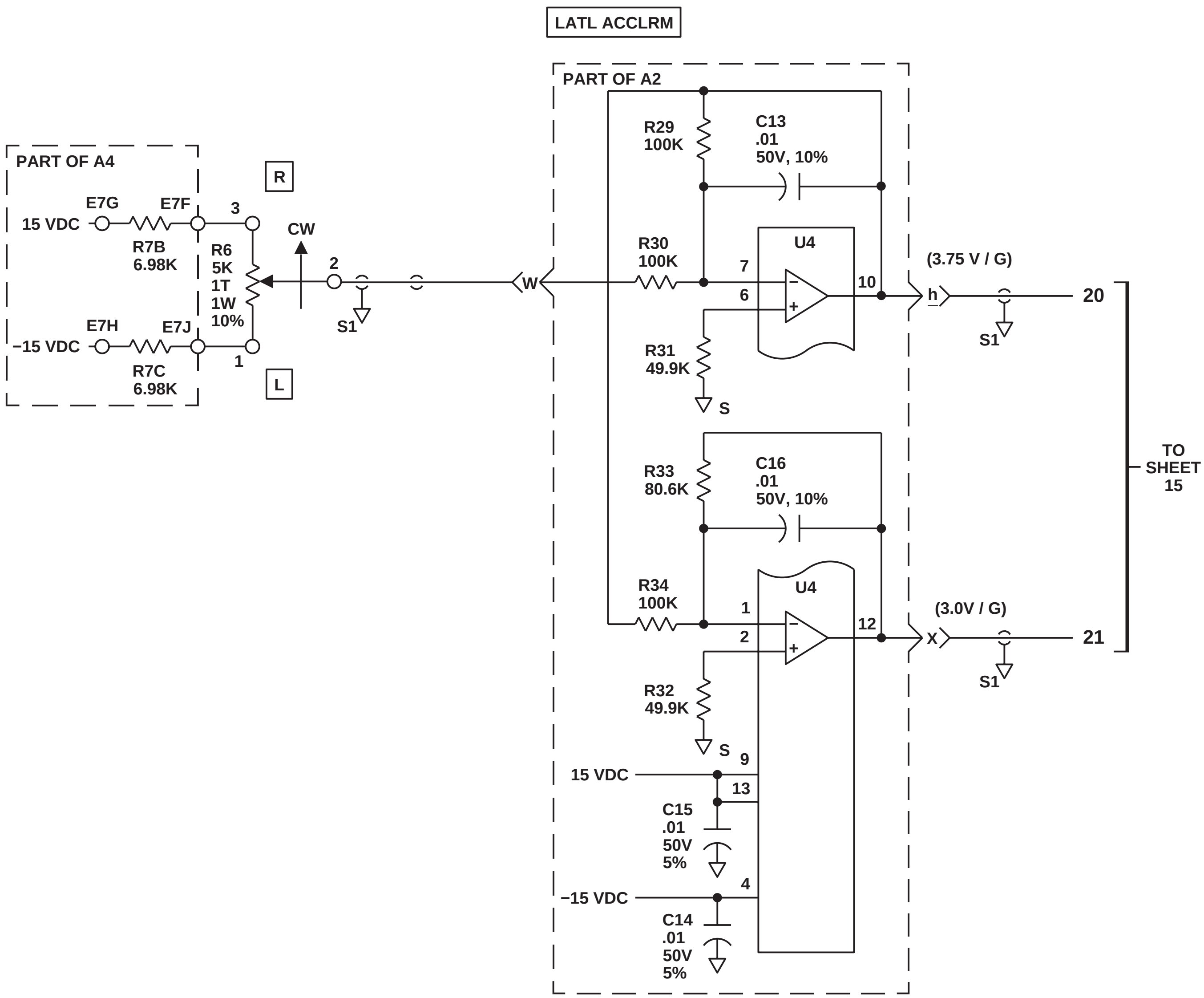


Figure 5-12. Test Set, Lower Panel Assembly Schematic Diagram (Sheet 14)

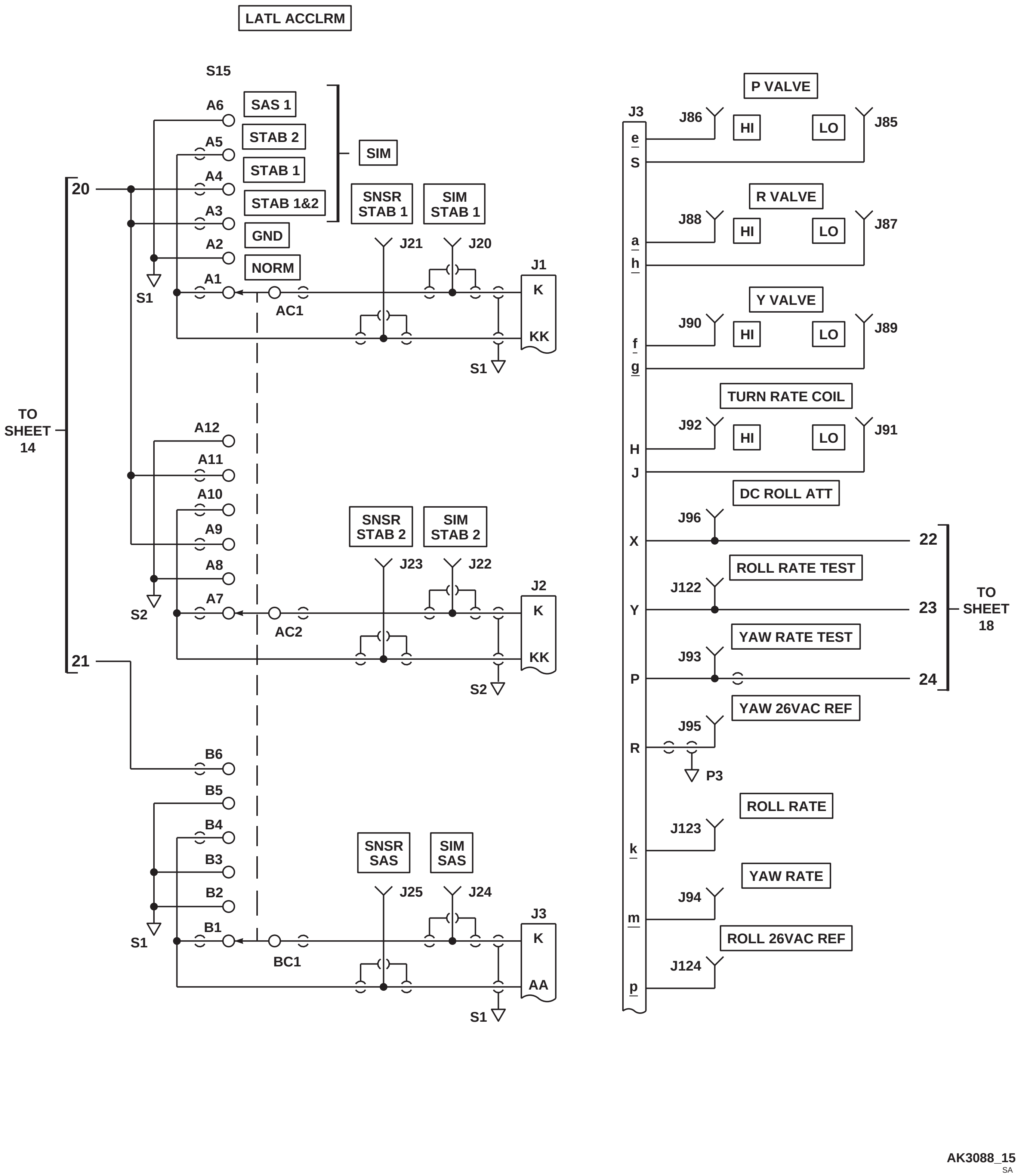


Figure 5-12. Test Set, Lower Panel Assembly Schematic Diagram (Sheet 15)

