TECHNICAL MANUAL

GENERAL SUPPORT AND DEPOT MAINTENANCE MANUAL

TEST SET,

GYRO STABILIZED PLATFORM

AN/ASM-385

(FSN 6625-404-3281)

This copy is a reprint which includes current pages from Changes 1 and 2.

HEADQUARTERS, DEPARTMENT OF THE ARMY

OCTOBER 1971

WARNING

Be careful when working with the 115-volt power connections. SERIOUS INJURY or DEATH may result from contact with these terminals.

CAUTION

This equipment contains highly sophisticated, complicated circuits. Maintenance personnel must not attempt any maintenance without reading and fully understanding the applicable section relating to that maintenance.

CHANGE
No. 1

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., *28 February 1972*

General Support and Depot Maintenance Manual

TEST SET, GYRO STABILIZED PLATFORM

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(FSN 6625-404-3281)

TM 11-6625-2440-45, 4 October 1971, is changed as follows:

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None	B-1 through B-3

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Chief of Staff.

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Distribution:

To be distributed in accordance with DA Form 1231, Direct and General Support maintenance requirements for OV-1D and U-21 aircrafts.

CHANGE
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General Support and Depot Maintenance Manual

TEST SET, GYRO STABILIZED PLATFORM

AN/ASM-385 (NSN 6625-00-404-3281)

TM 11-6625-2440-45, 4 October 1971, is changed as follows:

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B-5 and B-6	B-5 and B-6
B-9 and B-10	B-9 and B-10
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GENERAL SUPPORT AND DEPOT MAINTENANCE MANUAL
TEST SET, GYRO STABILIZED PLATFORM AN/ASM-385
(FSN 6625-404-3281)

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CHAPTER 1
INTRODUCTION

1-1. Scope

a. This manual contains general support and depot maintenance instructions for Test Set, Gyro Stabilized Platform AN/ASM-385 (test set). Circuit analysis, troubleshooting, removal and replacement, and testing procedures are also included.

b. Other technical manuals pertaining to the test set are TM 11-6625-2440-12, TM 11-6625-244020P, and TM 11-6625-2440-45P.

1-2. Indexes of Publications

a. DA Pam 310-4. Refer to DA Pam 310-4 to determine whether there are new editions, changes, or additional publications pertaining to the equipment.

b. DA Pam 310-7. Refer to DA Pam 310-7 to determine whether there are modification work orders (MWO's) pertaining to the equipment.

NOTE

Applicable forms and records are covered in TM 11-6625-2440-12.

1-3. Reporting of Errors

The reporting of errors, omissions, and recommendations for improving this publication by the individual user is encouraged. Reports should be submitted on DA Form 2028 (Recommended Changes to Publications and Blank Forms) and forwarded direct to Commander, US Army Electronics Command, ATTN: DRSEL-MA-Q, Fort Monmouth, NJ 07703. A reply will be furnished direct to you.

CHAPTER 2

PRINCIPLES OF OPERATION

Section I. FUNCTIONAL ANALYSIS

2-1. General

The test set simulates all the components of a navigation set, such as Navigation Set, Inertial AN/ASN-86, as they are related to the gyrostabilized platform unit of the navigation set. During operation, the two units of the test set, Control-Display, Test Set C-8316/ASM-385 (control-display unit) and Electronic Switching Unit, Test Set TS-2907/ASM-385 (electronics unit), are interconnected to make up the test set. The control-display unit reference designation is 1A1, and the electronics unit reference designation is 2A1. The test set is used to test, align, calibrate, and troubleshoot the gyro-stabilized platform (platform).

a. The test set provides all primary voltages (.+28 V, 26 V, 400 Hz and 115 V, 3-phase, 400 Hz) for the platform. The test set also provides the switching and logic means of controlling the platform through the modes of operation with provisions for manually stopping and holding the platform mode control logic in different states.

b. In aligning or dynamically testing the platform, the test set acts essentially as a digital velocity-to-torque converter with provisions for adding an earth rate correction factor to the output. Incremental velocity pulses (ΔV) from the platform are converted to digital voltage torque pulses ($\Delta\omega$) based on a 300-Hz rate. To this new pulse form is added an earth rate correction factor which is a function of the earth latitude position of the test site.

c. Dynamic or static monitoring of test points within the platform or test set (for self-test) is accomplished by observing test set front panel indicators and operating test set front panel switches which select test points and route test signals to ancillary test equipment.

2-2. Functional Description

(fig. 5-2)

The functions of the test set are testing, aligning, calibrating, and troubleshooting of the platform. To accomplish this, test set circuits are organized into logic groups as described in the following subparagraphs.

a. Power Control and Distribution. All ac and dc power for the test set is derived from the power control and distribution circuits in the control-display unit. Power is routed to the electronics unit power control and distribution circuits and then to the platform as illustrated.

b. Mode Control Logic. The mode control logic consists of mode circuit card 2A1A10, 2/4-minute timer circuit card 2A1A11, and part of the control-display unit switching circuits. The mode control logic controls sequencing of the velocity torque logic and the platform through the phases of operation. Input signals to mode circuit card 2A1A10 are the status signals, from the platform, and mode and status control signals and a fast/slow signal from the control-display unit switching circuits. Output signals from the mode circuit card include gain control signals to the velocity torque logic, a divide-by-5 control signal to the latitude correction logic, and ready-to-gyrocompass and ωz gain change signals to the platform. Other control signals to the platform are mode control signals, a monitor override signal, and a platform re-cage signal from the control-display unit switching circuits. The status of operation is monitored through mode signals from mode circuit card 2A1A10 and status signals from the platform. These signals are sent to lamp control logic and displayed on appropriate indicators.

c. Lamp Control Logic. The lamp control logic is distributed among circuit cards 1A1A1 through 1A1A4. Lamp control logic controls all indicators, except 28 VDC and 115 VAC power indicators. The LAMP TEST switch enables the testing of all logic-controlled lamps simultaneously.

d. Clock Generator. Clock generator circuit card 2AlA9 generates the 300and 150-Hz clock pulses that are used in generating torque signals. When testing the platform, the clock generator circuit card is driven by a 2.4-kHz signal from the platform, and in self-test, the clock generator circuit card is driven by a 4.8-kHz signal from crystal-controlled oscillator 2A1MP5Y1.

e. Latitude Correction Logic. The earth is essentially round and the distances from the poles are measured in degrees of latitude beginning with 0 degrees at the equator and increasing to +90° at the north pole and -90° at the south pole. The velocity of an object on the earth's surface with respect to free (inertial) space is a function of the earth-latitude position. The platform stable element tends to remain fixed in space as the earth rotates. To use the platform for navigation about the surface of the earth, the platform stable element must be continuously driven with a force proportional to earth rate for it to remain oriented to true north and level with the earth's surface. The force required to maintain the true north orientation (heading axis) of the stable element is proportional to earth rate (Ω) and the sin of earth latitude (λ) position of the test site. The force required to maintain the stable element level (level axis) with the earth's surface is proportional to earth rate (Ω) and the cos of earth latitude (λ) position of the test site. Forces required to maintain the stable element on its level axes (X and Y) and on its heading axis (Z) is produced by the test set in the form of digital voltage torque pulses ($\Delta\omega$) which are sent to the platform. The gyro torquing rate in the level axes is 0.183742 seconds of arc per hour per pulse. The gyro torquing rate in the heading axis is 0.374685 seconds of arc per hour per pulse. These rates are the scale factors (SF) used to calculate latitude corrections. The following formulas are used to determine the pulse frequency for the latitude corrections:

Level axis earth rate correction frequency =

$$\frac{\Omega \cos \lambda}{SF}$$

Where: Ω = 15.041 degrees per hour
SF = 0.183742

Therefore: Frequency = $\frac{15.041 \cos \lambda}{0.187342}$

$$= 80.28668 \cos \lambda$$

Heading axis earth rate correction frequency =

$$\frac{\Omega \sin \lambda}{SF}$$

Where: Ω = 15.041 degrees per hour
SF = 0.374685

Therefore: Frequency = $\frac{15.041 \sin \lambda}{0.374685}$

$$= 14.14323 \sin \lambda.$$

The latitude correction logic consists of the LEVEL AXIS and HEADING AXIS switches; three counter circuit cards 2A1A12, 2A1A13, and 2A1A14; and divide-by-5circuit card 2A1A15. Level axis and heading axis earth rate correction frequencies are inserted in coded form on the LEVEL AXIS and HEADING AXIS switches. The coded information from the switches is applied to the three counter circuit cards. These circuit cards make up a frequency divider that is driven continuously by the 150-Hz signal from clock generator circuit card 2A1A9. Level axis and heading axis earth rate correction signals are applied to divide-by-5 circuit card 2A1A15. The output of the divide-by-5 circuit card is controlled by the divide-by-5 control signal from mode circuit card 2A1A10. The level axis and heading axis earth rate correction output signals are applied to the velocity-torque logic.

f. Velocity-Torque Logic. The velocity-torque logic consists of circuits that directly convert incremental velocity signals (ΔV) into digital voltage torque pulses ($\Delta\omega$,). These are ΔV gain change circuit cards 2A1A2, 2A1A3, and 2A1A4; $\Delta\omega$ torquer circuit cards 2A1A7, 2A1A5, and 2A1A6; and $\Delta\omega$ output and strobe circuit card 2A1A8.

(1) Increments of velocity ($\pm\Delta$Vx and $\pm\Delta$Vy) are applied from the platform under test to ΔVx and ΔVy gain change circuit cards 2A1A2 and 2A1A3. These circuit cards convert the relatively small (narrow) signals representing velocity into relatively large (wide) signals (ΔV amplified) appropriate for driving the $\Delta\omega$ torquer circuit cards 2A1A6 and 2A1A7. The gain of the gain change circuit cards is determined by gain control signals from the mode card 2A1A10.

(2) The $\Delta\omega$x and $\Delta\omega$y torquer circuit cards 2A1A6 and 2A1A7 add level axis earth rate correction signals to the amplified velocity pulses; the resultant outputs ($\pm\Delta$Vx update and $\pm\Delta$Vy update) are applied to separate circuits in the $\Delta\omega$, output and strobe circuit card 2A1A8. The GB1 and GB2 signals from control-display unit switching circuits sets the $\Delta\omega$x and $\Delta\omega$y torquer circuit card logic for GB1 and GB2 modes of operation.

(3) The ±ΔVx update and ±ΔVy update pulses are converted to digital voltage torque pulses (Δω) in the Δω output and strobe circuit card 2A1A8, and sent to the platform.

(4) The required Δωz output is derived from the ±ΔVx or ±ΔVy pulses routed through the ΔVx and ΔVy gain change circuit cards 2A1A2 and 2A1A3 to the ΔVz gain change circuit card 2A1A4. The ±ΔVGC update output is combined with heading axis earth rate correction signal in the Δωz torquer circuit card 2A1A5; the ±ΔVGC update output is applied to the Δω output and strobe circuit card 2A1A8, converted to Δωz, and sent to the platform. The inhibit earth rate correction to ±ΔωGC signal from the LATITUDE switch sets the Δωz torquer circuit card logic for test set operation in the northern or southern hemisphere.

(5) The ΔV update inputs to the Δω output and strobe card 2A1A8 can be overriden by gyro slew signals from control-display unit switching circuits. The gyro slew signals are applied to Δω output and strobe circuit card 2A1A8, where they are converted to continuous Δωx, Δωy, or Δωz output signals.

g. Self-Test Logic. The self-test + 28 V switched signal is generated by component board circuit card 1A1A3 when the platform sense input signal indicates that the platform is not connected to the test set. The self-test +28 V switched signal activates crystal-controlled oscillator 2A1MP5Y1 that drives clock generator circuit card 2A1A9 during self-test. At the same time, the self-test +28 V switched signal is routed through the SIGNAL INPUT switch where it becomes the selftest command. The self-test command signal activates ΔV self-test circuit card 2A1A1 that generates ΔVx and ΔVy self-test pulses for testing the velocity-torque logic.

h. SYNCHRO SELECT and Scan Switches. The SYNCHRO SELECT switch is used to select platform synchro signals for test with ancillary test equipment. The SCAN SELECT, PLATFORM SCAN and TEST SET SCAN switches are used to scan the platform test points or the test set test points for troubleshooting. The signals scanned are routed to appropriate ancillary test equipment.

i. Magnetic Heading Circuit. The magnetic heading circuit card 1A1A4 provides an 800-Hz magnetic heading excitation signal. This signal is routed to the SIGNAL INPUT switch where it is converted to a simulated magnetic heading signal that is sent to the platform.

j. Heading Simulator Circuit. The output of the HEADING SIMULATOR is determined by the HEADING SIMULATOR control setting and the true heading input signal from the platform. This output signal is applied to true heading demodulator circuit card 1A1A2, which develops an azimuth cage error signal. This signal is sent to the platform to position the azimuth gimbal to a heading dictated by the position of the HEADING SIMULATOR control during caging.

Section II. CIRCUIT ANALYSIS

2-3. General

This section describes each function of the test set to a functional schematic diagram level. Reference designations, pin numbers, and simplified logic are included in diagrams to help identify and describe logic functions and make the diagrams useful for maintenance.

2-4. Power Control and Distribution

(fig. 5-3, 5-4, and 5-5)

Power control and distribution is centered in the control-display unit and is routed through interconnection cables to the electronics unit. The +28 V power is controlled by 28 VDC PRIMARY circuit breaker and simple switching and needs no further explanation. Distribution of both ac and dc power is a matter of routing; this also needs no explanation. Thus, the following subparagraphs describe only control of ac power and power supply 1A1PS1.

a. Ac Power Control. The test set provides ac voltages with circuit breaker overload protection and proper phase sequence for operation of the test set and platform.

(1) To insure the correct phase sequence of the ac power, phase detector relay 1A1K1 and phase reverser relay 1A1K2 are connected as a phase correction circuit (fig. 5-3). In order to actuate, the phase detector relay 1A1K1 must sense a phase sequence at terminals 2, 3, and 4 such that the voltage at 4 leads the voltage at 3, which leads the voltage at 2, which leads the voltage at 4, etc. That is, voltage sequence at 4, 3, and 2 may be: A, B, and C; B, C, and A;

or C, A, and B respectively in order to actuate the phase detector relay 1A1K1. If the phase is correct when 115 VAC PRIMARY circuit breaker is energized, 1A1K1 energizes; the normally closed contacts open, holding phase reverser relay 1A1K2 deenergized. If the 115-V, 400-Hz input is incorrectly phased, 1A1K1 does not energize, and normally closed contacts of 1A1K1 route +28 V to energize phase reverser relay 1A1K2. The contacts of 1A1K2 are connected in series with the Band C-phases of the 115-V lines as a double-pole, double-throw reversing switch. If the 115-V input phases are correct, 1A1K2 does not energize and its contacts route the phases to 115 VAC switch without change. If 115-V input phases are incorrect, 1A1K2 energizes, reversing the Band C-phases to the 115 VAC switch, thus, correcting the phase.

NOTE

In a 3-phase power system, incorrect phase may be corrected by reversing any two lines.

(2) When 115 VAC switch is energized, 115-V, 400-Hz, 3-phase power is applied to power supply 1A1PS1 and 115-V, 400-Hz, A-phase power is applied to transformer 1A1T1. Transformer 1A1T1 converts 115 V, 400 Hz to 26 V, 400 Hz. The 26 V, 400 Hz is applied to a frequency doubler circuit in magnetic heading circuit card 1A1A4 where it is converted to 800-Hz magnetic heading excitation. The output of transformer 1A1T1 is also applied to transformer 1A1T2. Transformer 1A1T2 converts 26 V, 400 Hz to 2.6 V, 400 Hz. The 2.6 V, 400 Hz is applied to true heading demodulator circuit card 1A1A2 as a reference voltage.

(3) Electronics unit circuit breakers control the application of ac power and provide overload protection as illustrated in figure 5-4. The two C-phase legs of the 115-V, 400-Hz, 3-phase power are routed through current sensor resistors 2A1R1 and 2A1R2. The voltages developed across the current sensor resistors are applied to the primaries of transformers 2A1T1 and 2A1T2. The outputs at the secondaries of 2A1T1 and 2A1T2 are applied to PLATFORM SCAN switch 2A1S3 as stable element heater monitor and ambient heater monitor signals. The 800Hz magnetic heading excitation is applied to SIGNAL INPUT switch 2A1S5 and converted to simulated magnetic heading as described in paragraph 2-6*e*(3).

b. Power Supply 1A1PS1 (fig. 5-5). The power supply converts 115-V, 400-Hz, 3-phase power to regulated +15 V, -15 V, and +5 V outputs. All three output voltages are current limited, and the + 5 V has an overvoltage crowbar and undervoltage trip. The following subparagraphs cover power supply operation and circuit description.