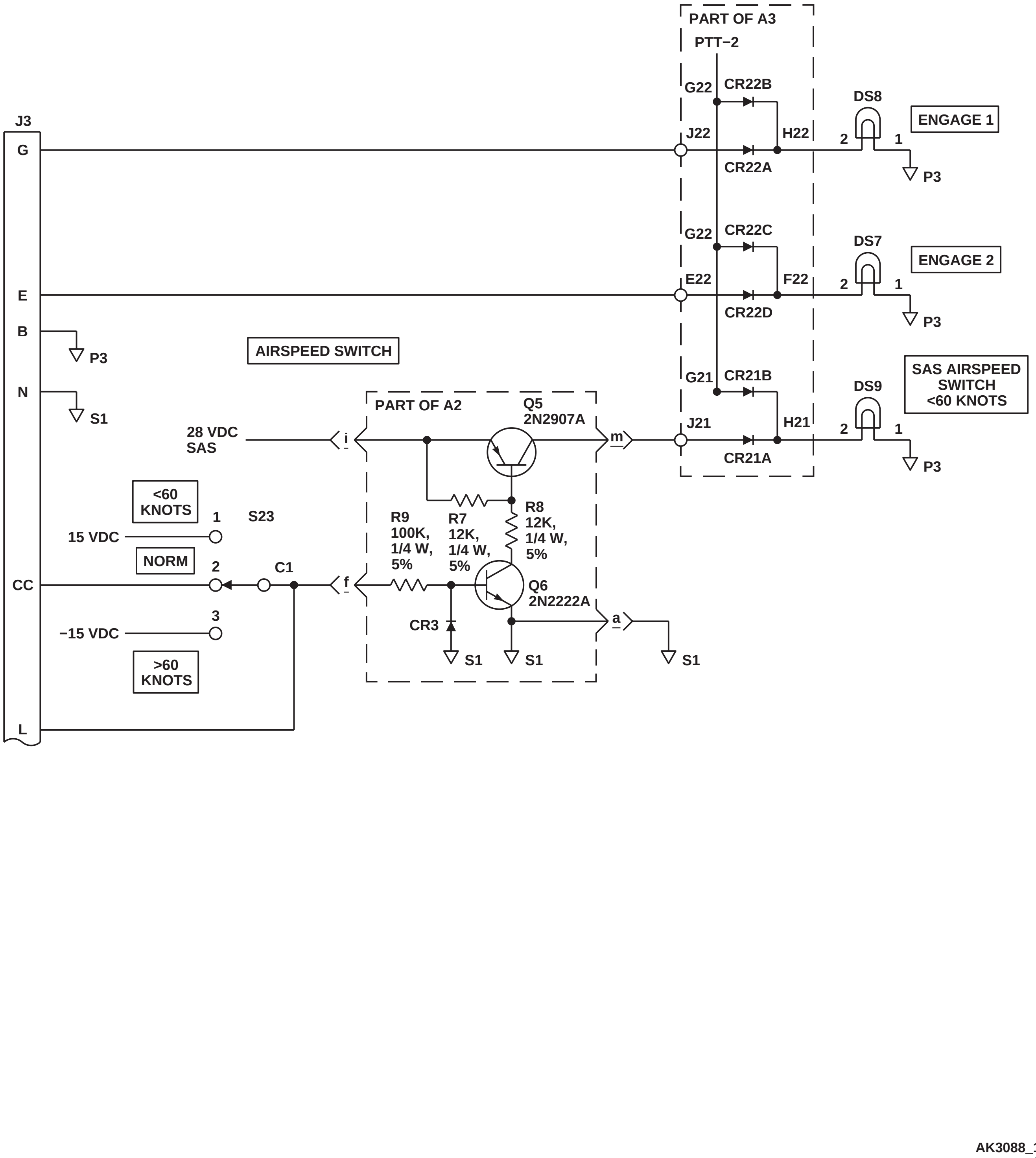


Figure 5-12. Test Set, Lower Panel Assembly Schematic Diagram (Sheet 16)

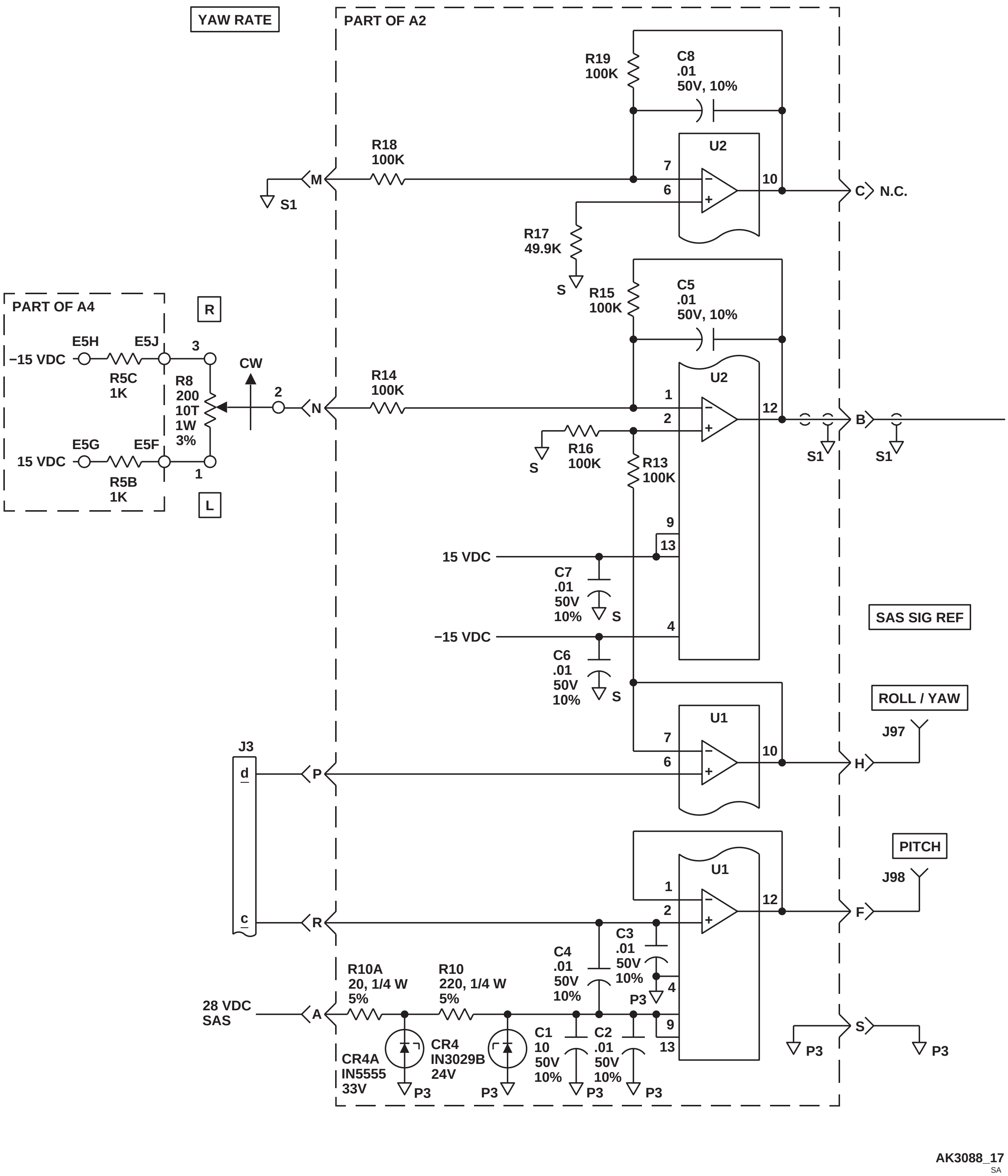


Figure 5-12. Test Set, Lower Panel Assembly Schematic Diagram (Sheet 17)

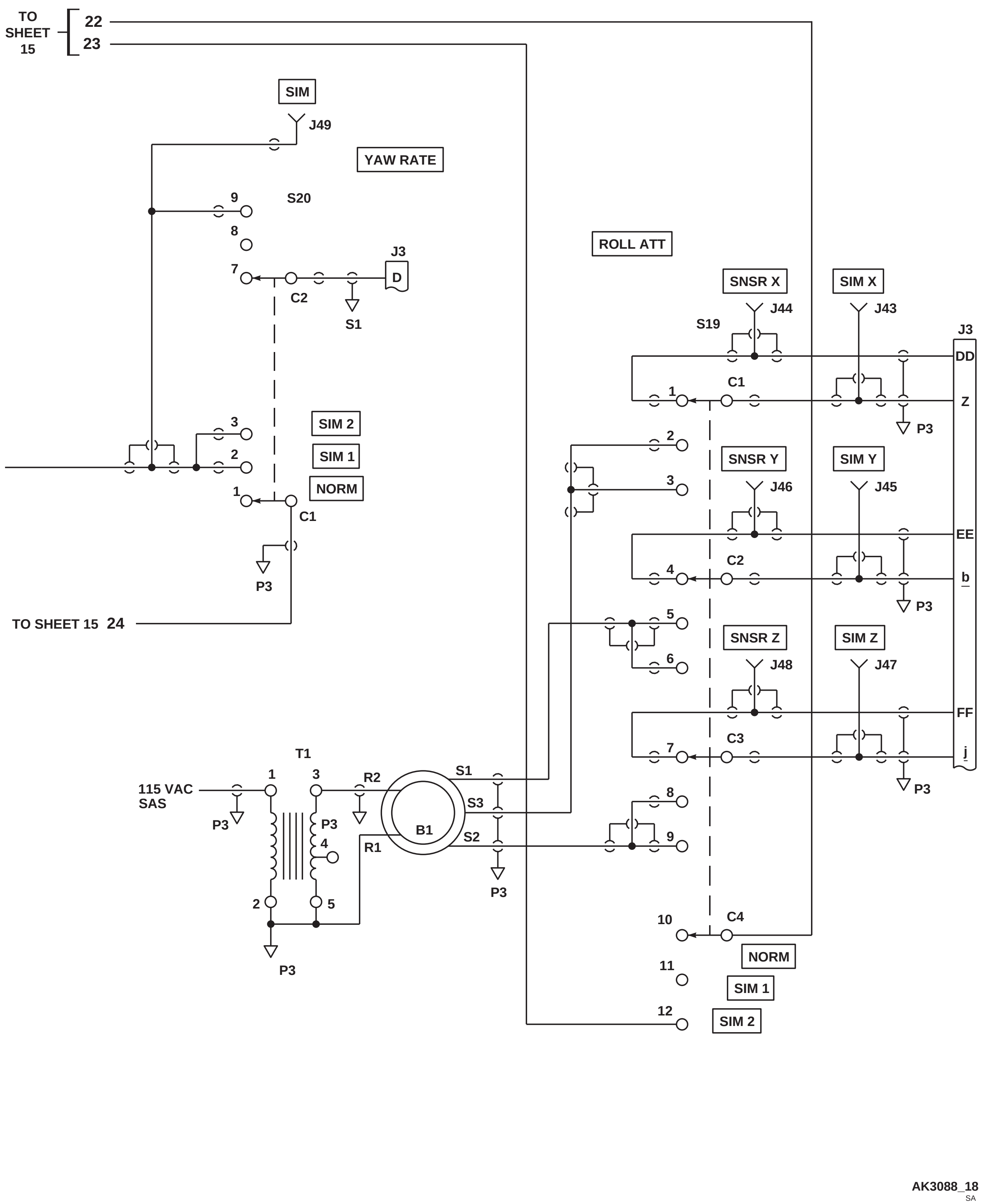


Figure 5-12. Test Set, Lower Panel Assembly Schematic Diagram (Sheet 18)

SECTION II.

CALIBRATION PROCEDURES

SECTION OVERVIEW

5.23. IDENTIFICATION AND DESCRIPTION.

5.23.1. Test Instrument Identification. The information in this section establishes procedures for calibrating the Stabilization System Test Set, 70700-20650-050. The manufacturer's manuals have been used as prime data source in compiling these instructions and procedures. The time required to complete all procedures listed in this section is approximately 4 hours, using dc (direct current) and frequency measurement techniques.

5.23.2. Calibration Description. The test set parameters and performance specifications pertinent to calibration are presented in tabular form to promote understanding of the detailed procedures in Table 5-1.

5.24. EQUIPMENT REQUIREMENTS.

5.24.1. Calibration Equipment Required. Equipment listed in Table 5-2. (Minimum Specifications of Equipment Required) are required to perform the calibration process outlined in this section. Such equipment can normally be found at activities authorized and issued Secondary Transfer Standards Calibration Set, such as AN/GSM-286 or AN/GSM-287.

5.24.2. Accessories Required.

NOTE

Minimum use specifications are the principle parameters required for performance of the calibration, and are included to assist in the selection of alternate equipment, which may be used at the discretion of the calibration activity. Satisfactory performance of alternate items shall be verified prior to use. All applicable equipment must bear evidence of current calibration.

The accessories listed in Table 5-3. are issued as indicated in paragraph 5.25. and are to be utilized in this calibration procedure. When necessary, these items may be substituted by equivalent items, unless specifically prohibited. Multimeter leads are not included in this accessory list.

5.25. PRELIMINARY OPERATIONS.

5.25.1. Setup Instructions.

The instructions in this section are preliminary to the complete calibration process. Personnel involved in this process shall review this entire section before proceeding with instructions.

Items of equipment used in this calibration process are referenced within the text by common or generic names and item identification number, as listed in Table 5-2. and Table 5-3., and are prefixed with letter A or B.

5.25.2. Equipment Connections.

WARNING

HIGH VOLTAGE is used during the calibration process. DEATH ON CONTACT may result if personnel do not observe safety precautions.

NOTE

Connections shown in Figure 5-11. are not changed during the entire calibration process.

Pull out all circuit breakers on test set.

Connect equipment as illustrated in Figure 5-11.

5.26. CALIBRATION PROCESS.

5.26.1. Power Supply ±15 Vdc.

5.26.1.1. Performance Check.

NOTE

Unless otherwise specified, verify the results of each test. Whenever the test requirement is not met, corrective action is necessary before continuing with the process. Necessary adjustments for calibrating the test set are listed herein.

a. Push in Power TEST SET circuit breaker.

b. Connect multimeter to +15 VDC test point and SIG GND. Multimeter shall indicate 15 ± 0.15 vdc.

c. Connect multimeter to -15 VDC test point and SIG GND. Multimeter shall indicate -15 ± 0.15 vdc.

5.26.1.2. Adjustments. Adjustments can not be made.

5.26.2. NO. 1 SCALING AMPL Simulator.

5.26.2.1. Performance Check.

a. Connect multimeter leads to SCALING AMP SIM NO. 1 and NO. 1 SIG GND.

b. Place SCALING AMP NO. 1 mode select control to SIM.

c. Place STAB 1 & 2/SINGLE control to SINGLE.

d. Rotate SCALING AMPL DN/UP NO. 1 control fully counterclockwise (CCW). Multimeter shall indicte 10.27 ± 0.4 vdc.

e. Rotate SCALING AMPL DN/UP NO. 1 control fully clockwise (CW). Multimeter shall indicte -10.27 ± 0.4 vdc.

5.26.2.2. Adjustments. Adjustments can not be made.

5.26.3. NO. 2 SCALING AMPL Simulator.

5.26.3.1. Performance Check.

a. Connect multimeter to SCALING AMP SIM NO. 2 and SIG GND.

b. Place SCALING AMP NO. 2 mode select control to SIM

c. Make sure SCALING AMPL STAB 1 & 2/SINGLE control is in SINGLE.

d. Rotate SCALING AMPL DN/UP NO. 2 control fully CCW. Multimeter shall indicte 10.27 ± 0.4 vdc.

e. Rotate SCALING AMPL DN/UP NO. 2 control fully CW. Multimeter shall indicte -10.27 ± 0.4 vdc.

5.26.3.2. Adjustments. Adjustments can not be made.

5.26.4. CLTV STICK POSN Simulator.

5.26.4.1. Performance Check.

a. Connect multimeter to CLTV STICK POSN NO. 1 SIM and NO. 1 SIG GND.

b. Place CLTV STICK POSN mode selector control to SIM STAB 1 & 2.

c. Rotate CLTV STICK POSN DN/UP control fully CCW. Multimeter shall indicate 7.16 ± 0.74 vdc.

d. Rotate CLTV STICK POSN DN/UP control fully CW. Multimeter shall indicate -7.16 ± 0.74 vdc.

5.26.4.2. Adjustments. Adjustments can not be made.

5.26.5. AS SENSOR Simulator.

5.26.5.1. Performance Check.

a. Connect multimeter to AS SENSOR SIM NO. 1 and NO. 1 SIG GND.

b. Place AS SENSOR mode selector control to SIM STAB 1 & 2.

c. Rotate AS SENSOR DECR/INCR control fully CCW. Multimeter shall indicate 0 ± 0.15 vdc.

d. Rotate AS SENSOR DECR/INCR control fully CW. Multimeter shall indicate 12.2 ± 1.25 vdc.

e. Connect multimeter to AS SENSOR SIM NO. 2 and NO. 2 SIG GND. Multimeter shall indicate 12.2 ± 1.25 vdc.

f. Place AS SENSOR mode selector control to SIM STAB 1. Multimeter shall indicate 2.3 ± 0.1 vdc.

5.26.5.2. Adjustments. Adjustments can not be made.

5.26.6. ACTR POSN Simulator

5.26.6.1. Performance Check.

a. Connect multimeter to ACTR POSN SIM No. 1 and to NO. 1 SIG GND.

b. Place ACTR POSN mode selector control to SIM STAB 1 & 2..

c. Rotate ACTR POSN DN/UP control fully CCW. Multimeter shall indicate -13.5 ± 1.5 vdc.

d. Rotate ACTR POSN DN/UP control fully CW. Multimeter shall indicate 13.5 ± 1.5 vdc.

5.26.6.2. Adjustments. Adjustments can not be made.

5.26.7. PITCH RATE GYRO Simulator.

5.26.7.1. Performance Check.

a. Connect multimeter to PITCH RATE GYRO SIM STAB 1 and NO. 1 SIG GND.

b. Place PITCH RATE GYRO mode selector control to SIM STAB 1 &2.

c. Rotate PITCH RATE GYRO NOSE DN/NOSE UP fully CCW. multimeter shall indicate 5.17 ± 0.53 vdc.

d. Rotate PITCH RATE GYRO NOSE DN/NOSE UP fully CW. multimeter shall indicate -5.17 ± 0.53 vdc.

5.26.7.2. Adjustments. Adjustments can not be made.

5.26.8. LATL ACCRM Simulator.

5.26.8.1. Performance Check.

a. Connect multimeter to LATL ACCRM SIM STAB 1 and NO. 1 SIG GND.

b. Place LATL ACCRM mode selector control to SIM STAB 1 &2.

c. Rotate LATL ACCRM L/R control fully CCW. multimeter shall indicate 3.96 ± 0.41 vdc.

d. Rotate LATL ACCRM L/R control fully CW. multimeter shall indicate -3.96 ± 0.41 vdc.

5.26.8.2. Adjustments. Adjustments can not be made.

5.26.9. YAW RATE Simulator.

5.26.9.1. Performance Check.

a. Connect multimeter toYAW RATE SIM and SAS SIG REF YAW.

b. Place AIRSPEED SWITCH mode selector control to <60 KNOTS.

c. Rotate YAW RATE L/R control fully CCW. Multimeter shall indicate -1.3 ± 0.3 vdc.

d. Rotate YAW RATE L/R control fully CW. Multimeter shall indicate 1.3 ± 0.3 vdc.

e. Disconnect multimeter from test set.