(1) *Power supply operation.* When relay K1 is energized, 115-V, 400-Hz, 3-phase power is applied through input filters to the primary windings of transformer A1T1. The secondary windings of transformer A1T1 apply voltages to 3-phase rectifier circuits A1Z1, A1Z2, and A1Z3. The outputs of the 3-phase rectifier circuits are filtered by LC circuits and applied to $\pm$15 V regulator VR4, -15 V regulator VR5, and +5 V switching regulator and crowbar VR6. External adjustment for $\pm$15 V regulators VR4 and VR5 is provided by variable resistors on resistor assembly A3. The outputs of $\pm$15 V regulators, VR4 and VR5, and +5 V switching regulator and crowbar VR6 are applied through filters to the output of the power supply.

(2) *Power supply turn-on*. Turn-on is initiated when +28 V is applied through input filter FL5 to pin 4 of power controller A2. The +28 V is applied through power controller A2 resistor network and breaks down an associated voltage regulator that forward biases power controller A2 relay driver. The relay driver conducts, providing a +28 V return at pin 9 of A2 that energizes relay K1. At the same time, the +28 V is applied through power controller A2 resistor network through the normally closed contacts of relay K2 to power controller A2 RC delay circuit. Three-phase power is applied to regulator controller Al through the contacts of K1. The transformer and rectifier assembly Al supplies the necessary voltages to regulators VR4, VR5, and VR6, and the regulators supply the proper output voltages. When the +5 V output of VR6 is above the minimum value, power controller A2 + 5 V undervoltage trip provides a power ground at pin 7 that energizes relay K2. The closed contacts of relay K2 provide a discharge path for power controller A2 RC delay circuit and apply a power supply go signal at the output of the power supply.

(3) *Power supply turn-off.* If the power supply turn-on described in (2) above does not occur within approximately 100 milli-seconds, the power supply turns off. Turn-off is controlled by power controller A2. Turn-off is initiated when the RC delay circuit charges up sufficiently

to break down its associated voltage regulator before K2 energizes. When the voltage regulator breaks down, the undervoltage shutdown conducts, the relay driver cuts off, relay K1 deenergizes, and the power supply is turned off. The normally closed contacts of relay K2 apply a +5 V return as a power supply no-go signal at the output of the power supply. If turn-on does occur, the power supply will remain on until +28 V is removed from the input or the +5 V output goes out of tolerance. A low +5 V output applied to power controller A2 +5 V undervoltage trip removes the power ground at pin 7. With the power ground removed at pin 7, relay K2 deenergizes and the power supply turns off as described above. Overvoltage protection for the +5 V output is provided by the +5 V switching regulator and crowbar described in (4) below.

(4) Plus 5-V switching regulator and crowbar VR6. The +5 V switching regulator and crowbar provides a regulated +5 V output with current-limit overload protection and scr crowbar overvoltage protection. The discrete components operate in conjunction with regulator controller Al circuits.

(a) The input +25 (±3) V is applied to input filter (L1, C3, C1), causing current to flow through power switch Q2, inductor L2, and current-sensing resistor R3 to the +5 V output. The + 5 V output is fed back to the voltage loop comparator and regulator. The +5 V output is compared with a reference voltage that is controlled by a reference voltage regulator and variable resistor A1R13. The voltage loop comparator and regulator controls the level sense switch. When the +5 V output voltage is low, power switch Q2 is kept conducting by the relatively low outputs of the level sense switch at pins 4 and 7 of Al. When power switch Q2 is conducting, the current flow through L2 increases and the output voltage rises. When the output voltage exceeds the reference voltage sensed by the voltage loop comparator and regulator, the level sense switch outputs increase, causing power switch Q2 to cut off almost instantaneously. When power switch Q2 cuts off, the self-induced voltage of inductor L2 causes current to continue to flow through diode CR1, inductor L2, and resistor R3 to the output load. This current decreases, and as it falls below the level demanded by the load, the output voltage decreases. Again, as the output voltage falls below the reference voltage level, the voltage loop comparator and regulator causes the level sense switch outputs at pin 4 and 7 of A1 to decrease, causing power switch Q2 to conduct. When power switch Q2 conducts, the output voltage increases. In this way, the output voltage is regulated at a level equal to the average reference voltage.

(b) Current-limit overload protection is provided by current-sensing resistor R3 and a current loop comparator circuit. When load current is excessive, the voltage across R3 causes the current loop comparator to activate the level sense switch and cut off power switch Q2. The current loop comparator will cause power switch Q2 to conduct when the load current decreases to a safe level. The switching frequency is held to a safe value because the rate of load current change is limited by inductor L2.

(c) Overvoltage protection is provided by scr Q3 and a crowbar control circuit. The reference voltage for the crowbar control circuit is provided by a voltage regulator and variable resistor A1R22. When the crowbar control circuit senses an abnormal overvoltage level of the +5 V output, it provides a positive voltage pulse at pin 3 of A1 This positive voltage pulse, applied to the gate of Q3, causes Q3 to trigger and short circuit the + 5 V output to ground.

(5) *Plus 15-V regulator VR4*. The +15 V regulator provides a regulated +15 V output with current limiting and short circuit protection. The input +44 (±8) V is applied to an amplifier input circuit. The amplifier input circuit sums the input voltage with two feedback voltages. The two feedback voltages are the output voltage and the unfiltered output voltage of the power switch. Both feedback voltages are applied to the amplifier input circuit through a feedback network and variable resistor R14. The amplifier compares the output of the amplifier input circuit with a reference voltage provided by a voltage regulator. The voltage difference is applied as a pulse-width-modulated input to the power switch. The power switch is a transistor switch used to chop input voltage to an average value equal to the desired output voltage. The output of the power switch drives an output filter which converts the chopped input voltage to a low-ripple dc output. Current limiting and short circuit protection are provided by a current-sensing transformer that drives a current limiter. The current limiter output is a voltage proportional to load current. This voltage is summed in the amplifier input circuit and reduces the output voltage to a minimum when an overcurrent condition exists.

(6) Minus 15-V regulator VR5. The operation of the -15 V regulator is identical to the +15 V regulator except for the conversion of a -44 (±8) V input to a regulated -15 V output.

2-5. Control-Display Unit 1A1
(fig. 5-6 and 5-7)

The control-display unit consists of control switches, lamp control circuits, a heading simulator circuit, power control and distribution circuits, and power supply PS1. The power control and distribution circuits and power supply PSI are described in paragraph 2-4. The following subparagraphs describe the other circuits.

a. Control Switches (fig. 5-6). The control switches select modes of operation and signals for testing the test set or platform under test. These switches are described in the following subparagraphs.

NOTE

The use of the symbol * throughout this manual indicates the not condition of a signal or operating mode. Exa*m*ple: ON indicates the normally-on condition of the signal. ON* indicates the not-on condition of the signal.

(1) *MODE switch.* The MODE switch selects signals to control the test set and platform modes of operation. The off*, standby, quantizer scale change, nav, and air data signals are routed through the electronics unit to the platform as mode control signals. The align* signal is sent to the mode control logic in the electronics unit to initiate the align mode sequencing. This signal is also routed to the platform as a mode control signal. The MODE switch also enables and disables lamp control logic as described below.

(2) *CAGE, LEVEL, and GC1 switches*. When set to HOLD, the CAGE switch, LEVEL switch, or GC1 switch provide cage hold, level hold or GC1 hold signals. These signals are sent to the electronics unit mode control logic. Each signal causes the mode control logic to stop sequencing and remain in the corresponding mode until the switch is set to OFF. With the MODE switch set to NAV and the CAGE switch set to HOLD, a nav cage signal is sent to the electronics unit mode control logic. This signal causes the platform to cage while operating in the navigate mode. With the CAGE switch set to HOLD, -15 V is applied to a switch in the magnetic heading circuit card A4. The -15 V activates the switch which provides a platform monitor inhibit signal. This signal is routed through the electronics unit to the platform to inhibit a platform monitor no-go signal during caging.

(3) *MONITOR OVERRIDE switch*. The MONITOR OVERRIDE switch may be pressed during any mode of operation to inhibit a platform monitor no-go signal. The MONITOR OVERRIDE switch is a momentary switch. When pressed, this switch generates the platform monitor inhibit signal that is routed through the electronics unit to the platform.

(4) *PLATF RE-CAGE switch*. The PLATF RE-CAGE switch is a momentary switch. When pressed, this switch generates a platform reset signal that is routed through the electronics unit to the platform. This signal causes the platform mode logic to sequence through the cage phase and initiate the level phase of the align mode.

(5) *PLATFORM SLEW switches*. The X, Y, and Z switches are two-position momentary switches. These switches provide ±x, ±y, and ±z gyro slew signals. These signals are applied to the electronics unit velocity-torque logic to provide manual control of platform stable element movement about the X-, Y-, and Z-axes. The FAST/SLOW switch is a two-position toggle switch that routes level fast slew and heading fast slew signals to the electronics unit mode control logic. These signals control the speed of the platform stable element motion as initiated by the X, Y, or Z switches.

(6) *GB1/GB2 switch*. The GB1/GB2 switch is a two-position toggle switch which routes GB1 or GB2 signals to the electronics unit velocity-torque logic. These signals set the velocity-torque logic for gyro bias 1 or gyro bias 2 operation.

(7) *LAMP TEST switch*. The LAMP TEST switch is a momentary switch. When pressed, this switch provides a +5 V return lamp test signal that causes all control-display unit lamps to light.

b. Lamp Control Logic (fig. 5-7). With slight variations, the lamp control logic consists of simple NAND gate circuits driving the lamp drivers that in turn energize the lamps. The circuitry is distributed among lamp drivers circuit card Al, true heading demodulator circuit card A2, component board no. 1 circuit card A3, and lamp module lamp drivers. Lamp drivers circuit card Al consists of only lamp drivers. True heading demodulator circuit card A2 contains NAND gate

logic that controls some lamp drivers. Component board no. 1 circuit card A3 contains NAND gates that control lamp drivers, biasing networks for all the NAND gates, and a resistor-diode network used in the lamp test circuit.

(1) *MODE switch control*. The MODE switch S3A controls the application of control signals to the lamp control logic. In the OFF and STBY positions, the +5 V return is routed to and disables the NAND gates that control the MONITOR, PLATFORM, OVERTEMP, and MAG HDG SERVO lamps. In all positions, except OFF and STBY, the MODE switch also provides a +5 V return that enables the lamp drivers for the CAGE LEVEL GC1 and GC2 lamps. Thus, in all positions except OFF and STBY, the MODE switch permits operation of the MONITOR, PLATFORM, OVERTEMP, MAG HDG SERVO, CAGE, LEVEL, GC1, and GC2 lamps.

(2) *Lamp driver test.* The lamp driver test signal originates in the electronics unit (para 2-6). The lamp driver test signal is applied to, and activates, the output NAND gates that drive the monitor, platform, over-temperature, and magnetic heading servo lamp drivers, thus testing NAND gates, lamp drivers, and lamps in these channels.

(3) *Mode and coarse heater logic*. The mode lamps are CAGE, LEVEL, GC1, and GC2. All circuits for mode lamps and the COARSE HEATER lamp are functionally identical. Each consists of a normally enabled NAND gate driving a lamp driver that drives the associated lamp. Enabling of these NAND gates is accomplished by the logic high-voltage level from the lamp test circuit. This circuit is discussed in (6) below. The lamp drivers for the CAGE, LEVEL, GC1, and GC2 lamps are enabled by the MODE switch as described in (1) above. These lamp drivers are also enabled by a low signal from the lamp test circuit when the LAMP TEST switch is pressed. The lamp driver for the COARSE HEATER lamp is enabled by a +5 V return during all modes of operation.

(4) *TEST SET lamp*. The TEST SET lamp is energized by the power supply go/no-go signal from the power supply as described in paragraph 2-4.

(5) *Self-test and platform test*. While the test set is energized, either SELF TEST lamp or GSP TEST lamp is lit. The +28 V return for these lamps is routed through a relay on component board no. 1 circuit card A3 connected as a double-pole, double-throw switch. This relay is energized by a high level of the platform sense signal routed through two inverters and a relay driver when the platform is not connected to the test set. When the relay is energized, the return is routed to the SELF TEST lamp. When the platform is connected to the test set, the relay is deenergized and the return is routed to the GSP TEST lamp.

(6) *Lamp test.* The lamp test circuit consists of LAMP TEST switch and an isolation diode and limiting resistor in each associated lamp circuit. When pressed, the LAMP TEST switch grounds the return lines for the following lamps: TEST SET, MONITOR, PLATFORM, OVERTEMP, M.AG HDG SERVO, PLATF PWR, GSP TEST, and SELF TEST. In addition to testing these lamps directly, the lamp test circuit also produces a ground that is routed to the input of the NAND gate logic of the following lamps: PLATF PWR, CAGE, LEVEL, COARSE HEATER, GC1, and GC2. In this latter group of lamp circuits, both lamps and logic are tested.

(7) *Platform and mode logic control*. The MONITOR, PLATFORM, OVERTEMP, and MAG HDG SERVO lamps are enabled as described in (1) above. When the platform is under test, these lamps are controlled by the respective platform monitor, platform go, platform over-temperature, and magnetic heading servo go signals from the platform. When a platform malfunction occurs, one or more of these signals changes state and causes the respective lamp to light. The platform power signal from the platform lights the PLATF PWR lamp when power is applied to the platform. The COARSE HEATER lamp is enabled as described in (3) above. The coarse heater on signal from the platform lights this lamp when the platform coarse heaters are on. The CAGE, LEVEL, GC1, and GC2 lamps are enabled as described in (1) above. During self-test or platform test, these lamps are controlled by the respective cage mode, level mode, GC1 mode, and GC2 mode signals from the test set mode control logic. Each signal changes state and lights the respective lamp to indicate the align mode sequence of the test set and platform.

c. Heading Simulator Circuit. The heading simulator circuit positions the platform azimuth gimbal when the gimbals are caged. The cage mode signal from the test set mode control logic is applied to a normally enabled NAND gate. The output of this NAND gate is applied to a relay driver that provides a ground to energize a relay in true

heading demodulator circuit card A2. When energized, the contacts of this relay apply an input to the demodulator from the HEADING SIMULATOR. The HEADING SIMULATOR control setting and the true heading input signal from the platform azimuth gimbal determine the phase of the HEADING SIMULATOR output signal. The demodulator, using a 2.6 V, 400-Hz reference voltage from transformer T2, converts the HEADING SIMULATOR output signal to a dc azimuth cage error signal that is amplified and sent to the platform to drive the azimuth gimbal. When the azimuth gimbal is positioned as determined by the HEADING SIMULATOR control setting, the true heading input signals nulls the HEADING SIMULATOR output signal and the azimuth cage error signal.

2-6. Electronics Unit 2A1

The electronics unit consists of the following functional circuits: mode control logic, clock generator, latitude correction logic, velocity-torque logic, and signal selection switches.

a. Mode Control Logic (fig. 5-8). The mode control logic circuit is confined mainly to mode circuit card A10 and 2/4-minute timer circuit card All; however, parts of several other circuit cards are used to complete the logic. Mode control logic receives control signals from the platform and switches in the control-display unit. The following subparagraphs describe one sequence of the mode control logic from standby to GC2 phase of align mode.

(1) Initially the MODE switch on the control-display unit is set to OFF or STBY. In either case, the align* signal is applied to the mode logic causing this logic to assume a ready state (clear).

(2) When the MODE switch is set to ALIGN, the align* signal changes state, causing the logic to produce the cage mode signal that is routed to the lamp control logic in the control-display unit and the time delay reset signal that is sent to 2/4-minute timer circuit card All.

(3) Another output from the MODE switch, the off* signal, initiates the turn-on sequence in the platform. During caging, the platform sends the mode control signal to the cage hold input of the mode logic, preventing the logic from sequencing until the platform has completed caging.

(4) When caging is complete, the platform sends the platform ready signal that sets mode control logic for the level mode. In this mode, the gain of the platform level axis gyro pulse torquer amplifiers is increased by 5. This gain increase is caused by the ready-to-gyrocompass signal sent from the mode card to the platform. To maintain the correct torque to compensate for earth rate, the mode logic produces the divide level axis earth rate correction by 5 signal that is sent to the latitude correction logic.

(5) In the level phase of align mode, the mode control logic also produces the level mode signal that is sent to lamp control logic in the control-display unit and the multiply-ΔV-by-6 signal that is sent to the ΔVx and ΔVy gain change cards in the velocity-torque logic. The mode control logic also produces the 2-minute time delay go signal that is applied to the timing logic in 2/4-minute timer circuit card to delay further action for 2 minutes.

(6) The next step is mode sequencing begins when the time delay decode (high and low) is routed to the mode control logic where it initiates another time delay reset signal, thus preparing the 2/4-minute timer logic for the next time delay.