5.26.9.2. Adjustments. Adjustments can not be made.

5.26.10. ROLL ATT Mechanical Zero.

5.26.10.1. Performance Check.

a. Line up ROLL ATT coarse control (inner dial) ″0″ marking with index mark; ROLL ATT fine control (outer dial) ″0°″ marking shall also align with index mark and ″0°″ coarse marking. If fine control ″0°″ marking does not align, go to paragraph 5.26.10.2.

b. Line up ROLL ATT coarse control (inner dial) ″180°″ marking with index mark; ROLL ATT fine control (outer dial) ″0°″ marking shall also align with index mark and ″180°″ coarse marking. If fine control ″0°″ marking does not align, go to paragraph 5.26.10.2.

5.26.10.2. Adjustments.

a. While holding coarse control so it doesn't move, align ″0°″ marrking on fine control (outer dial) with index mark and tighten setscrews.

b. Do performance check per paragraph 5.26.10.1. above.

5.26.11. ROLL ATT Alignment.

5.26.11.1. Performance Check.

a. Connect equipment as shown in Figure 5-12.

b. Adjust ratio transformer dials to .000000.

c. Place ROLL ATT synchro transmitter to ″0″ marking, and ROLL ATT mode selector control to SIM 1.

d. Adjust ROLL ATT synchro transmitter to obtain the minimum amplitude, or null condition on ac voltmeter. If indicator does not have index marker 0° ± 0.2° (one minor division on outer dial equals 0.2), go to paragraph 5.26.11.2.

e. Move B4 test lead from ROLL ATT SIM Z to ROLL ATT SIM Y.

f. Move B5 test lead from ROLL ATT SIM X to ROLL ATT SIM Z test point.

g. Move ac voltmeter lead that was originally connected to ROLL ATT SIM Y and move to ROLL ATT SIM X.

h. Adjust ratio transformer controls to 1.000000.

i. Place ROLL ATT synchro transmitter to 180°.

j. Adjust ROLL ATT synchro control to obtain minimum amplitude, or null condition on AC Voltmeter. If ROLL ATT control does not indicate 180° ± 0.2°, go to paragraph 5.26.11.2.

k. Perform checks using equipment connections and ratio transformer setting as shown in Table 5-4. ROLL ATT Synchro Performance Check. ROLL ATT synchro transmitter indications shall be within the limits indicated.

5.26.11.2. Adjustments.

WARNING

115 vac is very close to synchro.

NOTE

ROLL ATT synchro is located on the ROLL ATT synchro transmitter and is inside the test set.

a. Turn off ac power.

b. Remove screws, then remove test set from its case see Figure 5-13.

c. Connect equipment as shown in Figure 5-12

d. Loosen three Allen screws holding ROLL ATT synchro.

e. Turn on ac power

f. Adjust ratio transformer dials to .000000.

g. Place ROLL ATT (Synchro transmitter control) to 0°.

h. Turn synchro body to obtain null indication on Voltmeter.

i. Tighten three Allen screws.

j. Adjust ratio transformer dials to 1.000000.

k. Connect B4 test lead to Y test point.

l. Connect B5 test lead to Z test point.

m. Connect positive lead of ac voltmeter to X test point.

n. Adjust ROLL ATT (Synchro transmitter control) for full null indication on ac voltmeter.

o. If ROLL ATT control does not indicate 180° (within plus or minus one minor division on the outer dial), loosen Allen screws and align as required.

5.27. FINAL PROCEDURES.

NOTE

It may be necessary to compromise adjustment of ROLL ATT synchro transmitter in order to obtain in tolerance indications at 0° and 180°.

a. Turn off bench power to test set and disconnect other equipment.

b. Install and fasten test set in its case.

c. In accordance with DA PAM 738-750, make and attach label as appropriate.

(1) DA Label 80 (US Army Calibrated Instrument) for complete calibration.

(2) DA Label 163 (US Army Limited Special Calibration).

(3) DA Form 2417 (US Army Calibration System Rejected Instrument).

Table 5-1. Calibration Description.

Test Set Parameters	Performance Specifications
Power Supply	Range: 15.0 vdc Accuracy: ± 0.15 vdc Range: -15.0 vdc Accuracy: ± 0.15 vdc
NO. 1 SCALING AMP simulator	Range: -10.27 to 10.27 vdc Accuracy: ± 0.4 vdc
NO. 2 SCALING AMP simulator	Range: -10.27 to 10.27 vdc Accuracy: ± 0.4 vdc
CLTV STICK POSN indicator	Range: -7.16 to 7.16 vdc Accuracy: ± 0.74 vdc
AS SENSOR simulator	Range: 0 to 12.2 vdc Accuracy: ± 0.15 vdc at 0 vdc, ± 1.25 vdc at 12.2 vdc
ACTR POSN simulator	Range: 13.6 vdc Accuracy: ± 1.5 vdc Range: -13.5 vdc Accuracy: ±1.5 vdc
PITCH RATE GYRO simulator	Range: -5.17 to 5.17 vdc Accuracy:± 0.53 vdc
LATL ACCLRM simulator	Range: -3.96 to 3.96 vdc Accuracy: ±0.41 vdc
YAW RATE simulator	Range: -1.35 to 1.35 vdc Accuracy: ± 0.3 vdc
ROLL ATT simulator	Range: 0° to 360° at selected intervals Accuracy: ± 0.2° (see Table 4)

Table 5-2. Calibration Equipment.

Item	Common Name	Minimum Use Specifications	Calibration Equipment*
A1	AC Precision Power Supply	Range: 115 vac, 400 Hz Accuracy: ± 0.5%	N. H. Research Inc. Model SF613-1 (MIS-1022, Type 1); K-H 4100/7500A
A2	Digital Multimeter	Range: 0 to 20 vdc Accuracy:± 0.25 % Range: 0 to 2 vac Accuracy: ± 0.25 %	Hewlett-Packard, Model 3490A Option 060; Dana Model 5000-52351A
A3	Ratio Transformer	Range: 0.000000 to 1.000000 Accuracy:± 1 digit	ESI Model DT-72A
A4	AC Voltmeter	Range: NA (Null Indication Only)	HP3400A, HP400E, HP400EL

*The calibration equipment utilized in this procedure was selected from those known to be available at Department of Defense facilities, and the listing by make or model number carries no implication of preference, recommendation, or approval by the Department of Defense for use by other agencies. It is recognized that equivalent produced by other manufacturers may be capable of equally satisfactory performance in the procedure.

Table 5-3. Accessories Required.

Item	Common Name	Description
B1	Adapter*	Single banana jack to pin plug (red) (7907517)
B2	Adapter	Single banana jack to pin plug (black) (7907528)
B3	Adapter Box	Double banana jack termination (SKD4850-3)
B4	Lead (test lead)*	24-in., single banana plug termination (red) (7907497)
B5	Lead (test lead)*	24-in., single banana plug termination (black) (7907498)
B6	Test Probe*	Single banana to test hook

*Two required.

Table 5-4. ROLL ATT Synchro Performance Check.
(Refer to Figure 5-12)

(Refer to Figure 5-12)

Equipment Connections	Ratio Transformer Settings	ROLL ATT Synchro Control Indications
a. Connect B4 test lead to test set ROLL ATT SIm test poiunt Z, using B1 adapter. Connect B5 test lead to ROLL ATT SIM test point X using B2 adapter. Connect ac voltmeter (+) lead to ROLL ATT SIM test point Y using B1 adapter.	.500000 .500000	30° ± 0.2° 210°± 0.2°
b. Connect B4 test lead to ROLL ATT SIM test point X using B1 adapter. Connect B5 test lead to ROLL ATT SIM test point Y using B2 adapter. Connect ac voltmeter (+) lead to ROLL ATT SIM test point Z using B1 adapter.	.500000 .500000	270° ± 0.2° 90° ± 0.2°
c. Connect B4 test lead to ROLL ATT SIM test point Y using B1 adapter. Connect B5 test lead to ROLL ATT SIM test point Z using B2 adapter. Connect ac voltmeter (+) lead to ROLL ATT SIM test point X using B1 adapter.	.500000 .500000	150° ± 0.2° 330°± 0.2°

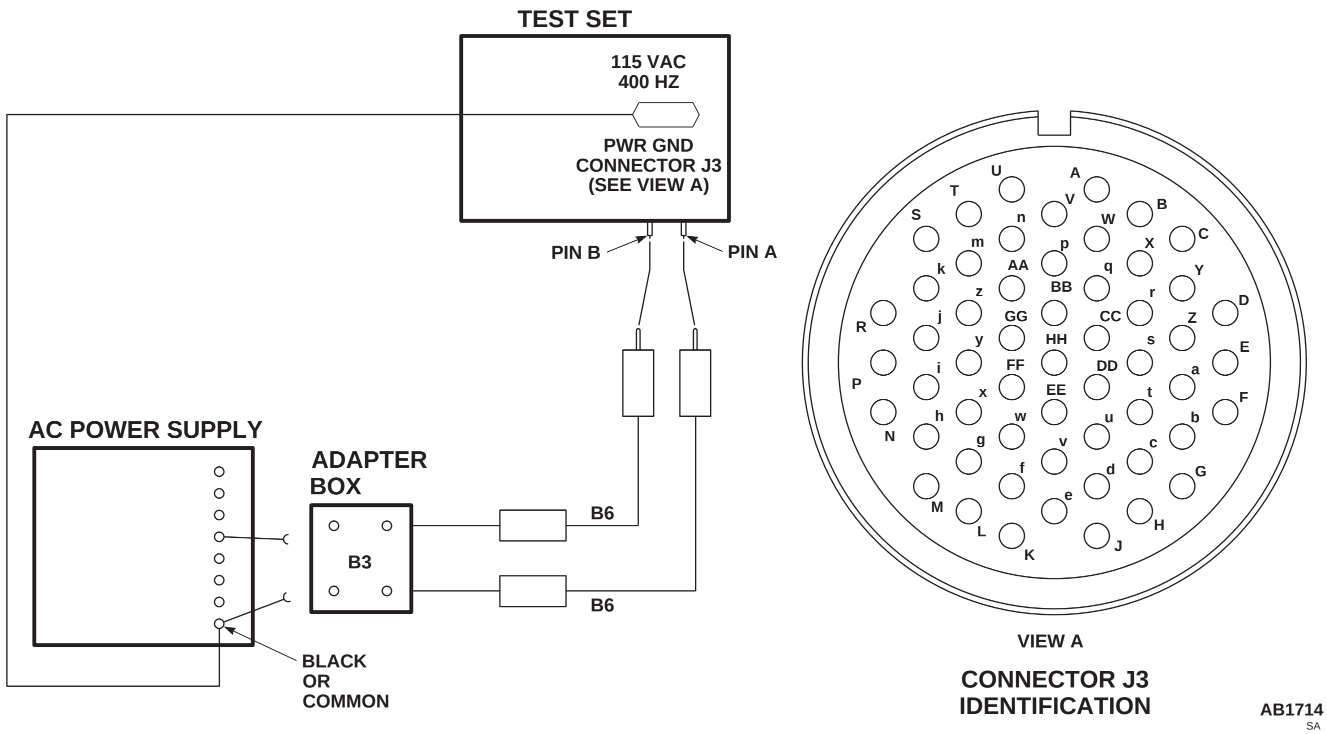


Figure 5-11. Power Input-Equipment Setup

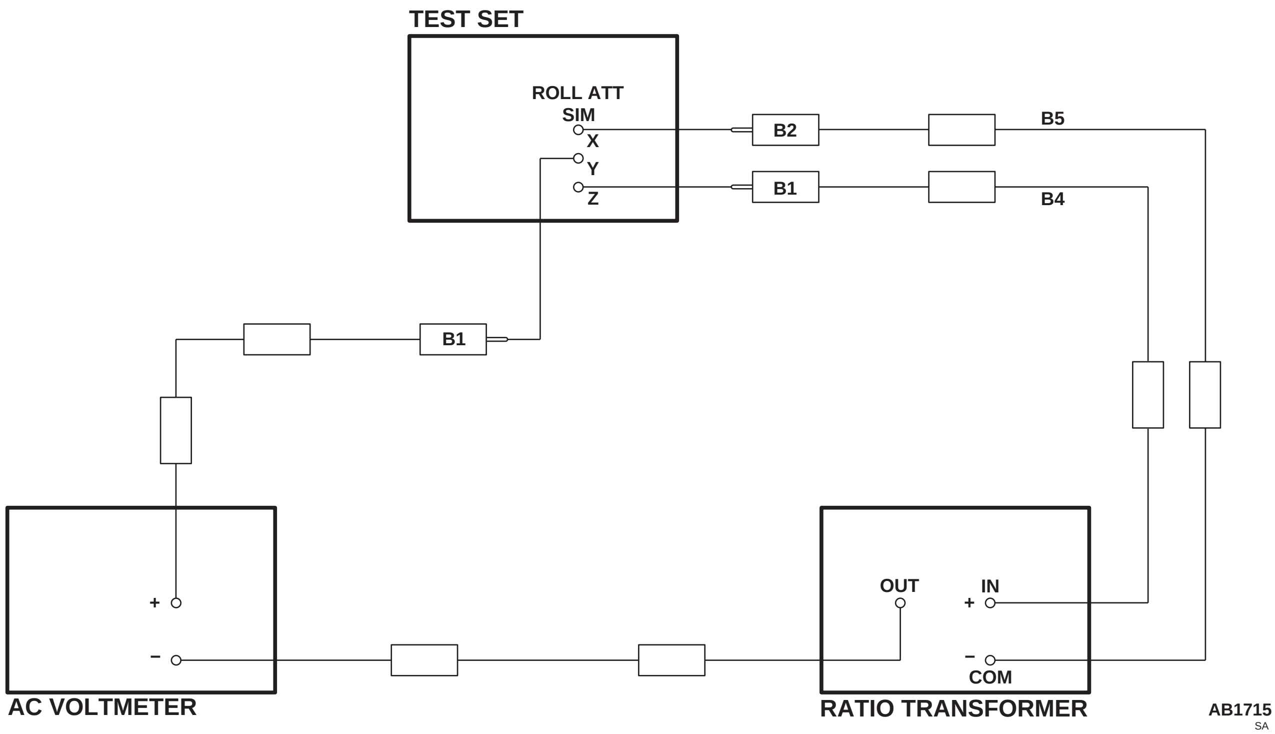


Figure 5-12. Synchro Check-Equipment Setup

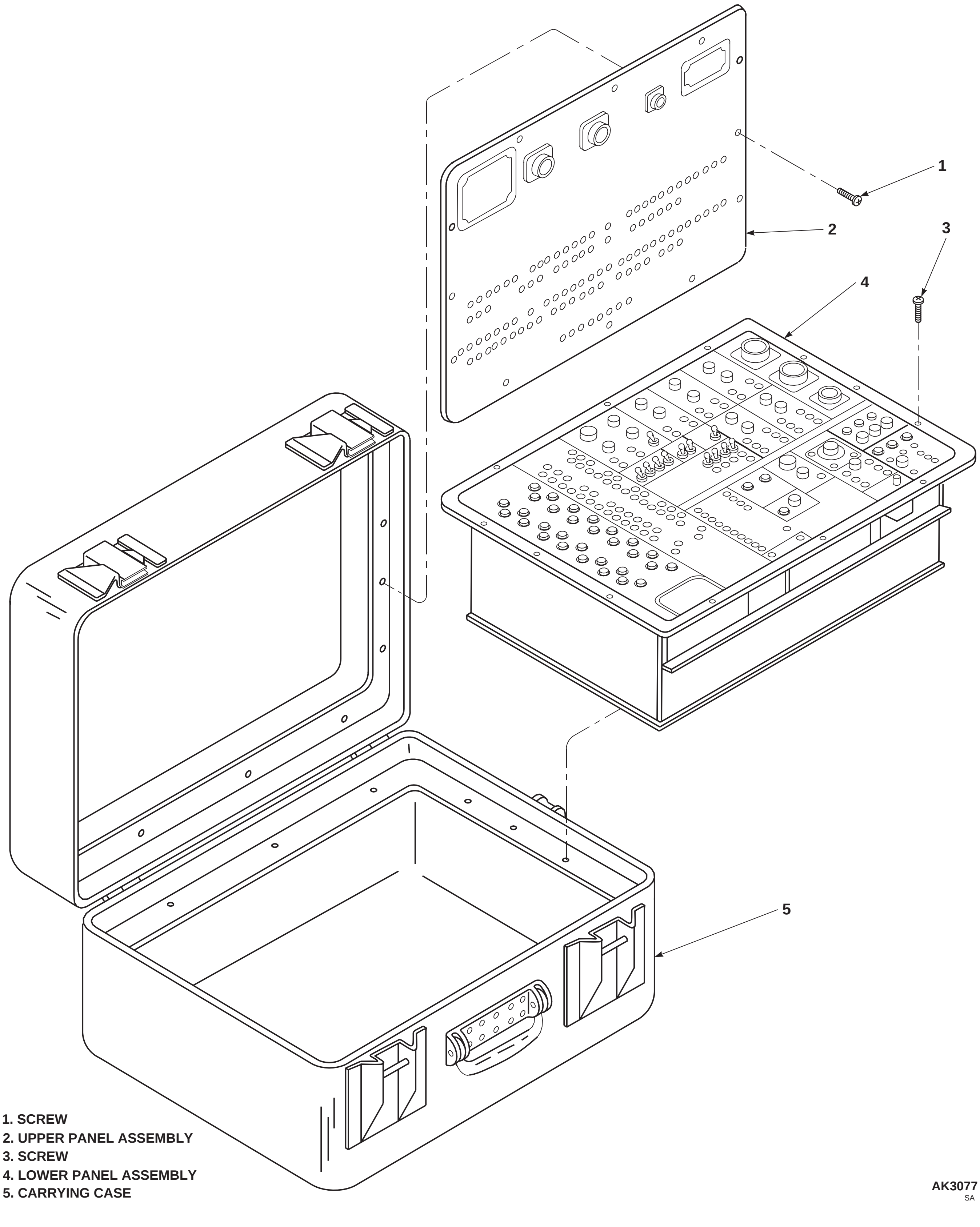


Figure 5-13. STAB/SAS Test Set

APPENDIX A

REFERENCES

A.1. DEPARTMENT OF THE ARMY REGULATIONS.

AR 55-38	Reporting of Transportation Discrepancies in Shipment
AR 735-11-2	Reporting of Item and Packaging Discrepancies
AR 750-1	Army Materiel Maintenance Policies

A.2. DEPARTMENT OF THE ARMY FIELD MANUALS.