(7) As the time delay reset signal ends, mode logic sequences to the GC1 phase of align mode, sending the 4-minute time delay go signal to 2/4-minute timer circuit card All, and the GC1 mode signal to lamp control logic in the control-display unit. There are three other signals generated by mode logic at this time: ωz gain change signal, divide heading axis earth rate correction by 5 signal, and GC loop enable signal. The ωz gain change signal is sent to the platform to increase the gain of the platform heading axis gyro pulse torquer amplifier by 5. The divide heading axis earth rate correction by 5 signal is sent to divide-by-5 circuit card A15 for the same purpose described in (4) above. The GC loop enable signal is sent to ΔVz gain change circuit card A4 to enable the azimuth velocity-torque loop.

(8) At the end of 4 minutes, the time delay decode is generated, resetting 2/4-minute timer logic, and causing mode logic to sequence to the GC2 mode.

(9) In CG2 mode, the mode logic produces the GC2 mode signal that is sent to lamp control logic in the control-display unit and the multiply-ΔV-by-3 signal that is sent to ΔVx and ΔVy gain change circuit cards A2 and A3. Mode logic remains in CG2 mode until the MODE switch is set to NAV.

(10) Auxiliary mode control signals are the cage hold, level hold, and GC1 hold. These are initiated by associated switches in the control display unit. When one of these switches (CAGE, LEVEL, or GC1) is set to HOLD, the associated signal causes mode logic to stop sequencing and remain in the corresponding mode until the switch is set to OFF.

(11) Other auxiliary mode control signals are nav cage, level fast slew, and heading fast slew. The nav cage signal is generated, together with the cage hold signal, when the CAGE switch is set to HOLD and the MODE switch is set to NAV. This combination of signals causes mode logic to return to cage phase while the platform is in the navigate mode, and remain until the CAGE switch is set to OFF. The level fast slew signal causes mode logic to produce the ready-to gyrocompass signal that is sent to the platform to initiate a gain increase in the level axis gyro pulse torquer channels. The heading fast slew signal causes mode logic to produce the ωz gain change signal that is sent to the platform to initiate a gain increase in the heading axis gyro pulse torquer channel.

(12) The 2/4-minute timer logic is a counter that is driven by either a 4.688-Hz or 2.344-Hz signal from a counter circuit card in the latitude correction logic. These signals are gated into the timing logic by either the 2or 4-minute time delay go signal, thus determining the counting rate. The higher count rate produces the time delay decode signal in 2 minutes, the lower in 4 minutes.

b. Clock Generator Logic (fig. 5-9). The clock generator is a frequency divider normally driven by the 2.4-kHz clock signal from the platform or by a 4.8-kHz signal from crystal-controlled oscillator MP5Y1 when the test set is. operated in self-test.

(1) When the test set is in platform test mode, the self-test* signal inhibits the self-test 4.8-kHz input to the frequency divider and enables the platform clock 2.4-kHz input. When the test set is in self-test mode, the self-test* signal is discontinued and the self-test +28 V switched is applied to crystal-controlled oscillator MP5Y1. Thus activated, the oscillator generates the self-test 4.8-kHz signal that is applied to clock generator circuit card A9. Within the card, this frequency is divided by 2 and applied through enabled input gates to the frequency divider.

(2) There are four outputs from clock generator circuit card A9: 150 Hz, sent to latitude correction logic counter as the drive signal; 300Hz clock 1 and 300-Hz clock 2, sent to velocity torque logic; and 2.4 kHz, generally distributed to all logic as the basic synchronizing signal.

c. Latitude Correction Logic (fig. 5-9). Latitude correction logic consists of a frequency divider made up of three circuit cards. The frequency divider is driven continuously by the 150-Hz signal from clock generator circuit card A9. The lowest frequency output (2.344 Hz) from counter no. 1 circuit card A12 drives counter no. 2 circuit card A13, and the lowest frequency output (0.0368 Hz) from counter no. 2 circuit card A13 drives counter no. 3 circuit card A14.

(1) Output logic circuitry illustrated in counter no. 1 circuit card A12 is typical of counter no. 2 and 3 circuit cards A13 and A14. This logic is divided into two groups of NAND gates connected as illustrated. Each group receives a frequency from the frequency divider logic and a control signal from the LATITUDE CORRECTION switches, LEVEL AXIS switch, or HEADING AXIS switch. Two outputs from counter no. 1 circuit card A12, 4.688 Hz and 2.344 Hz, are applied to the 2/4-minute timer in mode control logic (*a* above).

(2) LATITUDE CORRECTION switches are assemblies consisting of six eight-position, octal-coded thumbwheel switches. The coded information produced by each thumbwheel switch is applied to the counter output NAND gate logic. The coded signals select frequencies which are summed and applied as earth rate correction for level axis and heading axis. Frequencies up to 150 Hz are generated to produce earth rate corrections for all latitudes. Refer to TM 11-66252440-12 for an example of earth rate correction calculation and thumbwheel switch settings.

(3) Earth rate correction signals are applied to divide-by-5 circuit card A15. Input and output logic of this circuit card is controlled by the divide heading axis earth rate correction by 5 and the divide level axis earth rate correction by 5 signals from mode control logic. When either of these signals is present, the corresponding earth rate correction signal is routed through a frequency divider. When neither divide-by-5 signal is present, both earth rate correction signals are routed directly through divide-by-5 circuit card A15 without change. The divide-by-5 signals are produced in mode control logic: the divide level axis earth rate correction by 5 signal in the level mode and the divide heading axis

earth rate correction by 5 in the GC1 mode. Dividing earth rate by 5 in -these modes compensates for the increased gain of the platform gyro pulse torquer channels during these modes.

d. Velocity-Torque Logic (fig. 5-10). Velocity-torque logic consists of three channels of three corresponding stages each. The channels are X, Y, and Z. The stages are ΔV gain change, Δω torquer, and Δω output.

(1) The main signal inputs are the velocity pulses ±ΔVx and ±Vy from the platform. These signals are applied to the ΔVx and ΔVy gain change circuit cards A2 and A3 respectively, where they are admitted through normally enabled NAND gates to the gain change logic. A secondary path for the ΔVx and ΔVy signals is through two more NAND gates in each circuit card to Z gain change circuit card A4. These two NAND gates are enabled or inhibited by the gyro bias signals GB1 and GB2. GB1 inhibits the ΔVy NAND gate and GB2 inhibits ΔVx.

(2) Controlled by mode circuit card A10, the align*, multiply-by-6 and multiply-by-3 signals are applied to the ΔVx gain change circuit card A2 and ΔVy gain change circuit card A3. The mode control logic sequences through the modes of operation. In the align mode of operation, the align* signal changes state and enables the output NAND gates to the Δωx torquer circuit card A6 and Δωy torquer circuit card A7 and TEST SET SCAN switch. In the level and gyrocompass 1 (GC1) phases of the align mode the multiply-by-6 signal is produced, causing the gain change logic of both ΔVx and ΔVy to multiply the input velocity pulses by 6. When the mode control sequences to the gyrocompass 2 (GC2) phase of the align mode, the multiply-by-3 signal is produced, causing the ΔVx gain change circuit card A2 and ΔVy gain change circuit card A3 to multiply the input velocity pulses by 3. When the mode control logic is in the GC1 or GC2 phases of the align mode, the GC loop enable signal is applied to Z gain change circuit card A4 making it operational.

(3) Other signals applied to the gain change circuit cards are 2.4 kHz for synchronizing, and 300-Hz clock 2 for converting the ΔV pulses to a 300-Hz incremental period.

(4) The output of the ΔVx gain change circuit card A2 and ΔVy gain change circuit card A3 is a series of three or six pulses at 300 Hz for every ΔV pulse received. The output of Z gain change circuit card A4 is a series of 112 pulses at 300 Hz for every pulse received. These outputs are applied to Δω, torquer circuit cards.

(5) The Δω torquer circuit cards add earth rate correction to the velocity pulses. Like the ΔV signals, earth rate correction is also in the form of pulses. For testing. earth rate correction is a constant determined by the earth-latitude position of the test site. This value is added to the three Δω torquer circuit cards at different times during platform operation. During GB1, earth rate correction is inserted into the plus input of Δωx torquer circuit card A6; during GB2, earth rate correction is inserted into the plus input of Δωy torquer circuit card A7. For the azimuth channel, earth rate correction is inserted into the plus input of Δωz torquer circuit card A5 when the LATITUDE switch is set to NORTH and inserted into the minus input when it is set to SOUTH.

(6) Other inputs to the Δω torquer circuit cards are 300-Hz clock pulses 1 and 2. These are used in the torquer logic in adding earth rate and in producing the final output waveform.

(7) The outputs of the Δω torquers are applied to Δω output and strobe circuit card A8. Several inputs and feedbacks are required from torquer logic to torquer output logic to sustain logic interaction. The result of this interaction is the output of the output torquer logic. When there are no ΔV or earth rate correction inputs to the torquer cards, the outputs of output and strobe circuit card A8 are 150-Hz square waves. When ΔV and earth rate correction inputs are present, the output logic levels correspond in duration to the sum of the inputs. For a +ΔV, the level is low; for a -ΔV, the level is high.

(8) The output of the torquer output logic is applied to NAND gate switches that are controlled by the slew signals from PLATFORM SLEW switches in the control-display unit. The application of a plus slew signal overrides the output of the torquer logic and produces a low level output from the circuit card. A minus slew signal is a similar way produces a high-level output.

(9) The output of the torquer output logic is also applied to another NAND gate that is strobed by the 300-Hz clock signal. The output of this NAND gate (Δω strobed) is sent to the TEST SET SCAN switch.

(10) Self-test logic consists of ΔV self-test circuit card Al which generates simulated ΔV pulses for testing the velocity-torque logic. The

ΔV self-test signals from the SIGNAL INPUT switch activates relays in the ΔV self-test circuit card. The contacts of these relays route the outputs of 1-Hz oscillators through inverters as ΔV self-test pulses.

e. Signal Selection Switches (fig. 5-11).

(1) *MONITOR SELECT switches.* The test set has three MONITOR SELECT switches used for scanning the test points of the test set and the platform. These are the TEST SET SCAN switch, PLATFORM SCAN switch. and SCAN SELECT switch. The SCAN SELECT switch has four positions used with the TEST SET SCAN switch, four positions used with the PLATFORM SCAN switch, and an OFF position. The total number of test points that can be scanned by the MONITOR SELECT switches is 68 in the test set and 68 in the platform, though all positions of the switches are not used.

(a) PLATFORM SCAN switch. Each wafer of the PLATFORM SCAN switch is used to select a certain category of voltages. The selected voltage is routed to one or more wafers of SCAN SELECT switch which routes it to an appropriate test connector or combination of test connectors. The E-wafer of the PLATFORM SCAN switch selects appropriate returns for the signal applied to PH ANGLE VM connector J4.

(b) *TEST SET SCAN switch.* The TEST SET SCAN switch is functionally identical to the PLATFORM SCAN switch. The voltages selected by this switch are routed through SCAN SELECT switch to SCOPE connector J5 and COUNTER connector J1; the returns for these connectors are grounded. This switch also produces the lamp driver test signal that is sent to lamp control logic in the control-display unit.

(c) MONITOR SELECT functions chart. The charts that follow list combinations of MONITOR SELECT switch positions, signals monitored, and monitoring instruments.

1. MONITOR SELECT functions, TEST SET SCAN.

SCAN SELECT switch position	Monitoring instrument	TEST SET SCAN switch position	Signal
DISCRETES	Differential voltmeter and oscilloscope	OFF	
		1	+5
		2	+15 V
		3	-15 V
		4	Time delay reset
		5	2-minute time delay go
		6	2/4-minute time delay reset
		7	
		8	4-minute time delay go
		9	2/4-minute time delay stop
		10	4-minute time delay go
		11	Multiply ΔV by 3
		12	Multiply ΔV by 6
		13	
		14	+5 V
		15	
		16	
		17	Self-test +28 V switched
CHAN X	Oscilloscope and counter	OFF	
		1	+ΔVx self-test
		2	-ΔVx self-test
		3	+ΔVx test point
		4	-ΔVx test point
		5	+ΔVx update
		6	-ΔVx update
		7	Δωx strobed
		8	
		9	
		10	Level axis earth rate correction
		11	
		12	
		13	
		14	
		15	

SCAN SELECT switch position	Monitoring instrument	TEST SET SCAN switch position	Signal
CHAN X-Continued		16	
		17	
CHAN Y	Oscilloscope and counter	OFF	
		1	-ΔVy self-test
		2	+ΔVy self-test
		3	-ΔVy test point
		4	+ΔVy test point
		5	+ΔVy update
		6	-ΔVy update
		7	Δωy strobed
		8	
		9	
		10	
		11	
		12	
		13	
		14	
		15	
		16	
		17	
CHAN Z	Oscilloscope and counter	OFF	
		1	+ΔVgc
		2	-Δgc
		3	Heading axis earth rate correction
		4	+ΔVgc update
		5	-ΔVgc update
		6	Δωz strobed
		7	300-Hz clock 1
		8	300-Hz clock 2
		9	150 Hz
		10	2.4 kHz
		11	4.688 Hz
		12	2.344 Hz
		13	
		14	
		15	
		16	
		17	

2. MONITOR SELECT functions, PLATFORM SCAN.

SCAN SELECT switch position	Monitoring instrument	TEST SET SCAN switch position	Signal
AC VOLTS	Phase angle voltmeter, oscilloscope, counter, and recorder	OFF	
		1	115 V, 400 Hz, A-phase
		2	115 V, 400 Hz, B-phase
		3	115 V, 400 Hz, C-phase
		4	26 V, 400 Hz (high)
		5	23.5 V, 400 Hz (high)
		6	26 V, 400 Hz, ∠0°
		7	26 V, 400 Hz, ∠90°
		8	Ambient heater reference
		9	+7.5 V, 4.8 kHz
		10	-7.5 V, 4.8 kHz
		11	26 V, 4.8 kHz (low)
		12	26 V, 4.8 kHz (high)
		13	Ambient heater monitor
		14	Stable element heater monitor
		15	Stable element heater reference

SCAN SELECT switch position	Monitoring instrument	TEST SET SCAN switch position	Signal
AC VOLTS-Continued			
		16	
		17	
DC VOLTS	Differential voltmeter	OFF	
		1	+28 V
		2	+24 V auxiliary
		3	+28 V switched
		4	+30 V
		5	-30 V
		6	+28 V regulated
		7	-28 V regulated
		8	+ 15 V precision
		9	-15 V precision
		10	+5 V regulated
		11	Gyro spin dc
		12	+48 V floating
		13	Azimuth cage error
		14	
		15	X-accelerometer bias
		16	Y-accelerometer bias
		17	
A	Oscilloscope	OFF	
		1	Off*
		2	Standby/off
		3	High heat on
		4	Coarse heaters on
		5	Platform over-temperature
		6	Magnetic heading servo go
		7	Platform go
		8	Platform monitor
		9	Platform ready
		10	
		11	ωz gain change
		12	Ready to gyrocompass
		13	Navigate
		14	
		15	Mode control
		16	Gyro spin amplitude control
		17	Platform monitor inhibit
B	Oscilloscope and counter	OFF	
		1	115.2/2.4 kHz
		2	2.4-kHz clock
		3	Δωx
		4	Δωy
		5	Δωz
		6	+ ΔVx
		7	-ΔVx
		8	-Δy
		9	+ΔVy
		10	
		11	
		12	ωx
		13	ωy
		14	ωz
		15	
		16	
		17	

(2) *SYNCHRO SELECT switch*. The SYNCHRO SELECT switch selects synchro signals from the platform and routes them to SYNC BRDG connector J3. Proper loads for the synchros are contained in recorder filter and synchro load board circuit card and chassis-mounted components.

(3) SIGNAL INPUT switch. The SIGNAL INPUT switch is wired to an 800-Hz magnetic heading excitation signal from the control-display unit to simulated magnetic heading signals. These signals simulate headings of 0, 60, 120, 180, 240, and 300 degrees. The SIGNAL INPUT switch also routes the ΔV self-test signals (+28 V switched) to ΔV self-test circuit card Al.

(4) *RECORDER ACCESS switches*. The RECORDER ACCESS switches consist of LOW GAIN switch, HIGH GAIN switch, and PSD (phase-sensitive demodulator) switch. Each switch is a two-position toggle switch that, in the OPERATE position, routes its associated signal to a corresponding recorder outlet, or in the ZERO REF position, shorts these test outlets to zero the recorder.

(*a*) LOW GAIN switch routes relatively low-level acceleration signals Ax and Ay to LOW GAIN connector J10.

(*b*) HIGH GAIN switch routes relatively high-level acceleration signals Ax and Ay through filters in recorder filter and synchro load board circuit card to HIGH GAIN connector J8.