FM 21-11	First Aid.

A.3. DEPARTMENT OF THE ARMY PAMPHLETS.

PAM 25-30	Consolidated Index of Army Publications and Blank Forms
PAM 738-751	The Army Maintenance Management System - Aviation (TAMMS-A)

A.4. DEPARTMENT OF THE ARMY TECHNICAL MANUALS.

DMWR 11-6625-2942	Test Set, Stabilization System, TS-3920B/ASM
TM 11-1520-250-2	Aviation Unit Maintenance (AVIM) Electronic Configuration Manual for MH-60K Helicopter (NSN 1520-01-282-4051) (EIC: RSC) Automatic Flight Control System and Stabilator System
TM 11-6625-2942-24P	Organizational, Direct Support and General Support Maintenance Repair Parts and Special Tools List (Including Depot Maintenance Repair Parts and Special Tools) for Test Set, Stabilization System TS-3920A/ASM (NSN 6625-01-169-5333) Test Set, Stabilization System TS-3920B/ASM (NSN 6625-01-266-1636).
TM 55-1500-323-24	Installation Practices for Aircraft Electric and Electronic Wiring
TM 750-244-2	Procedures for the Destruction of Aircraft and Associated Equipment to Prevent Enemy Use

APPENDIX B

MAINTENANCE ALLOCATION CHART

SECTION

I. Introduction

B.1. MAINTENANCE ALLOCATION CHART.

a. This Maintenance Allocation Chart (MAC) assigns maintenance functions in accordance with the Aviation Maintenance concept for Army aviation. These maintenance levels - Unit Maintenance (AVUM), Direct Support (AVIM), and Depot Maintenance - are depicted on the MAC as:

AVUM -	corresponds to an O code in the Repair Parts and Special Tools List (RPSTL).
AVIM -	corresponds to an F code in the Repair Parts and Special Tools List (RPSTL).
DEPOT -	corresponds to a D code in the Repair Parts and Special Tools List (RPSTL).

b. The maintenance to be performed below depot and in the field is described as follows:

(1) Aviation Unit Maintenance (AVUM) activities will be staffed and equipped to perform high frequency ″On-Aircraft″ maintenance tasks required to retain or return aircraft systems to a serviceable condition. The maintenance capability of the AVUM will be governed by the Maintenance Allocation Chart (MAC) and limited by the amount and complexity of ground support equipment (GSE), facilities required, authorized manning strength, and critical skills available. The range and quantity of authorized spare modules/components will be consistent with the mobility requirements dictated by the air mobility concept. (Assignments of Maintenance tasks to divisional company size aviation units will consider the overall maintenance capability of the division, the requirements to conserve personnel and equipment resources, and air mobility requirements.)

(a) Company Size Aviation Units: Perform those tasks which consist primarily of preventive maintenance and maintenance repair and replacement functions associated with sustaining a high level of aircraft operational readiness. Perform maintenance inspections and servicing to include preflight, daily, intermediate, periodic (or phased), and special inspections, as authorized by the MAC or higher headquarters. Identify the cause of equipment/system malfunctions using applicable technical manual troubleshooting instructions, built-in test equipment (BITE), installed aircraft instruments, or test, measurement, and diagnostic equipment (TMDE). Replace worn or damaged modules/components that do not require complex adjustments or system alignment and which can be removed/installed with available skills, tools, and ground support equipment. Perform operational and continuity checks and make minor repairs to the electrical system. Inspect, service, and make operational, capacity, and pressure checks to hydraulic systems. Perform servicing, functional adjustments, and minor repair/ replacement to the flight control, propulsion, power train, and fuel systems. Accomplish airframe repair that does not require extensive disassembly, jigging, or alignment. The manufacture of airframe parts will be limited to those items which can be fabricated with tools and equipment found in current air mobile tool and shop sets. Evacuate unserviceable modules/components and end items beyond the repair capability of AVUM to the support AVIM.

(b) Less than Company size Aviation Units: Aviation elements organic to brigade, group, battalion headquarters, and detachment size units are normally small and have less than 10 aircraft assigned. Maintenance tasks performed by these units will be those which can be accomplished by the aircraft crew chief or assigned aircraft repairman and will normally be limited to preventive maintenance, inspections, servicing, spot painting, module/component fault diagnosis, and replacement of selected modules/components. Repair functions will normally by accomplished by the support AVIM unit.

(2) Aviation Intermediate Maintenance (AVIM).

(a) Provides Mobile, responsive ″One-Stop″ maintenance support. (Maintenance functions which are not conducive to sustaining air mobility will be assigned to depot maintenance.)

(b) May perform all maintenance functions authorized to be done at AVUM. Repair of equipment for return to user will emphasize support or operational readiness requirements. Authorized maintenance includes replacement and repair of modules/components and end items which can be accomplished efficiently with available skills, tools, and equipment.

(c) Establishes the Direct Exchange (DX) program for AVUM units by repairing selected items for return to stock when such repairs cannot be accomplished at the AVUM level.

(d) Inspects, troubleshoots, performs diagnostic test, repairs, adjusts, calibrates, and aligns aircraft system modules/components. AVIM units will have capability to determine the serviceability of specified modules/components removed prior to the expiration of the Time Between Overhaul (TBO) or finite life. Module/component disassembly and repair will support the DX program and will normally be limited to tasks requiring cleaning and the replacement of seals, fittings, and items of common hardware. Airframe repair and fabrication of parts will be limited to those maintenance tasks which can be performed with available tools and test equipment. Unserviceable repairable modules/components and end items which are beyond the capability of AVIM to repair will be evacuated to Depot Maintenance.

(e) Performs aircraft weight and balance inspections and other special inspections which exceed AVUM capability.

(f) Provides quick response maintenance support, including aircraft recovery and air evacuation, on-the-job training, and technical assistance through the use of mobile maintenance contact teams.

(g) Maintains authorized operational readiness float aircraft.

(h) Provides collection and classification services for serviceable/unserviceable material.

(i) Operates a cannibalization activity in accordance with AR 750-50. (The aircraft maintenance company within the maintenance battalion of a division will perform AVIM functions consistent with air mobility requirements and conservation of personnel and equipment resources. Additional intermediate maintenance support will be provided by the supporting nondivisional AVIM unit.)

B.2. USE OF THE MAINTENANCE ALLOCATION CHART (SECTION II.).

NOTE

Approved item names are used throughout this MAC. Generic terms/nomenclatures (if any) are expressed in parentheses and are not to be considered as official terminology.

a. This Maintenance Allocation Chart assigns maintenance functions to the lowest level of maintenance, based on past experience and the following considerations:

(1) Skills available.

(2) Work time required.

(3) Tools and test equipment required and/or available.

b. Only the lowest level of maintenance authorized to perform a maintenance function is indicated. If the lowest maintenance level cannot perform all tasks of any single maintenance function (e.g., test, repair), then the higher maintenance level(s) that can accomplish additional tasks will also be indicated.

c. A maintenance function assigned to a maintenance level will automatically be authorized to be performed at any higher maintenance level.

d. A maintenance function that cannot be performed at the assigned level of maintenance for any reason may be evacuated to the next higher maintenance level. Higher maintenance levels will perform the maintenance functions of lower maintenance levels when required by the commander who has the authority to direct such tasking.

e. The assignment of a maintenance function will not be construed as authorization to carry the related repair parts or spares in stock. Information to requisition or otherwise secure the necessary repair parts will be as specified in the associated Repair Parts and Special Tools List (RPSTL).

f. Normally there will be no deviation from the assigned level of maintenance. In cases of operational necessity, at the request of a lower maintenance level and on a one-time basis, transfer of maintenance functions to the lower level may be accomplished by specific authorization of maintenance officer of the higher level of maintenance to which the function is assigned. The special tools, equipment, etc., required by the lower level of maintenance to perform this function will be furnished by the maintenance level to which the function is assigned. This transfer of a maintenance function to a lower maintenance level does not relieve the higher maintenance level of the responsibility for the function. The higher level of maintenance will provide technical supervision and inspection of the function being performed at the lower lever.

B.3. DEFINITIONS.

a. Inspect. To determine the serviceability of an item by comparing its physical, mechanical, and/or electrical characteristics with established standards through examination (e.g., by sight, sound, or feel).

b. Test. To verify serviceability by measuring the mechanical, pneumatic, hydraulic, or electrical characteristics of an item and comparing those characteristics with prescribed standards.

c. Service. Operations required periodically to keep an item in proper operating condition, i.e., to clean (includes decontaminate, when required), to preserve, to drain, to paint, or to replenish fuel, lubricants, chemical fluids, or gases.

d. Adjust. To maintain or regulate, within prescribed limits, by bringing into proper or exact position, or by setting the operating characteristics to specified parameters.

e. Align. To adjust specified variable elements of an item to bring about optimum or desired performance.

f. Calibrate. To determine and cause corrections to be made or to be adjusted on instruments or test, measuring, and diagnostic equipments used in precision measurements. Consists of comparisons of two instruments, one of which is certified standard of known accuracy, to detect and adjust any discrepancy in the accuracy of the instrument being compared.

g. Remove/Install. To remove and install the same item when required to perform service or other maintenance functions. Install may be the act of emplacing, seating, or fixing into position a spare, repair part, or module (component or assembly) in a manner to allow the proper functioning of an equipment or system.

h. Replace. To remove an unserviceable item and install a serviceable counterpart in its place. ″Replace″ is authorized by the MAC and assigned maintenance level is shown as the 3d position code of the SMR code.

i. Repair. The application of maintenance services, including fault location/troubleshooting, removal/installation and disassembly/assembly procedures, and maintenance actions to identify troubles and restore serviceability to an item by correcting specific damage, fault, malfunction, or failure in a part, subassembly, module (component or assembly), end item, or system.

j. Overhaul. That maintenance effort (service/action) prescribed to restore an item to a completely serviceable/operational condition as required by maintenance standards in appropriate technical publications (i.e., DMWR). Overhaul is normally the highest degree of maintenance performed by the Army. Overhaul does not normally return an item to like new condition.

k. Rebuild. Those services/actions necessary for the restoration of unserviceable equipment to a like new condition in accordance with original manufacturing standards. Rebuild is the highest degree of material maintenance applied to Army equipment/components.