(*c*) PSD switch routes the true heading signal from the platform to the PSD connector J9. The phase-sensitive demodulator of the recorder converts this signal to direct current for use by the recorder. Reference 26 V, 400 Hz is also applied to connector J9 to operate the phase sensitive demodulator.

CHAPTER 3

GENERAL SUPPORT MAINTENANCE

Section I. GENERAL

3-1. Scope of General Support Maintenance

General support maintenance consists of troubleshooting the test set for malfunctions that were not isolated by self-test and troubleshooting procedures described in TM 11-6625-2440-12.

3-2. Tools, Test Equipment, and Materials Required

In addition to the tools, test equipment, and materials listed in TM 11-6625-2440-12, Multimeter AN/USM-223, or equivalent, sealing compound MILS-22473GC, and the tools listed in the following chart are required.

Tools	Part no.	Use
Wire stripper	GGG-S-793A	Removing insulation from wires
Crimping tool	MH750 (Daniels)	Attaching wire to pins on Bendix and Hughes type connectors
Contact locator head	11-8673-6 (Bendix)	Used in conjunction with removal tool 11-8675-22 and insertion tool 11-8674-22
Removal tool	TW022RT000 (Hughes)	Removing pins from Hughes type connectors
Insertion tool	TW0221T000	Inserting pins in Hughes type connectors
Crimping tool	48698	Attaching wires to taper pins
Removal tool	380305-1	Removing taper pins from terminal block
Insertion tool	380310-2	Inserting taper pins in terminal block
Extractor-locator tool	69357-5 (AMP)	Removing clip from AMP type connector pins; relocating clips and wires still attached to connector pins
Insertion tool	69514 (AMP)	Inserting replacement pins in AMP type connectors
Termi-Point service tool	69535 (AMP)	Attaching wires to AMP type connector pins using clips
Wire stripper	Model 100 (K. Miller)	Cutting wire in preparation for attachment to AMP type connector pins
Mandrel	69545-1 (AMP)	Used with Termi-Point service tool to accommodate 28-gage wire and AMP 67042-2 clip

Section II. TROUBLESHOOTING

3-3. General

a. In the following paragraphs, it is assumed that the troubleshooting procedures in TM 116625-2440-12 have failed to correct the trouble; therefore, the trouble is in the components, wiring, or connectors. The following procedure includes use of the self-test procedure in TM 11-6625-2440-12 to isolate trouble to a specific area of the test set, visual inspection, and standard troubleshooting techniques to locate the specific defective part.

b. Repairs are accomplished by replacement or repair of the defective part. After repair, the selftest which resulted in the abnormal indication is repeated to verify that the trouble has been corrected.

3-4. Troubleshooting Procedures

a. Perform the self-test that revealed the malfunction. Refer to the foldout illustrations in chapter 5 to locate the area of malfunction.

b. Visually inspect the unit to see whether

faults can be localized without further troubleshooting. Electrical and mechanical connections, condition of wires, components, modules, and assemblies; contamination such as dirt, fungus, corrosion, or debris; cracks in metal and components should be given special attention. The following chart is provided as a guide, but is not a complete inspection list.

Items	*Possible defects*
Connectors	Loose, bent, corroded, broken or missing pins; cracked, chipped, or broken insulation; damaged or stripped threads on polarity pins.
Hardware	Loose SCREWS or threaded assemblies. Incorrect screw length. Missing screws, nuts, bolts, rivets, washers, lockwashers, spacers, or nutplates; screws, nuts, or bolts damaged or stripped threads.
Resistors	Damaged or broken leads; cracked, chipped, or broken surfaces; illegible, obliterated, or missing color code values.
Solder connections	Missing, insufficient, or excess solder; cold or crystalline solder connections.
Wires	Pinched, stretched, or damaged; cult, burned, or abraded insulation exposing bare wire; loose or miss-inz lacing; loose or missing cable clamps.
Equipment, general	Dust, dirt, lint, solder flux, spattered solder, metal chips, filings, or particles; any other foreign matter.

c. If the visual inspection failed to isolate the malfunction, use the foldout illustrations (ch 5), the wire lists (app B to be published later), and standard troubleshooting techniques to isolate the malfunction.

d. Correct malfunction by replacement or repair of the defective part. (Refer to removal and replacement procedures, section III.)

e. After completion of the corrective action, repeat the self-test which resulted in the abnormal indication to verify that the trouble has been corrected.

Section III. REMOVAL AND REPLACEMENT

3-5. Control-Display Unit 1Al Components, Removal and Replacement

(fig. 3-1)

When circuit breakers, switches, indicators, connectors, and chassis-mounted components on the control-display unit are similar, the removal and replacement of a typical component is described. If applicable, tag and unsolder or disconnect wires prior to removing components. Refer to paragraph 3-8 for removal of connector contacts. Refer to TM 11-6625-2440-12, for control-display unit chassis removal and replacement.

NOTE

When replacing attaching hardware, use sealing compound when a mechanical locking device (lockwasher, locknut, etc.) is not specified.

a. Heading Simulator B1.

(1) *Removal*. Remove four screws (1), locknuts (2), and flatwashers (3); remove synchro control transformer (4).

(2) *Replacement*. Secure synchro control transformer (4) by replacing four screws (1), flatwashers (3), and locknuts (2).

b. Dual-Lamp Indicators DS3 through DS10.

(1) *Removal*. Remove two screws (5) to release legend plateholder (6), legend plate (7), and gasket (8); remove two filters (9) and pull lamps (10) from socket. Remove two screws (11), flatwashers (12), and bushings (13); remove indicator base (14).

(2) *Replacement*. Secure indicator base (14) by replacing two bushings (13), flatwashers (12), and screws (11). Place two lamps (10) in socket and install filters (9); secure gasket (8), legend plate (7), and legend plateholder (6) by replacing two screws (5).

c. Single-Lamp Indicators DS1 and DS2.

(1) *Removal*. Unscrew lens (15) and remove lamp (16) from lens. Remove nut (17) and lockwasher (18); remove indicator base (19).

(2) *Replacement*. Secure indicator base (19) with lockwasher (18) and nut (17). Replace lamp (16) in lens (15) and screw lens into indicator base.

d. Single-Lamp Indicators DSI1 through DS15.

(1) *Removal*. Unscrew lens (20) and remove lamp (21) from lens. Remove nut (22), rubber washer (23), lockwasher (24), and nut (25); remove indicator base (26).

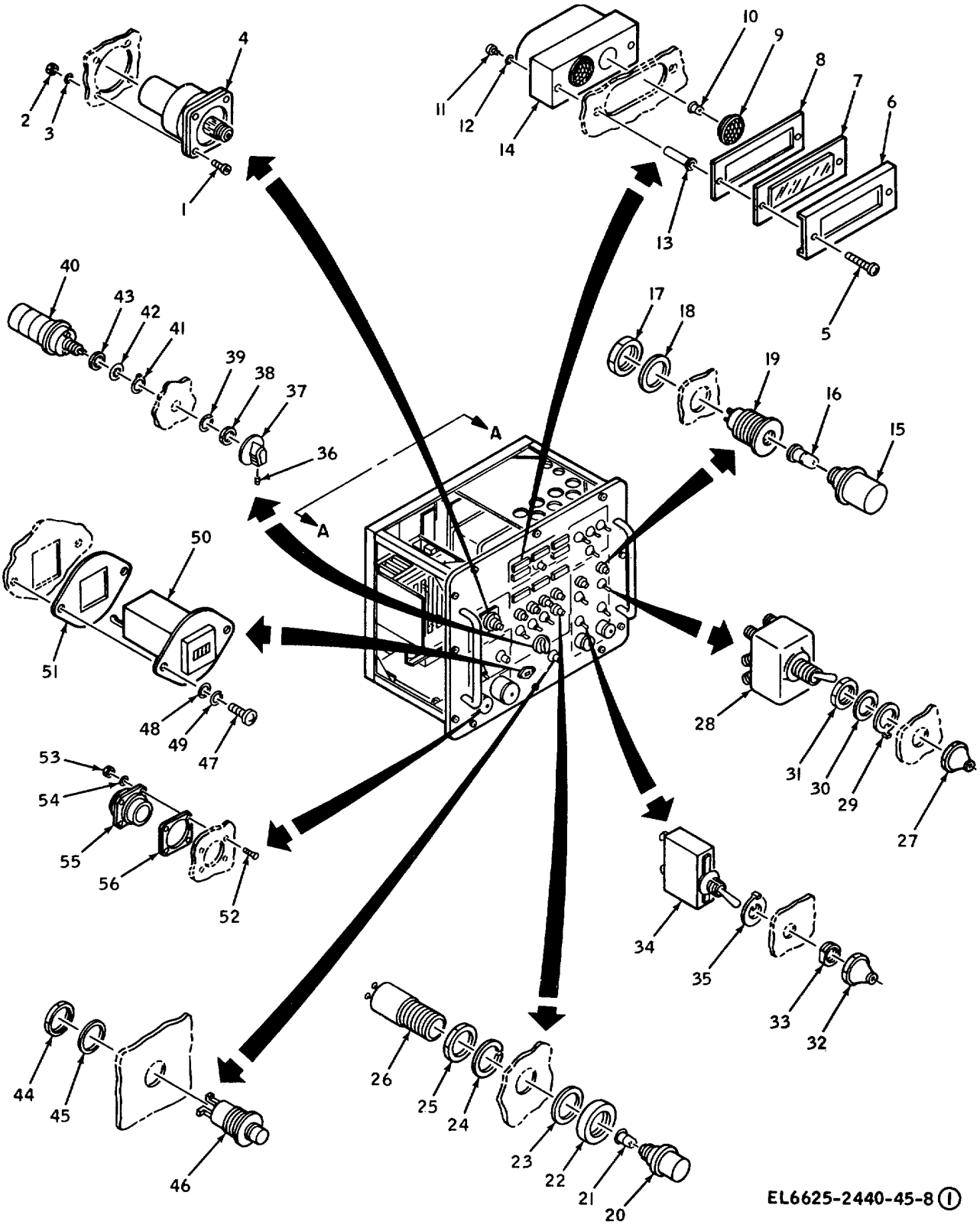

Figure 3-1 (1). Removal and replacement of control-display unit components (part 1 of 2).

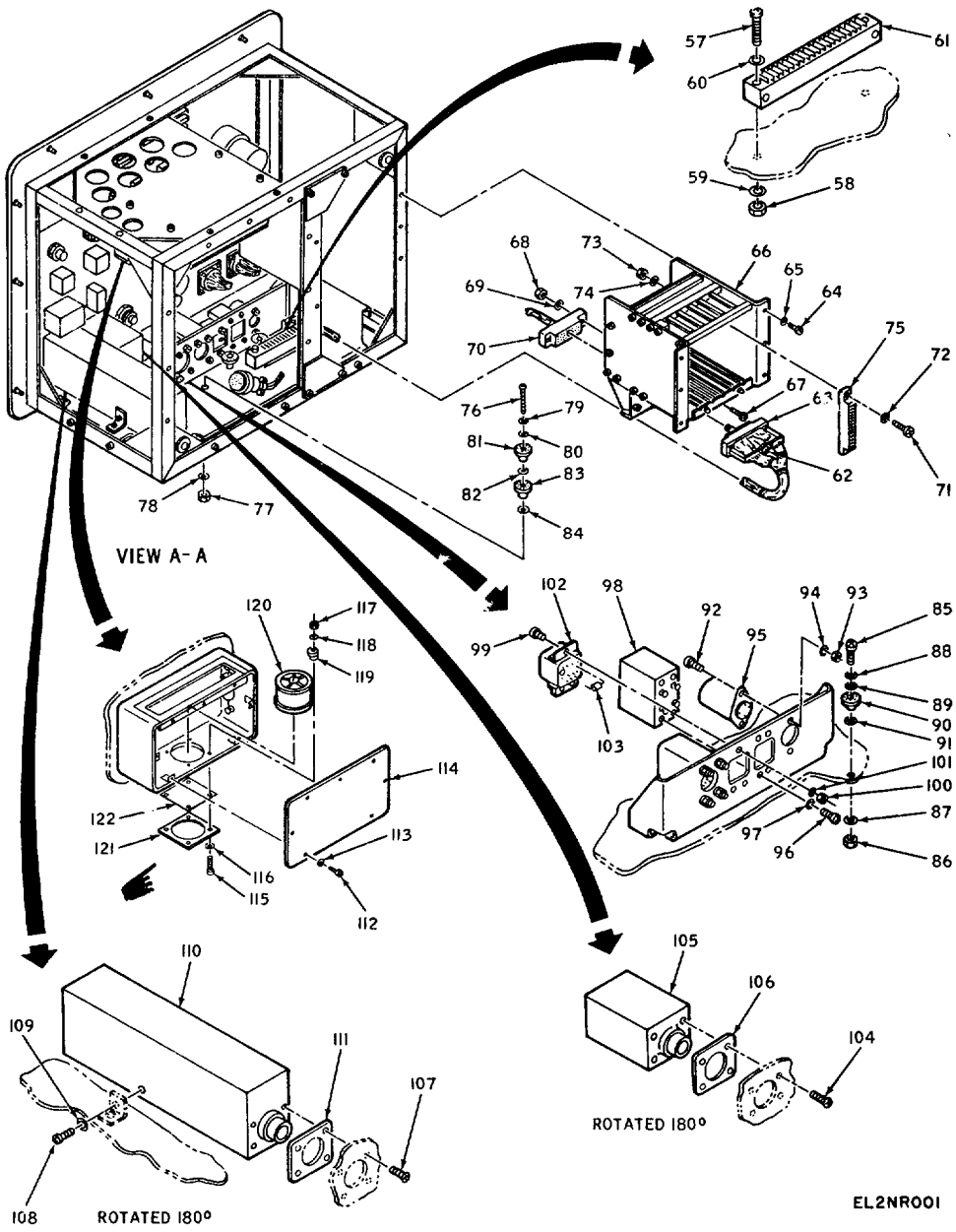

Figure 3-1 (2) . Removal and replacement of control-display unit components (sheet 2 of 2).

1 Screw (4)
2 Locknut (4)
3 Flatwasher (4)
4 Synchro control transformer
5 Screw (2)
6 Legend plateholder
7 Legend plate
8 Gasket
9 Filter (2)
10 Lamp (2)
11 Screw (2)
12 Flatwasher (2)
13 Bushing (2)
14 Indicator base
15 Lens
16 Lamp
17 Nut
18 Lockwasher
19 Indicator base
20 Lens
21 Lamp
22 Nut
23 Rubber washer
24 Lockwasher
25 Nut
26 Indicator base
27 Boot adapter
28 Toggle switch
29 Keywasher
30 Lockwasher
31 Nut
32 Boot adapter
33 Nut
34 Circuit breaker
35 Keywasher
36 Setscrew (2)
37 Knob
38 Nut
39 Lockwasher
40 Rotary switch
41 Keywasher
42 Lockwasher
43 Nut
44 Nut
45 Lockwasher
46 Pushbutton switch
47 Screw (2)
48 Flatwasher (2)
49 Lockwasher (2)
50 Elapsed-time meter
51 Gasket
52 Screw (4)
53 Locknut (4)
54 Flatwasher (4)
55 Connector
56 Gasket
57 Screw (2)
58 Locknut (2)
59 Flatwasher (2)
60 Flatwasher (2)
61 Terminal block
62 Retaining screw
63 Connector
64 Screw (6)
65 Lockwasher (6)
66 Card cage assembly
67 Screw (2)
68 Locknut (2)
69 Flatwasher (2)
70 Connector
71 Screw (2)
72 Flatwasher (2)
73 Locknut (2)
74 Flatwasher (2)
75 Connector
76 Screw
77 Locknut
78 Flatwasher
79 Flatwasher
80 Insulating washer
81 Ground stud
82 Insulating washer
83 Ground stud
84 Insulating washer
85 Screw
86 Locknut
87 Flatwasher
88 Flatwasher
89 Insulating washer
90 Ground stud
91 Insulating washer
92 Screw (2)
93 Locknut (2)
94 Flatwasher (2)
95 Transformer
96 Screw (4)
97 Lockwasher (4)
98 Transformer
99 Screw (4)
100 Locknut (4)
101 Flatwasher (4)
102 Relay
103 Diode
104 Screw (4)
105 Filter
106 Gasket
107 Screw (4)
108 Screw (4)
109 Lockwasher (2)
110 Filter
111 Gasket
112 Screw (7)
113 Flatwasher (7)
114 Cover
115 Screw (4)
116 Flatwasher (4)
117 Locknut (4)
118 Flatwasher (4)
119 Clamp (4)
120 Blower
121 Retaining ring
122 Blower guard

Figure 3-1-Continued.

(2) *Replacement.* Secure indicator base (26) by replacing nut (25), lockwasher (24), rubber washer (23), and nut (22). Replace lamp (21) in lens (20) and screw lens into indicator base.

e. Toggle Switches S1, S2, S5 through S12, and S14.

(1) *Removal.* Unscrew boot adapter (271 and remove toggle switch (28), keywasher (29), lockwasher (30), and nut (31).

(2) *Replacement.* Replace nut (31), lockwasher (30), and keywasher (29) on toggle switch (28); secure toggle switch by replacing boot adapter (27).

f. Circuit Breakers CB1 and CB2.

(1) *Removal.* Unscrew boot adapter (32) and remove nut (33), circuit breaker (34), and keywasher (35).

(2) *Replacement.* Place keywasher (35) on circuit breaker (34); secure circuit breaker (34) by replacing nut (33) and boot adapter (32).

g. Rotary Switch S3.

(1) *Removal.* Loosen two setscrews (36) and remove knob (37); remove nut (38), lockwasher (39), rotary switch (40), keywasher (41), lockwasher (42), and nut (43).

(2) Replacement. Replace nut (43), lockwasher (42), and keywasher (41) on rotary switch (40). Secure rotary switch by replacing lockwasher (39) and nut (38); secure knob (37) by tightening two setscrews (36).

h. Pushbutton Switches S4, S7, and S13.

(1) *Removal.* Remove nut (44) and lockwasher (45) remove pushbutton switch (46).

(2) *Replacement.* Secure pushbutton switch (46) by replacing lockwasher (45) and nut (44).

i. Elapsed-Time Meter M1.

(1) *Removal.* Remove two screws (47), flatwashers (48), and lockwashers (49); remove elapsed-time meter (50) and gasket (51).

(2) *Replacement* Replace gasket (51) and elapsed time meter (50); secure by replacing two lockwashers (49), flatwashers (48), and screws (47).

j. Connectors J3 and J4.

(1) *Removal.* Remove four screws (52), locknuts (53), and flatwashers (54); remove connector (55) and gasket (56).

(2) *Replacement.* Replace gasket (56) and connector (55); secure by replacing four screws (52), flatwashers (54), and locknuts (53).

k. Terminal Block TB1.

(1) *Removal.* Remove two screws (57), locknuts (58), flatwashers (59), and flatwashers (60); remove terminal block (61).

(2) *Replacement*. Secure terminal block (61) bv replacing two flatwashers (60), screws (57), flatwashers (59), and locknuts (58).

l. Connector P2.

(1) *Removal*. Loosen retaining screw (62) and remove connector (63).

(2) *Replacement*. Secure connector (63) by tightening retaining screw (62).

m. Card Cage Assembly MP3.

NOTE

Connector P2 must be removed before ,removing card cage assembly MP3.

(1) *Removal*. Remove circuit cards (TM 11-6625-2440-12). Remove six screws (64) and lockwashers (65); remove card cage assembly (66).

(2) *Replacement*. Secure card cage assembly (66) by replacing six lockwashers (65) and screws (64). Replace circuit cards (TM 11-662.52440-12).

n. Card Cage Connector MP3J5.

NOTE

Connector P2 must be removed before removing card cage connector MP3J5.

(1) *Removal*. Remove two screws (67), locknuts (68), and flatwashers (69); remove connector (70).

(2) *Replacement*. Secure connector (70) by replacing two screws (67), flatwashers (69), and locknuts (68).

o. Circuit Card Mating Connectors MP3XA1 through MP3XA4.

(1) *Removal*. Remove circuit cards (TM 6625-2440-12) as required. Remove two screws (71), flatwashers (72), locknuts (73), and flatwashers (74); remove connector (75).

(2) *Replacement*. Secure connector (75) by replacing two flatwashers (72), screws (71), flatwashers (74), and locknuts (73). Replace circuit cards (TM 11-6625-2440-12).

p. Bus Bar W1 and W2.

(1) *Removal*. Remove screw (76), locknut (77), flatwasher (78), flatwasher (79), insulating washer (80), ground stud (81), insulating washer (82), ground stud (83), and insulating washer (83).

(2) *Replacement*. Replace insulating washer (84), ground stud (83), insulating washer (82), ground stud (81), insulating washer (80), flat washer (79), screw (76), flatwasher (78), and locknut (77).

q. Bus Bar W3, W4, and W5.

(1) *Removal*. Remove screw (85), locknut (86), flatwasher (87), flatwasher (88), insulating washer (89), ground stud (90), and insulating washer (91).

(2) *Replacement*. Replace insulating washer (91), ground stud (90), insulating washer (89), flatwasher (88), screw ’85), flatwasher (87), and locknut (86).

r. Transformer T2

(1) *Removal*. Remove two screws (92), locknuts (93), and flatwashers (94); remove transformer (95).

(2) *Replacement*. Secure transformer (95) by replacing two screws (92), flatwashers (94), and locknuts (93).

s. Transformer T1.

(1) *Removal*. Remove four screws (96) and lockwashers (97); remove transformer (98).

(2) *Replacement*. Secure transformer 38 by replacing four lockwashers (97) and screws (96).

t. Relay K1 and K2.

(1) *Removal*. Remove four screws (99), locknuts (100), and flatwashers (101); remove relay (102).

(2) *Replacement*. Secure relay (102) by replacing four screws (99), flatwashers (101), and locknuts (100).

u. Diode CR1.

(1) *Removal*. Remove diode (103) using standard maintenance practices.

(2) *Replacement*. Replace diode (103) using standard maintenance practices.

v. Filter FL2.

(1) *Removal*. Remove four screws (104); remove filter (105) and gasket (106).

(2) *Replacement*. Replace gasket (106) and filter (105); secure by replacing four screws (104).

w. Filter FL1.

(1) *Removal*. Remove four screws (107), two screws (108), and lockwashers (109); remove filter (110) and gasket (111).

(2) *Replacement*. Replace gasket (111) and filter (110); secure by replacing two screws

(108) and lockwashers (109) and four screws (107).

x. Blower B2.

(1) *Removal*. Remove seven screws (112) and flatwashers (113); remove cover (114); remove four screws (115), flatwashers (116), locknuts (117), flatwashers (118), and clamps (119); remove blower (120), retaining ring (121), and blower guard (122).

(2) *Replacement*. Secure blower guard (122), retaining ring (121), and blower (120) by replacing four flatwashers (116), screws (115), clamps (119), flatwashers (118), and locknuts (117); secure cover (114) by replacing seven flatwashers (113) and screws (112).

3-6. Electronics Unit 2A1 Components, Removal and Replacement

(fig. 3-2)

When circuit breakers, switches, connectors, and chassis-mounted components on the electronics unit are similar, the removal and replacement of a typical component is described. If applicable, tag and unsolder or disconnect wires prior to removing components. Refer to paragraph 3-8 for removal of connector contacts. Refer TM 11-6625-2440-12 for electronics unit chassis removal and replacement.

NOTE

When replacing attaching hardware, use sealing compound when a mechanical locking device (lockwasher, locknut, etc.) is not specified.

a. Connectors J1 through J12.

(1) *Removal*. Remove four screws (1), locknuts (2), and flatwashers (3); remove connector (4) and gasket (5).

(2) *Replacement*. Replace gasket (5) and connector (4); secure by replacing four screws (1), flatwashers (3), and locknuts (2).

b. Toggle Switches S8, S9, and S10.

(1) *Removal*. Unscrew boot adapter (6); remove toggle switch (7), keywasher (8), lockwasher (9), and nut (10).

(2) *Replacement*. Replace nut (10), lockwasher (9), and keywasher (8) on toggle switch (7); secure toggle switch by replacing boot adapter (6).

c. Rotary Switches S1 through S5.

(1) *Removal*. Loosen setscrew (11) and remove knob (12); remove nut (13), lockwasher (14), flatwasher (15), and rotary switch (16).

(2) *Replacement*. Secure rotary switch (16) by replacing flatwasher (15), lockwasher (14), and nut (13); secure knob (12) by tightening setscrew (11).

d. Elapsed-Time Meter M1

(1) *Removal*. Remove two screws (17), flatwashers (18), and lockwashers (19); remove elapsed-time meter (20) and gasket (.)

(2) *Replacement*. Replace gasket (21) and elapsed-time meter (20); secure by replacing two lockwashers 919) flatwashers (18) and screws (17).

e. Switch Cover MP12.

(1) *Removal*. Remove six screws (22) and spacers (23); remove switch covers (24) and shim (25).

(2) *Replacement*. Replace shim (25) and switch cover (24); secure by replacing six spacers (23) and screws (22).

f. Rotary Thumbwheel Switches S6 and S7.

(1) *Removal*. Remove four screws (26) and flatwashers (27); remove rotary thumbwheel switch (28).

(2) *Replacement*. Secure rotary thumbwheel switch (28) by replacing six flatwashers (27) and screws (26).

g. Circuit Breakers CB1 through CB4.

(1) *Removal*. Unscrew boot adapter (29); remove circuit breaker (30), keywasher (31), lockwasher (32), and nut (33).

(2) *Replacement*. Replace nut (33), lockwasher (32), and keywasher (31); secure circuit breaker (30) by replacing boot adapter (29).

h. Circuit Card Connector XA17.

(1) *Removal*. Remove two screws (34), flatwashers (35), locknuts (36), and flatwashers (37); remove connector (38).

(2) *Replacement*. Secure connector (38) by replacing two flatwashers (35), screws (34), flatwashers (37), and locknuts (36).

i. Bus Bar W11 and W12.

(1) *Removal*. Remove screw (39), locknut (40), flatwashers (41 and 42), insulating washer (43), ground stud (44), insulating washer (45), and ground stud (46).

(2) *Replacement*. Replace ground stud (46), insulating washer (45), ground stud (44) insulating washer (43), flatwasher (42), screw (39), flatwasher (41), and locknut (40).

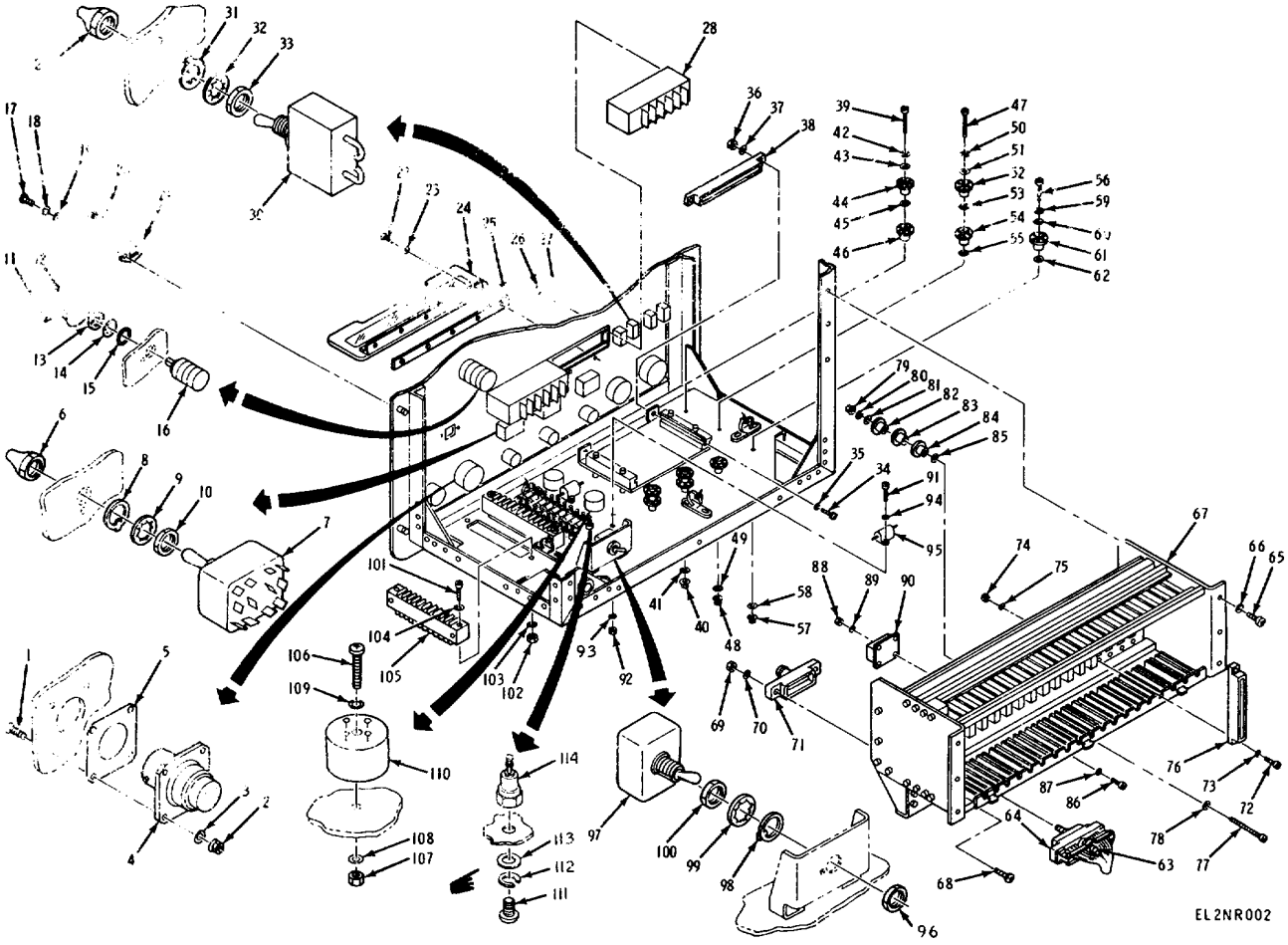

Figure 3-2. Removal and replacement of electronics unit chassis-mounted components.

1 Screw (4)
2 Locknut (4)
3 Flatwasher (4)
4 Connector
5 Gasket
6 Boot adapter
7 Toggle switch
8 Keywasher
9 Lockwasher
10 Nut
11 Setscrew
12 Knob
13 Nut
14 Lockwasher
15 Flatwasher
16 Rotary switch
17 Screw (2)
18 Flatwasher (2)
19 Lockwasher (2)
20 Elapsed-time meter
21 Gasket
22 Screw (6)
23 Spacer (6)
24 Switch cover
25 Shim
26 Screw (4)
27 Flatwasher (4)
28 Rotary thumbwheel switch
29 Boot adapter
30 Circuit breaker
31 Keywasher
32 Lockwasher
33 Nut
34 Screw (2)
35 Flatwasher (2)
36 Locknut (2)
37 Flatwasher (2)
38 Connector
39 Screw
40 Locknut
41 Flatwasher
42 Flatwasher
43 Insulating washer
44 Ground stud
45 Insulating washer
46 Ground stud
47 Screw
48 Locknut
49 Flatwasher
50 Flatwasher
51 Insulating washer
52 Ground stud
53 Insulating washer
54 Ground stud
55 Insulating washer
56 Screw
57 Locknut
58 Flatwasher
59 Flatwasher
60 Insulating washer
61 Ground stud
62 Insulating washer
63 Retaining screw
64 Connector
65 Screw (6)
66 Flatwasher (6)
67 Card cage assembly
68 Screw (2)
69 Locknut (2)
70 Flatwasher (2)
71 Connector
72 Screw (2)
73 Flatwasher (2)
74 Locknut (2)
75 Flatwasher
76 Connector
77 Screw
78 Flatwasher
79 Locknut
80 Flatwasher
81 Insulating washer
82 Ground stud
83 Ground stud
84 Ground stud
85 Insulating washer
86 Screw
87 Flatwasher
88 Locknut
89 Flatwasher
90 Oscillator
91 Screw (2)
92 Locknut (2)
93 Flatwasher (2)
94 Flatwasher (2)
95 Resistor
96 Nut
97 Toggle switch
98 Keywasher
99 Lockwasher
100 Nut
101 Screw (2)
102 Locknut (2)
103 Flatwasher (2)
104 Flatwasher (2)
105 Terminal block
106 Screw
107 Nut
108 Flatwasher
109 Flatwasher
110 Transformer
111 Screw
112 Lockwasher
113 Flatwasher
114 Standoff

Figure 3-2-Continued.

j. Bus Bars W1 through W4, W9, and W10.

(1) Removal. Remove screw (47), locknut(48), flatwashers (49 and 50), insulating washer 151), ground stud (52), insulating washer (53), ground stud (54), and insulating washer (55).

(2) Replacement. Replace insulating washer (55), ground stud (54), insulating washer (53), ground stud (52), insulating washer (51), flatwasher (50), screw (47), flatwasher (49), and locknut (48).

k. Bus Bar W5 and W6.

(1) . Remove screw (56), locknut (57), flatwashers (58 and 59), insulating washer (60), ground stud (61), and insulating washer (62).

(2) Replacement. Replace insulating washer (62), ground stud (61), insulating washer (60), flatwasher (59), screw (56), flatwasher (58), and locknut (57).

l. Connector P1 and P2.