B.4. EXPLANATION OF COLUMNS IN THE MAC, (SECTION II.).

a. The functional groupings identify maintenance significant components, assemblies, subassemblies, and modules with the next higher assembly.

b. Maintenance Function (Column 3). Column 3 lists the functions to be performed on the items listed in column 2.

c. Maintenance Levels (Column 4). The maintenance levels AVUM, AVIM, and DEPOT are listed on the Maintenance Allocation Chart with individual columns that include the work times for maintenance functions at each maintenance level. Work time presentations such as ″0.1″ indicate the average time (expressed in man-hours in whole hours or decimals) it requires a maintenance level to perform a specified maintenance function. If a work time has not been established, the columnar presentation will indicate ″--.″ Maintenance levels higher than the level of maintenance indicated are authorized to perform the indicated function.

d. Tools and Equipment Reference Code (Column 5). Column 5 specifies, by code, those common tool sets (not individual tools), common TMDE, and special tools, special TMDE, and special support equipment required to perform the designated function.

e. Remarks Code (Column 6). When applicable, this column contains a letter code, in alphabetical order, which is keyed to the remarks contained in Section IV.

B.5. EXPLANATION OF COLUMNS IN TOOLS AND TEST EQUIPMENT REQUIREMENTS, (SECTION III.).

a. Column 1, Tools and Test Equipment Reference Code. The tool and test equipment reference code correlates with a code used in the MAC, (Section II.), Column 5.

b. Column 2, Maintenance Level. The lowest level of maintenance authorized to use the tool or test equipment.

c. Column 3, Nomenclature. Name or identification of the tool or test equipment.

d. Column 4, National Stock Number. The National Stock Number of the tool or test equipment.

e. Column 5, Tool Number. The manufacturer's part number.

B.6. EXPLANATION OF COLUMNS IN REMARKS, (SECTION IV.).

a. Column 2, Remarks Code. The code recorded in column 6, (Section II.).

b. Column 2, Remark. This column lists information pertinent to the maintenance function being performed as indicated in the MAC, (Section II.).

SECTION II. MAINTENANCE ALLOCATION CHART (AVIATION)

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVELS AVUM (O)	AVIM (F)	DEPOT (D)	(5) TOOLS & EQUIP REF CODE	(6) REMARK CODE
00	Test Set, Stabilation System 70700-26650-050	Inspect	0.1				
		Test	0.1			1	
		Test		0.5		1,2	
		Calibrate		1.4		7	
		Replace	0.1			7	
		Replace	0.1			3	A
		Repair		4.0		1, 2, 4, 5, 6	B
01	Assembly, Cable Case 70700-20650-052	Inspect	0.2				
		Replace		0.2			
		Repair	0.2				
0101	Assembly, Cable 70700-20697-041 or 70700-20697-050	Test	0.2			1	
		Test				1, 2	
		Replace	0.2			3	
		Repair		0.5		2, 4	E
0102	Assembly, Cable 70700-20697-042 or 70700-20697-051 W2	Test	0.2			1	
		Replace	0.2			3	
		Repair		0.5		2, 4	E
0103	Assembly, Cable 70700-20697-043 W3	Test	0.2			1	
		Replace	0.2			3	
		Repair		0.5		2, 4	E
0104	Assembly, Cable 70700-20697-044 W4	Test	0.2			1	
		Replace	0.2			3	
		Repair		0.5		2, 4	E
0105	Assembly, Cable 70700-20697-045 W5	Test	0.2			1	
		Replace	0.2			3	
		Repair		0.5		2, 4	E
0106	Assembly, Cable 70700-20697-046 or 70700-20697-052 W6	Test	0.2			1	
		Replace	0.2			3	
		Repair		0.5		2, 4	E

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVELS AVUM (O)	AVIM (F)	DEPOT (D)	(5) TOOLS & EQUIP REF CODE	(6) REMARK CODE
02	Test Unit, STAB/SAS 70700-20650-051	Test	0.2				
		Test		0.5		1, 2	
		Replace		0.2			
		Repair	0.2			3	
		Repair		4.0		1, 2, 3, 4, 5, 6	B
0201	Assy, Panel STAB/SAS 70700-20690-044	Test		0.2			
		Repair		0.5			
		Repair					
020101	Assembly, Guide 70700-20651-047	Inspect					
		Replace					
		Repair					
020102	Assy, Ckt. Card Resistor 70700-20693-043 A4	Test		0.3		2, 6	
		Replace		0.2		4	
		Repair		1.0		2, 4, 5, 6	
020103	Assy, Ckt. Card Diode 70700-20693-042 A3	Test		0.3		2, 6	
		Replace		0.2		4	
		Repair		1.0		2, 4, 5, 6	
020104	Assembly, Wiring 70700-20696-044 A4	Test					
		Replace					
		Repair					
020105	Assembly, Circuit Card 70700-20698-043 A1	Test		0.3		2, 6	
		Replace		0.2		4	
		Repair		1.0		2, 4, 5, 6	
020106	Assembly, Circuit Card 70700-20698-042 A2	Test		0.3		2, 6	
		Replace		0.2		4	
		Repair		1.0		2, 4, 5, 6	
0202	Assy, Panel Test Point 70700-20700-042	Test		0.2			
		Repair		0.5			D

SECTION III. TOOLS AND TEST EQUIPMENT REQUIREMENTS FOR TEST SET, STABILATION SYSTEM

Tools and Test Equipment Reference Code	Maintenance Level	Nomenclature	National Stock Number	Tool Number
1	AVIM/AVUM	Multimeter	6625-01-060-6804	AN/USM-451
2	AVUM	Multimeter, Digital	6625-01-139-2512	AN/PSM-45
3	AVUM	Tool Kit, Electronic	5180-00-064-5178	TK-101/G
4	AVIM	Tool Kit, Electronic	5180-00-605-0079	TK-100/G
5*	AVIM	Cable/Harness Adapter		Local Fab. 33
6	AVIM	Capacitance Bridge	6625-00-236-1536	ZM-71/U
7	AVIM	RMS Voltmeter		3400A

* LOCALLY-MADE AT DIRECT SUPPORT AND/OR DEPOT LEVEL FACILITY. See Figure D-1.

SECTION IV. Remarks For Test Set, Stabilization System

Remarks Code	Remarks
	NOTE AVIM coverages to be accomplished at calibration facilities repair support activities only.
A	Replace limited to replacement of: knobs, lens, and cable assemblies.
B	Repair by replacement of: synchro assembly, selected hardwired items and repair/replacement of printed wiring boards.
C	Repair by replacement of damaged cable only.
D	Repair by replacement of panel connectors and selected items only.
E	If cable sleeve is damaged, repair cable sleeve with polyethylene spiral wrap, Appendix C, Item 8.

APPENDIX C

EXPENDABLE AND DURABLE ITEMS LIST

SECTION I. INTRODUCTION

C.1. SCOPE

This appendix lists expendable and durable items you will need to operate and maintain the line test set. This listing is for informational purposes only and is not authority to requisition the listed items. These items are authorized to you by CTA 50-970, expendable Items (except Medical, Class V, Repair Parts, and Heraldic Items).

C.2. EXPLANATION OF COLUMNS

a. Column (1) - Item number. This number is assigned to the entry in the listing for referencing when required.

b. Column (2) - Level. This column identifies the lowest level of maintenance that requires the listed item. AVUM - Aviation Unit MaintenanceAVIM - Aviation Intermediate Maintenance

c. Column 3 - National Stock Number. This is the national stock number assigned to the item; use it to request or requisition the item.

d. Column 4 - Description. Indicates the federal item name and, if required, a description to identify the item. The last line for each item indicates the part number followed by the Commercial and Government Entity Code (CAGEC) in parentheses, followed by the part number.

e. Column (5) - Unit of Measure (U/M) Unit of issue (U/I). This measure is expressed by a two-character alphabetical abbreviation (e.g., EA, IN., PR). If the unit of measure differs from the unit of issue as shown in the Army Master Data File (AMDF), requisition the lowest unit of issue that will satisfy your requirement.