(1) Removal. Loosen retaining screw (63) and remove connector (64).

(2) Replacement. Secure connector (64) by tightening retaining screw (63).

m. Card Cage Assembly MP5.

NOTE

Connectors P1 and P2 must be removed before removing card cage assembly MP5.

(1) *Removal.* Remove circuit cards (TM 66252440-12). Remove six screws (65) and flatwashers (66); remove card cage assembly (67).

(2) Replacement. Secure card cage assembly (67) by replacing six flatwashers (66) and screws (65). Replace circuit cards (TM 6625-2440-12).

n. Card Cage Connector MP5J13 and MPSJ14.

NOTE

Connectors P1 and P2 must be removed before removing card cage connectors MP5J13 and MP5J14.

(1) Removal. Remove two screws (68), locknuts (69), and flatwasher (70); remove connector (71).

(2) Replacement. Secure connector (71) by replacing two screws (68), flatwashers (70), and locknuts (69).

o. Circuit Card Mating Connectors MP5XA1 through MP5XA16.

(1) Removal. Remove circuit cards (TM 66252440-12) as required. Remove two screws (72), flatwashers (73), locknuts (74), and flatwashers (75); remove connector (76).

(2) Replacement. Secure connector (76) by replacing two flatwashers (73), screws (72), flatwashers (75), and locknuts (74). Replace circuit cards (TM 6625-2440-12).

p. Bar MP5W7 and MP5W8.

(1) Removal. Remove screw (77), flatwasher (78), locknut (79), flatwasher (80), insulating washer (81), ground studs (82, 83, and 84), and insulating washer (85).

(2) Replacement. Replace flatwasher (78),

screw (77) insulating washer (85), ground studs (84, 83, and 82), insulating washer (81), flatwasher (80), and locknut (79).

q. Oscillator MP5Y1.

(1) Removal. Remove screw (86), flatwasher (87), locknut (88), and flatwasher (89); remove oscillator (90).

(2) Replacement. Secure oscillator (90) by replacing flatwasher (87), screw (86), flatwasher (89), and locknut (88).

r. Resistors RI and R2.

(1) Removal. Remove two screws (91), locknuts (92), flatwashers (93), and flatwasher (94); remove resistor (95).

(2) Replacement. Secure resistor (95) by replacing two flatwashers (94), screws (91, flatwashers (93), and locknuts (92).

s. Toggle Switch S11.

(1) Removal. Remove nut (96), toggle switch (97), keywasher (98), lockwasher (99), and nut (100).

(2) Replacement. Replace nut (100), lockwasher (99), and keywasher (98) on toggle switch (97); secure toggle switch by replacing nut (96).

t. Terminal Blocks TB1 and TB2.

(1) Removal. Remove two screws (101), locknuts (102), flatwashers (103), and flatwashers (104); remove terminal block (105).

(2) Replacement. Secure terminal block (105) by replacing two flatwashers (104), screws (101), flatwashers (103), and locknuts (102).

u. Transformers TI and T2.

(1) Removal. Remove screw (106), nut (107), flatwashers (108 and 109); remove transformer I110).

(2) Replacement. Secure transformer (110) by replacing flatwasher (109), screw (106), flatwasher (108) and nut (107).

v. Standoffs E2 through E19.

(1) Removal. Remove screw (111), lockwasher 112), and flatwasher (113): remove standoff (114).

(2) Replacement. Secure standoff (114) bye replacing flatwasher (113), lockwasher (112) and screw (111).

3-7. Special Purpose Electrical Cable Assembly Connectors, Removal and Replacement.

(fig. 3-3)

This paragraph covers the removal and replacement of connectors that are not military standard types. The nonmilitary standard type connectors are 1W9P2, 1W9P3, lWl1P1, 1W11P2 through 1WllP5, 1W12P2, 1W12P3, 2W6P2, 2W8P2, 2W8P3, 2W10P2, and 2W10P3. Figure 3-3 illustrates the configuration of the connectors listed. To remove and replace these connectors, use standard maintenance practices.

3-8. Connector Repair

This paragraph describes the repair of reparable connectors that are not military standard types.

a. Repair of Card Cage Assembly Connectors 1A1P2 and 1A1MP3J5 and Connectors 2A1P1, 2A1P2, 2A1MP&J13, and 2A1MP3J14.

(1) Identify damaged contact(s) and tag wire(s) at harness.

(2) Using removal tool TW022RTOOO, remove damaged contact(s) from connectors(s).

(3) Remove damaged contact(s) from wire(s).

(4) Using GGG-S-793A wire stripper, remove 1/8 inch insulation for wire.

(5) Using crimping tool MH750 with 11-86736 contact locator head, attach new contact(s) to wire(s).

(6) Using insertion tool TW0221T000, insert contact(s) into connector(s).

b. Repair or Circuit Card Mating Connectors 1A1MP3XA1 through 1A1MP3XA4 and 2AlMP5XAl through 2A1MP5XA16.

(1) Identify damaged pin(s) and tag wire(s) at harness.

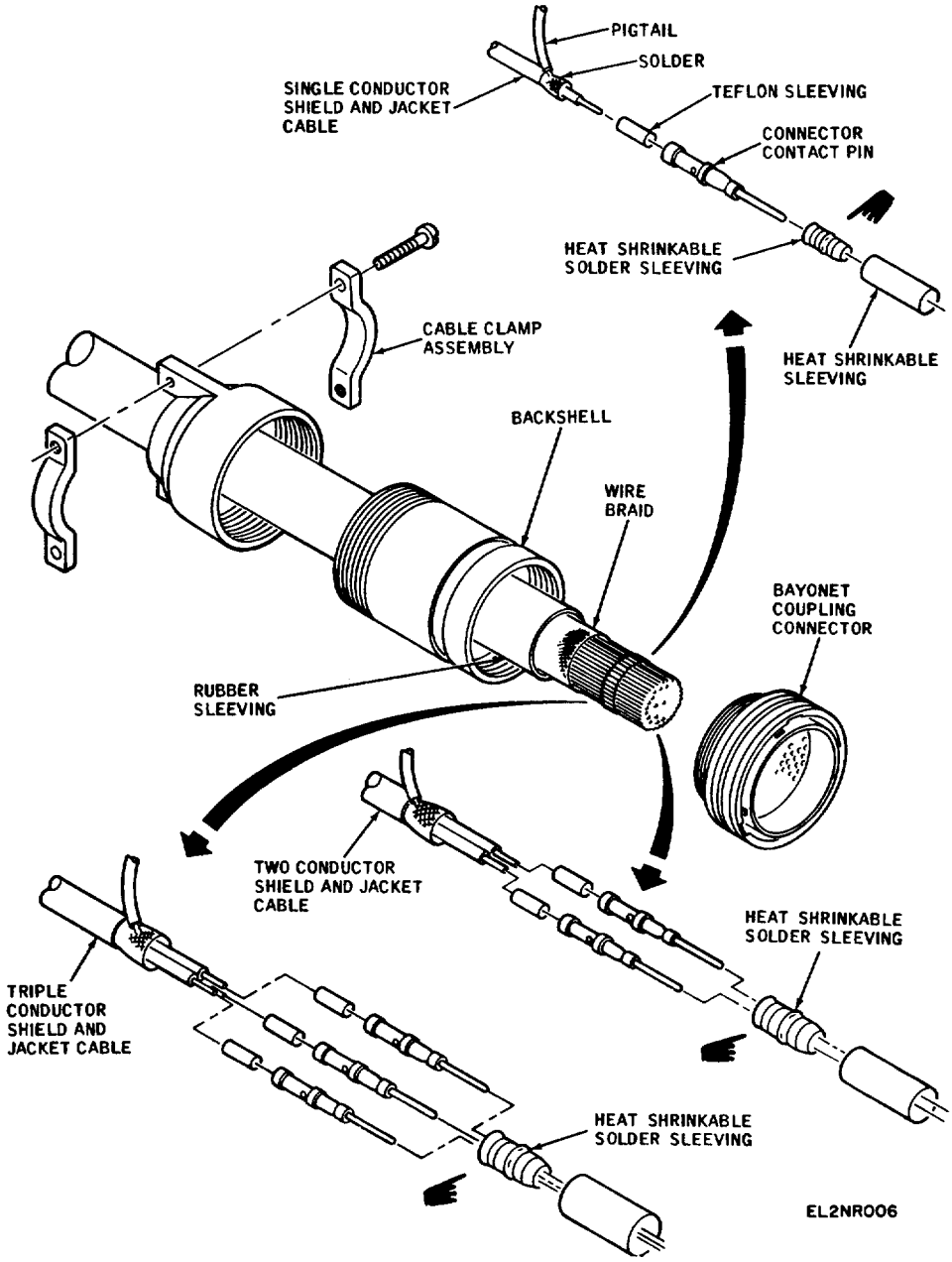

Figure 3-3 (1). Removal and replacement of special purpose electrical cable assembly connectors (sheet 1 of 2).

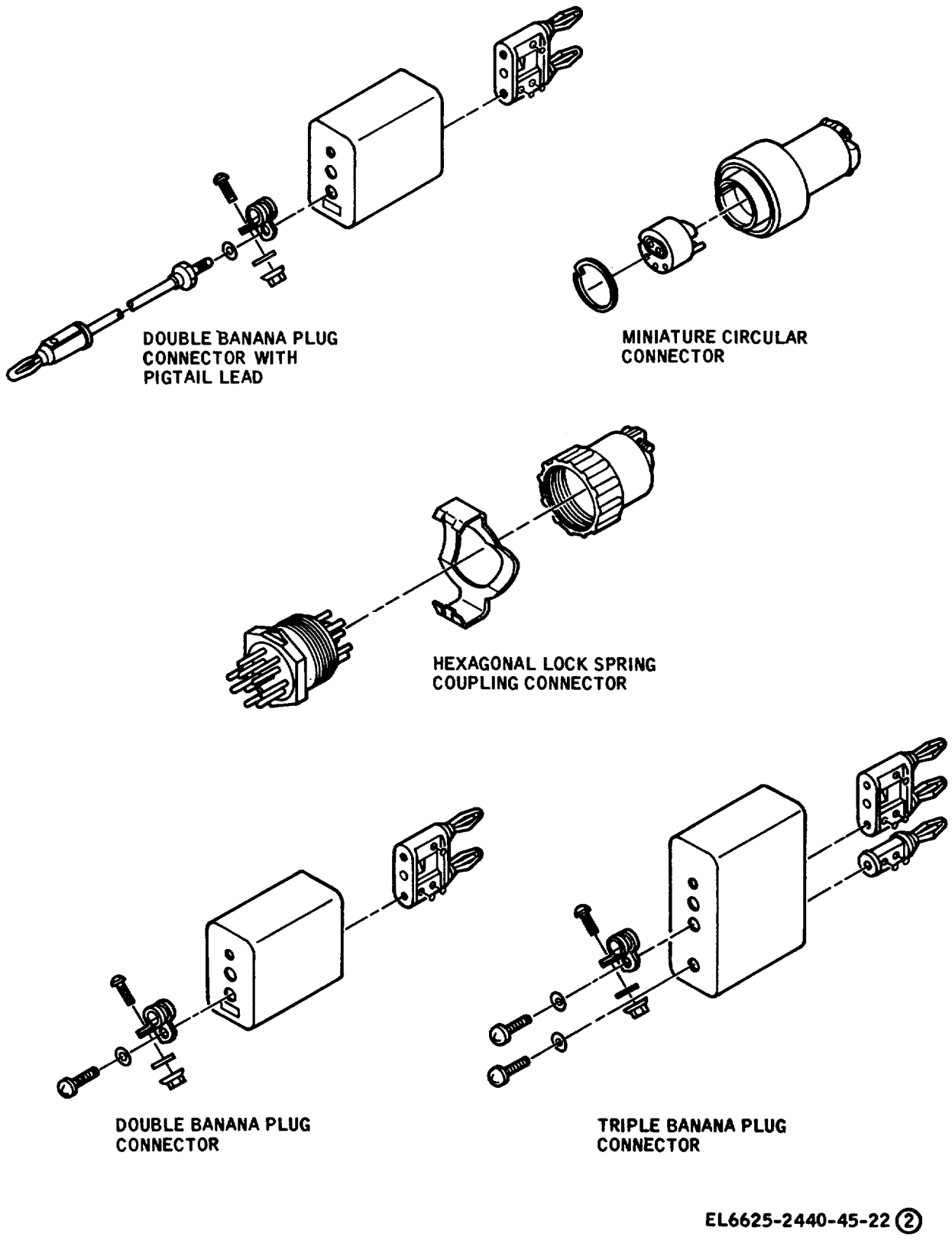

Figure 3-3 (2). Removal and replacement of special purpose electrical cable assembly connectors (part 2 of 2).

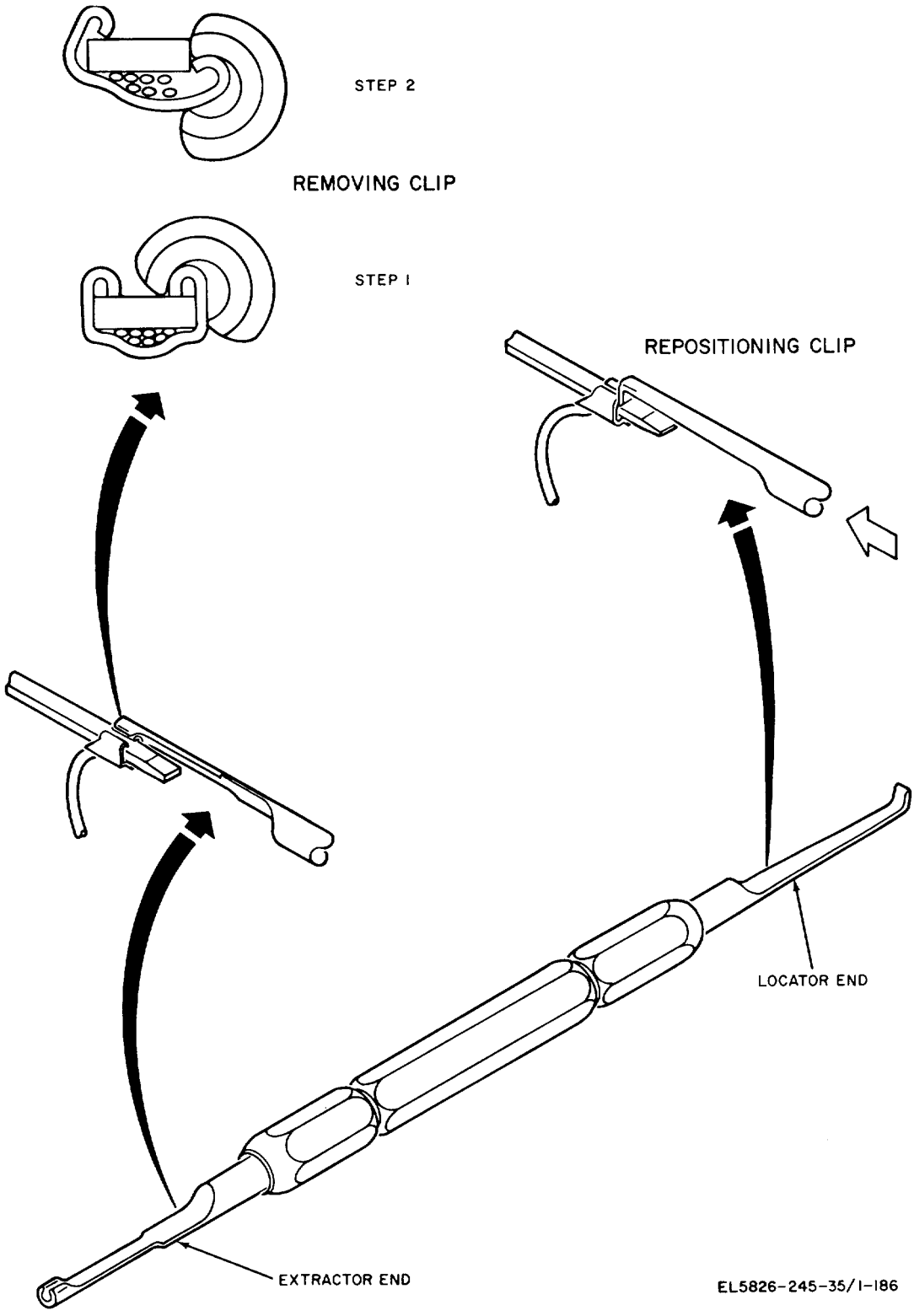

Figure 3-4. Extractor-locator tool

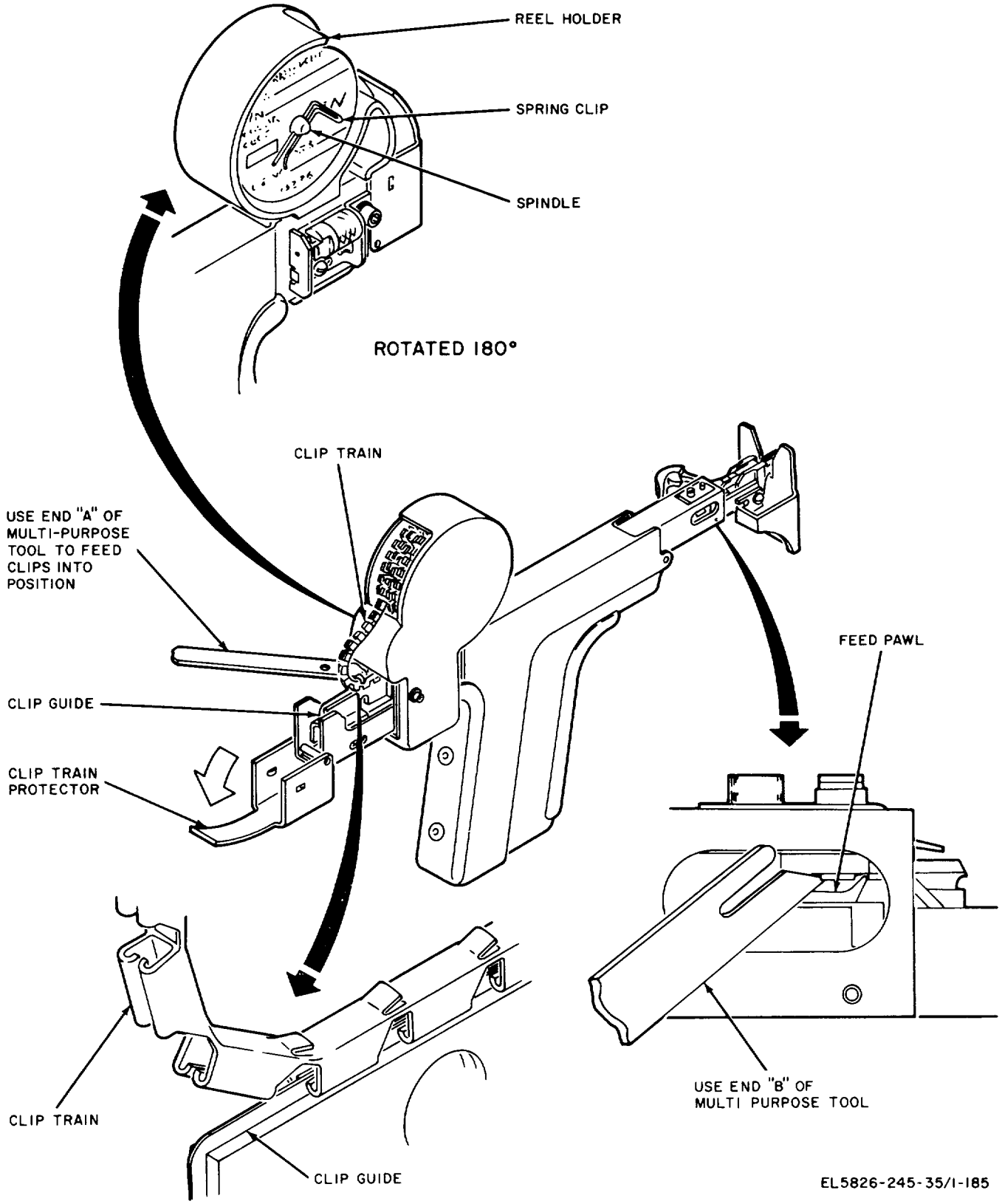

Figure 3-5. Termi-Point service tool loading.

(2) Hold extractor-locator tool 69357-5 perpendicular to connector and hook lip of extractor end of tool as shown in figure 3-4.

(3) Twist tool cw to remove clip and wire.

(4) Using diagonal-cutting pliers, cut damaged pin(s) from plug-in side of connector.

(5) Using round-nose (needle) pliers, pull damaged pin(s) from wiring harness side of connector.

(6) Using insertion tool 69514, install replacement pin(s) to wiring harness side of connector.

NOTE

Steps (7) through (16) pertain to loading and preparing Termi-Point service tool 69535 for use.

(7) Refer to figure 3-5. Remove clip from reel holder spindle.

(8) Place reel of clips on spindle with label side out; replace reel holder spindle spring clip.

(9) Pivot clip train protector down and feed clip train onto clip track.

(10) Using A-end of multipurpose tool, feed clip train along clip track until clip train stops at feed pawl.

(11) Using B-end of multipurpose tool, depress feed pawl and advance clip train until feed pawl engages the space between the first and second clips.

(12) Pivot clip train protector up and snap into place.

(13) Refer to figure 3-6. Set clip position control to required position.

NOTE

If wire is not cut with specified tool, the cut end will be flared and will not fit into the hole between the resizer and mandrel 69545-1.

(14) Using model 100 wire stripper (with stop removed), cut wire to be attached to connector pin. Do not strip wire.

(15) Insert wire into hole between resizer and mandrel. Insure that wire bottoms on resizer.

(16) Squeeze Termi-Point service tool handle and release.

(17) Refer to figure 3-7. Position Termi-Point service tool so that connector pin tip will fit into exposed clip.

(18) Align Termi-Point service tool vertically and horizontally, and rest alignment foot on surrounding connector pins.

(19) Grip tool lightly and push on rear of tool handle with steady, even pressure until clip reaches preset position on post. If there is any resistance to pressure, repeat step 18.

(20) Remove tool from connector pin; make sure that handle is released and reset tool by pushing clip train protector fully forward.

(21) Depress insulation ejector to remove insulation from tool before inserting next wire.

c. Repair of Terminal Blocks 1A1TB1, 2A1TB1, and 2A1TB2.

(1) Identify damaged contact(s) and tag wire at harness.

(2) Using removal tool 380305-1, remove damaged contact(s) from terminal block.

(3) Remove damaged contact(s) from wire(s).

(4) Using GGG-S-793A wire stripper, remove 1/8 inch of insulation from wire(s).

(5) Using crimping tool 48698 with contact locator head 11-8673-6, attach new contact(s) to wire(s).

(6) Using insertion tool 380310-2, insert contact(s) into terminal block.

d. Repair of Special Purpose Electrical Cable Assembly Connectors.

This subparagraph covers the repair of connectors 1W9P2, 1W9P3, 1WllP2 through 1W11P5, 1W12P2, 1W12P3, 2W6P2, 2W8P2, 2W8P3, 2W10P2, and 2W10P3. Figure 3-3 illustrates the configuration of the connectors listed. To repair these connectors, use standard maintenance practices.

3-9. Wiring Harness Repair

When repairing wiring harnesses, refer to the wire lists (app B to be published later) to determine the wire type, gage, color, and routing. Do not attempt to pull replacement wires through wiring harness. If damaged wiring is part of a twisted group (pair, triple, etc.), all wires of the group are replaced by a similarly twisted group. Secure replacement wires to the wiring harness and terminals using standard maintenance practices. Refer to connector repair, paragraph 3-8, for terminating wires at connectors.

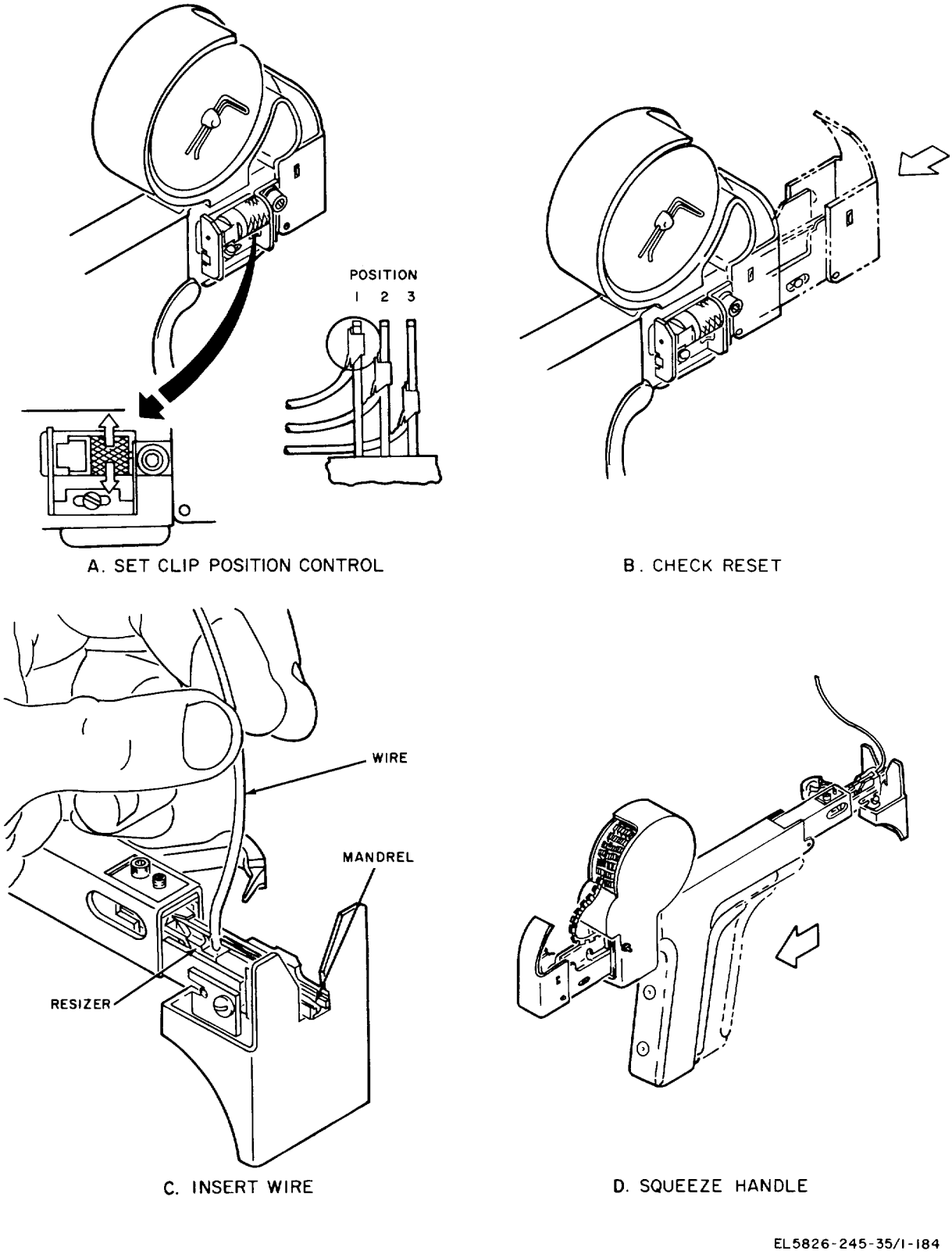

Figure 3-6. Preparing Termi-Point service tool for use.

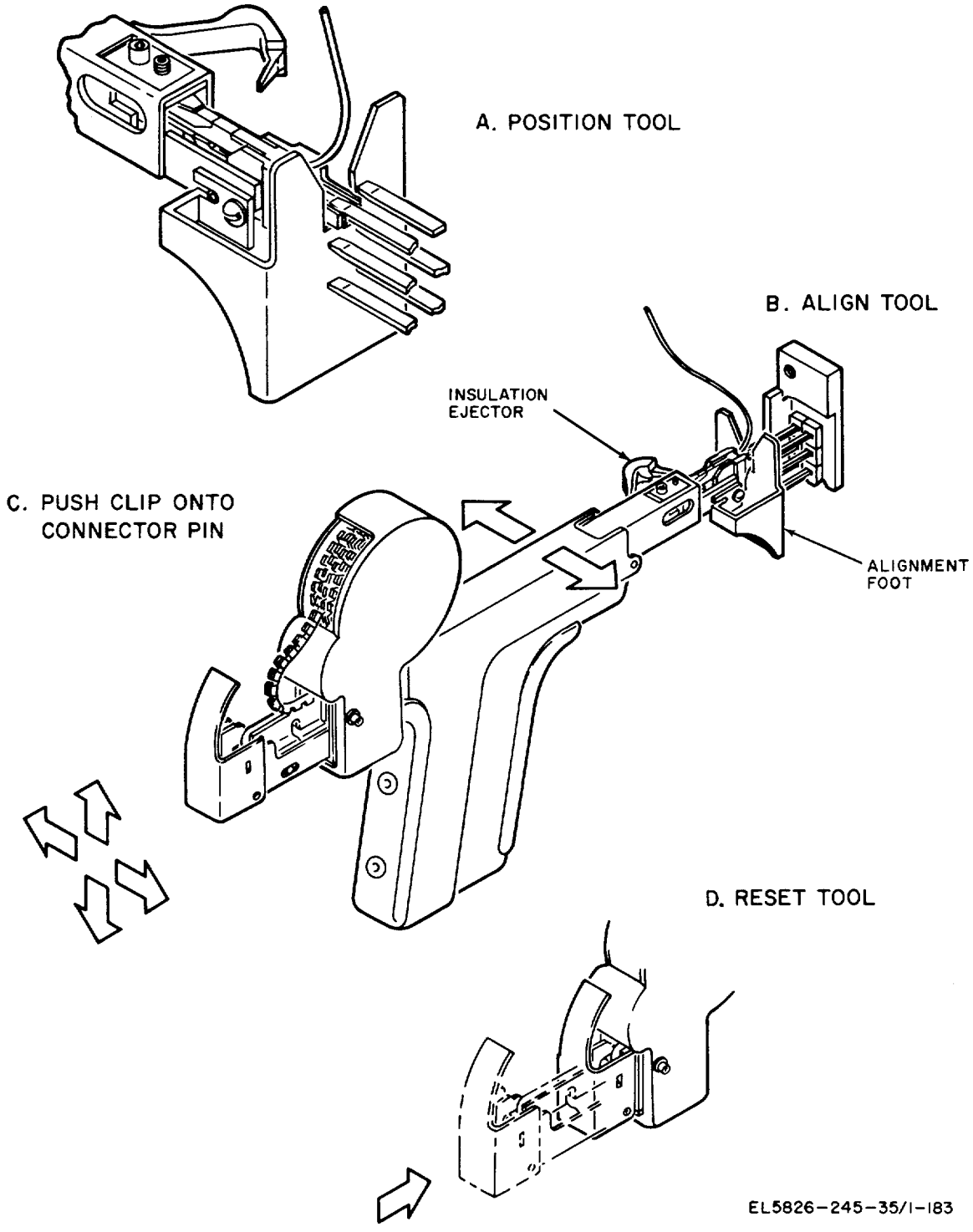

Figure 3-7. Applying clip and wire to connector.

3-10. Special Purpose Electrical Cable Assembly Repair

Cable assembly repair at the general support maintenance level is limited to those repairs which are deemed practical by the local cognizant authority. If extensive repair is required, send cable assembly to higher level of maintenance. Figure 3-3 illustrates single and multiconductor jacket and shield cables and the configuration of a typical special purpose electrical cable assembly. To repair cables, refer to figure 5-12 for wire type and size, paragraph 3-7 for connector removal and replacement, figure 3-3 for assembly; and repair using standard maintenance practices.

CHAPTER 4

DEPOT MAINTENANCE

Section I. GENERAL

4-1. Scope of Depot Maintenance

Depot maintenance consists of troubleshooting the test set for malfunctions that were not isolated by troubleshooting procedures in TM 116625-2440-12 or in chapter 3 of this manual. Procedures in this chapter provide instructions for troubleshooting the power supply 1AiPS1, removal and replacement of power supply components, and repairing special purpose electrical cable assemblies. These procedures combined with those in chapter 3 provide instructions for rebuilding the test set.

4-2. Tools, Test Equipment, and Materials Required

In addition to the tools, test equipment, and materials listed in TM 11-6625-2440-12 and chapter 3 of this manual, insulating compound MIL C-16555 and the test equipment listed in the following chart are required:

Test equipment	*Federal stock no.*
Dual dc power supply (Power Design TW 5005)	
Oscillator SG-621/U	6625-606-9727
Power supply tester (Litton TESK 209319)	

Section II. TROUBLESHOOTING

4-3. General

Prior to performing the power supply test procedures in paragraph 4-4, perform the visual inspection as described in paragraph 3-4b. If the visual inspection does not reveal the cause of the malfunction, proceed to the test procedures. Removal and replacement procedures for faulty components are described in paragraph 4-7. Paragraph 4-8 describes repair of power supply wiring harness. After component replacement, repeat test procedures (para 4-4) to verify the power supply operational status. When isolating malfunctions in special purpose electrical cable assemblies, refer to figure 5-12 and use standard fault isolation procedures. Special purpose electrical cable assembly repair is described in paragraph 4-9.

WARNING

The power supply contains voltages which could cause DEATH or serious injury. Be careful when taking readings or making adjustments in the power supply.