SECTION II. Expendable and Durable Items List

(1) Item Number	(2) Level	(3) National Stock Number	(4) Description	(5) (U/M)/(U/I)
1	AVUM	8305-00-267-3015	Cheese Cloth CCC-C-440 (CAGE 81348)	roll
2	AVUM	6850-00-274-5421	Dry-Cleaning Solvent P-D-680, Type II (CAGE 81348)	5 gal
3	AVUM	6240-00-155-7836	Lamps	ea
4	AVUM	7920-00-260-1279	Machinery Towel DDD-T-541 (CAGE 81348)	bx

(1) Item Number	(2) Level	(3) National Stock Number	(4) Description	(5) (U/M)/(U/I)
5	AVUM		Paint Fed Std 595 #13538	pt
6	AVUM		Paint Fed Std 595 #37038	pt
7	AVIM	3439-00-269-9610	Solder SN60WRMAP3 0.063	lb
8	AVUM	9330-01-059-2562	Spiral Wrap, Polyethylene T2SF (CAGE 06383)	roll

APPENDIX D

ILLUSTRATED LIST OF MANUFACTURED ITEMS

D.1. INTRODUCTION.

a. This appendix includes complete instructions for making items authorized to be manufactured at aviation intermediate maintenance level.

b. A part number index in alphanumeric order is provided for cross-referencing the part number/nomenclature of the item to be manufactured to the figure which covers fabrication criteria.

c. All bulk materials needed for manufacture of an item are listed by part number in a tabular list on the illustration.

D.2. MANUFACTURED ITEMS PART NUMBER INDEX.

Index

Noun	Part No.	Figure No.
Cable/Harness Adapter	Local Fab. 33	D-1

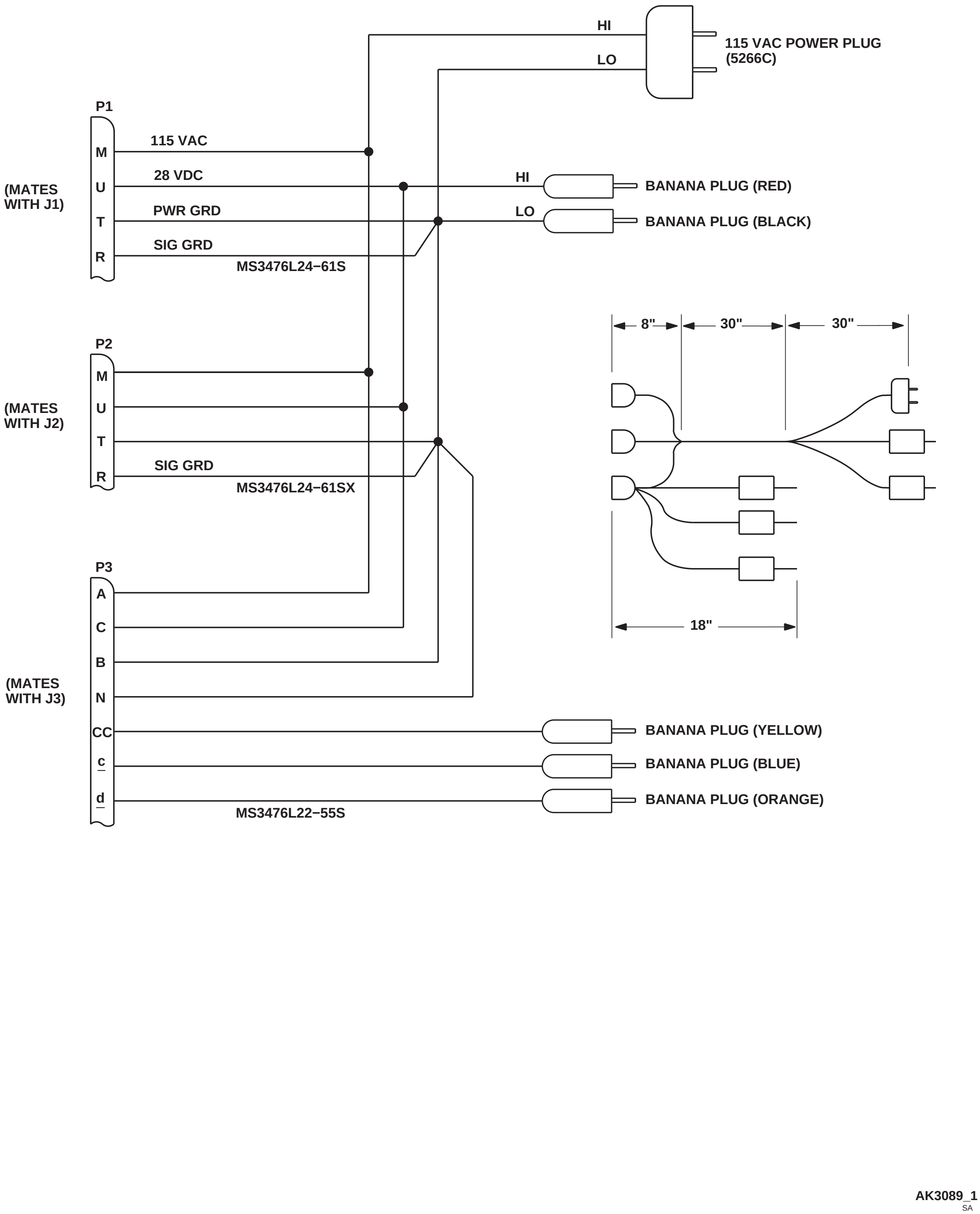


Figure D-1. Test Cable (Sheet 1 of 2)

PARTS LIST

PART NUMBER	DESCRIPTION	QUANTITY
MS3476L24–61S	CONNECTOR (P1)	1
MS3476L24–61SX	CONNECTOR (P2)	1
MS3476L22–55S	CONNECTOR (P3)	1
5266C (74545)	AC POWER PLUG	1
108–0742–001	BANANA PLUG (RED)	1
108–0743–001	BANANA PLUG (BLACK)	1
108–0743–001	BANANA PLUG (YELLOW)	1
108–0743–001	BANANA PLUG (BLUE)	1
108–0743–001	BANANA PLUG (ORANGE)	1
—	WIRE, AWG 22	AS REQ.
—	SLEEVING	AS REQ.

AK3089_2
SA

Figure D-1. Test Cable (Sheet 2)

GLOSSARY

SECTION I. ABBREVIATIONS

AC	Alternating Current
ACTR POSN	Actuator Position
ACTR POSN OS	Actuator Position Other Side
AFCS	Automatic Flight Control System
AMPL	Amplifier
AS	Airspeed
AS BFR	Airspeed Buffer
AS BFR OS	Airspeed Buffer Other Side
AS SW	Airspeed Switch
AUTO ENGA	Automatic Engage
BFR ACTR POSN	Buffer Actuator Position
BFR AS SNSR	Buffer Airspeed Sensor
BITE	Built-In Test Equipment
CAGEC	Commercial and Government Entity Code
CLTV	Collective
COMPT TST (+)	Comparator Test Positive
COMPT TST (−)	Comparator Test Negative
DC	Direct Current
DECR	Decrease
DN	Down
DN CMD	Down Command
DN LIMIT	Down Limit
DRVR SPLY	Driver Supply
DRVR SPLY OS	Driver Supply Other Side
EA	Each
GND	Ground
Hz	Hertz
I LIMIT	Current Limit
INCR	Increase
INTLK	Interlock
INTLK OS	Interlock Other Side
L	Left
LATL ACCLRM	Lateral Accelerometer
LATL ACCLRM FLTR	Lateral Accelerometer Filter

MAC	Maintenance Allocation Chart
NSN	National Stock Number
P RATE FLTR	Pitch Rate Filter
P VALVE	Pitch Valve
POSN	Position
PWR GND	Power Ground
R	Right
R VALVE	Roll Valve
ROLL ALT	Roll Altitude
SAS	Stability Augmentation System
SAS SIG REF	Stability Augmentation System Reference
SAS/FPS	Stability Augmentation System Flight Path Stabilization
SIG GND	Signal Ground
SIM	Simulator
SNSR	Sensor
STAB	Stabilator
STAB DN	Stabilator Down
STAB UP	Stabilator Up
TMDE	Test, Measurement, and Diagnostic Equipment
UP CMD	Up Command
VAC	Volts Alternating Current
VDC	Volts Direct Current
Y VALVE	Yaw Valve

SECTION II. DEFINITION OF UNUSUAL TERMS

There are no unusual terms used in this manual. All terms are standard terms used by Avionics Specialists.

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Subject	Page Number

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D

INDEX (Cont)

INDEX (Cont)

INDEX (Cont)

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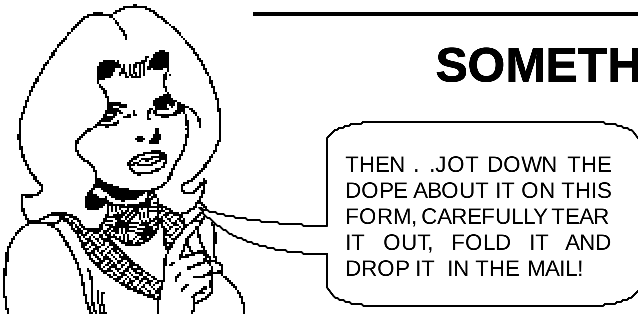

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81		4-3		Callout 16 on figure 4–3 is pointed at a bolt. In key to figure 4–3, item 16 is calle a shim. Please correct one or the other

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