CAUTION

Some of the power supply variable resistors are located close to the chassis or exposed terminals. Use extreme care when making adjustments to prevent damage to the power supply.

4-4. Power Supply 1A1PS1 Test Procedures

a. Preliminary Procedures.

(1) Ensure that dual dc power supply and oscillator are turned off.

(2) Set power supply tester switches and controls as follows:

Switch or control	*Position or setting*
400 HZ	OFF
+28 V	OFF
+15 V	NO LOAD
-15 V	NO LOAD
+5 V	NO LOAD
U. V. TRIP	OFF

CAUTION

To prevent damage to equipment, do not connect power supply tester connector P2 to 115-V, 400-Hz, 3-phase power input at this time.

(3) Except for power supply tester connector P2, connect power supply, power supply tester, oscillator, and dual dc power supply as shown in figure 4-1.

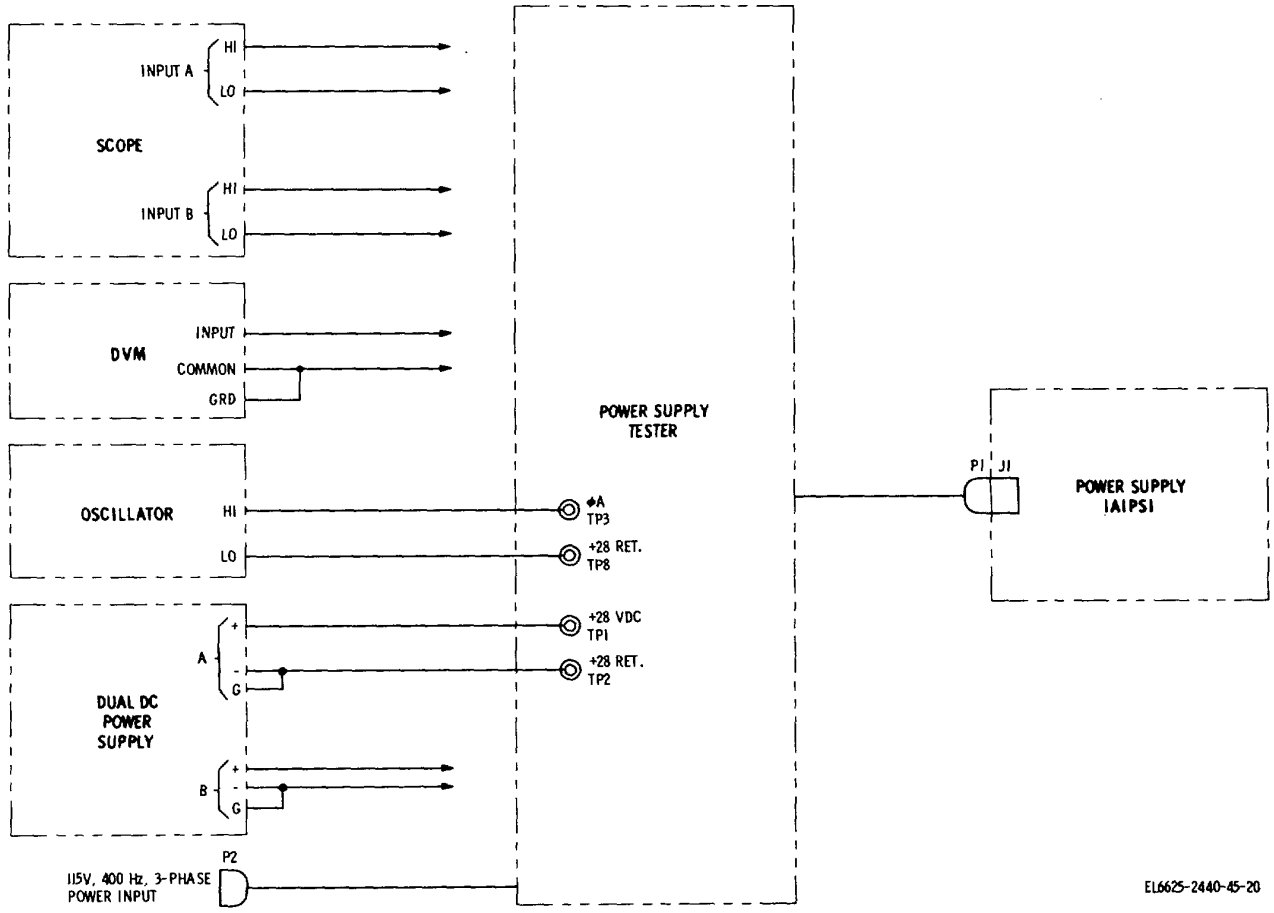

Figure 4-1. Power supply test setup.

(4) Turn on scope, differential voltmeter (DVM), oscillator, and dual dc power supply; permit equipment to warm up for 30 minutes (minimum).

b. Test Procedures. Perform procedures in the test procedure chart (c below) in the order listed. The procedures and the test equipment readings for a normal indication are listed in the Procedure column. If a normal indication is not obtained, refer to the power supply troubleshooting paragraph listed in the Reference column for corrective action. The numbers in the Sequence no. column correspond to the sequence numbers in the troubleshooting chart.

c. Test Procedure Chart

Sequence no. Item	*Procedure*	*Reference*	
		NOTE **Unless otherwise specified, all referenced switches, controls, test jacks, and indicators are located on the power supply tester.**	
1	Relay K1 energizing and time delay.	*a.* Set dual dc power supply A to 150 mA maximum and 28(±)V; set dual dc power supply B to 0 V. *b.* Set oscillator to 60 V p-p, 400 Hz. *c.* Connect scope INPUT A LO and IN-PUT B LO to +28 RET. TP8 test jack; connect scope INPUT A HI to +28 VDC TP7 test jack; connect scope INPUT B HI to N TP6 test jack.	Paragraph 4-5.

Sequence no.	Item	Procedure	Reference
		NOTE **It may be necessary to perform step d several times to get indication on scope channel B. To reset, set +28 V switch to OFF and repeat step d.** *d.* Set +28 V switch to ON; observe that scope channel A indicates 28 (+1) V, and ≤15 ms later, and for a period of ≤115 ms, scope channel B indicates 60 V p-p, 400 Hz.	
2	+15 V ----------	*a* Set +28 V switch to OFF ---------- *b.* Shut off oscillator; remove oscillator HI and LO out-puts and scope INPUT A and INPUT B HI and LO from test jacks. *c.* Connect P2 connector to 115-V, 400-Hz, 3-phase input power. *d.* Connect scope INPUT B HI and DVM INPUT to +15 V TP11 test jack; connect scope INPUT B LO and DVM COMMON to ±15 RET. TP12 test jack. *e.* Set switches to the indicated position or setting in the following order: *Switch* — *Position or setting* +15 V — MIN -15 V — MIN 400 HZ — ON +28 V — ON +15 V — MAX -15 V — MAX +5 V — MAX *f.* Observe that DVM indicates +15. 00 (±0. 02) V; scope channel B indicates less than 150 mV p-p.	Paragraph 4-5.
3	-15 V ----------	*a.* Connect scope INPUT B H1 and DVM IN. PUT to -15 V TP13 test jack. *b.* Observe that DVM indicates -15. 00 (±0. 02) V; scope channel B indicates less than 150 mV p-p.	Paragraph 4-5.
4	+5 V ----------	*a.* Connect scope INPUT B HI and DVM INPUT to +5 VOLT TP14 test jack; connect scope INPUT B LO and DVM COMMON to +5 V RET. TP15 test jack. *b.* Observe that DVM indicates +5. 00 (±0. 01) V; scope channel B indicates less than 100 mV p-p.	Paragraph 4-5.
5	+15 V current limiting ---	*a* Disconnect scope INPUT B H1 and LO from test jacks; connect DVM INPUT and COMMON to +15 V TP11 and ±15 RET. TP12 test jacks respectively. **CAUTION** **To prevent damage to equipment, perform the following procedure quickly.** *b* Set +15 V switch to O. L. ; observe DVM for a maximum indication of +13 V and then immediately set switch to NO LOAD.	Paragraph 4-5.
6	-15 V current limiting ---	*a.* Connect DVM INPUT to -15V TP13 test jack ---------- CAUTION **To prevent damage to equipment, perform the following procedure quickly.** *b.* Set -15 V switch to O. L. ; observe DVM for a maximum indication of -13 V (absolute value) and then immediately set switch to NO LOAD.	Paragraph 4-5.
7	+5 V undervoltage trip	*a.* Turn control R9 fully ccw . ---------- *b.* Connect test jacks +28 VDC TP7 to NO-GO SIG. TP9 and +28 RET. TP8 to +5 V RET. TP15. *c.* Connect scope INPUT A HI and LO to NO-GO SIG. TP10O and +28 RET. TP8 test jacks respectively; connect scope INPUT B HI to DVM IN-PUT;	Paragraph 4-5.

Sequence no.	*Item*	*Procedure*	*Reference*
		connect scope INPUT B LO to +5 V RET. TP15 test jack. d. Connect DVM INPUT and COMMON to +5 VOLT TP14 and +5 V RET. TP15 test jacks respectively. e. Set +5 V switch to O. L. ; set U. V. TRIP switch to ON. f. Observe that DVM and scope channel B indicate +3. 6 (±0. 8) V. Turn control R9 cw until scope channel A indicates 28 V; observe that DVM and scope channel B indicate 0 V in ≤125 ms after scope channel A indicates 28 V.	
8	+5 V crowbar -------	a. Set switches as follows: +5 V switch to NO LOAD, ------ +28 V snitch to OFF, and U. V. TRIP to OFF. b. Set dual dc power supply B to 200 mA maximum and then to 0 V. c. Connect dual dc power supply B + and - to +5 VOLT TP14 and +5 V RET. TP15 test jacks respectively. d. Slowly increase dual de power supply B output and observe that when DVM indication reaches +6. 4 (±0. 1) V, DVM indication then reduces to less than +2 V.	Paragraph 4-5.
9	Shutdown ----------	a. Set 400 Hz and +28 V switches to OFF ---------- b. Turn off dual dc power supply, scope, and DVM. c. Disconnect power supply from power supply tester. b. Troubleshooting Chart.	None.

4-5. Power Supply 1A1PSI Troubleshooting Procedures

a. General. In the troubleshooting chart (b below), the numbers in the Sequence no. column correspond to the sequence numbers in the test procedure chart (para 4-4c). The Symptom column lists abnormal indications that might occur for the test procedure with the corresponding sequence number. The Probable trouble column lists the malfunctions most likely to cause the abnormal indication in the Symptom column. Procedures to correct the malfunction are listed in the Corrective action column. When standard fault isolation procedures are specified, use figures 4-2 and 5-4 and the wire list (app B, sec II C, to be published later) to locate the defective component. Many of the corrective procedures are adjustments; if the adjustment fails to correct the malfunction, perform standard fault isolation procedures. Refer to paragraph 4-7 for removal and replacement procedures.

b. Troubleshooting Chart

Sequence no.	*Symptom*	*Probable trouble*	*Corrective action*
1	Scope indications are not as specified	A2, K1, A1T1, FL1, FL2, FL5, or FL8 defective	Perform standard fault isolation procedures.
2	a. Voltage indicated on DVM is out of tolerance b. Scope channel B indicates greater than 150 mV p-p	a. A3R10 or VR4R14 not properly adjusted b. FL9, FL10, L1, C1, or VR4 defective	a. Perform +15 V adjustment (para 4-6a). b. Perform standard fault isolation procedures.
3	a. Voltage indicated on DVM is out of tolerance b. Scope channel B indicates greater than 150 mV p-p	a. A3R12 or VR5R14 not properly adjusted b. FL11, L2, C2, or VR5 defective	a. Perform -15 V adjustment (para 4-6b). b. Perform standard fault isolation procedures.
4	a. Voltage indicated on DVM is out of tolerance b. Scope channel B indicates greater than 100 mV p-p	a. VR6R13 not properly adjusted b. FL12, FL13, L3, C3, or VR6 defective	a. Perform +5 V adjustment (para 4-6c). b. Perform standard fault isolation procedures.
5	Voltage indicated on DVM is greater than +13 V.	VR4 defective ----------	Replace VR4 (para 4-7o).
6	Voltage indicated on DVM is	VR5 defective ----------	Replace VR5 (para 4-7c).

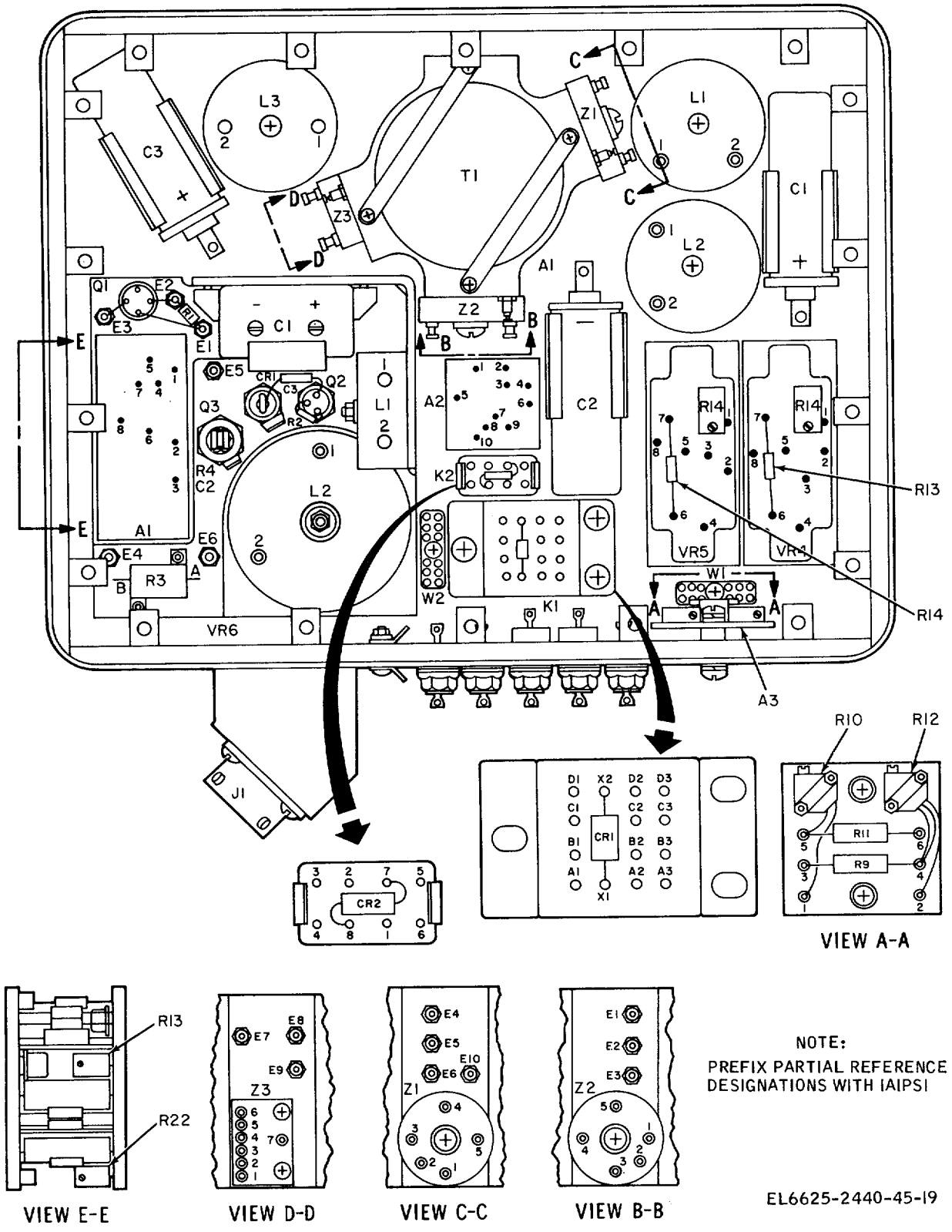

Figure 4-2. Power supply parts location diagram.

Sequence no.	Symptom Probable trouble	Corrective action	
	greater than -13 V (absolute value).		
7	a. Scope channel A does not indicate 28 V when power supply tester control R9 is turned ccw.	a. K2 or A2 defective ----------	a. Perform standard fault isolation procedures.
	b. DVM and scope channel B do not indicate 0 V in <125 ms after scope channel A indicates 28 V.	b. KR1, CR1, or A2 defective --------	b. Perform standard fault isolation procedures.
8	DVM indication reduces to less than +2 V when dual dc power supply B output is less than or greater than +6. 4 (+0. 1) V.	VR6A1R22 not properly ad-	Perform +5 V crowbar adjustment (para 4-6d).

WARNING

The power supply contains voltages which could cause DEATH or serious injury. Be careful when taking readings or making adjustments in the power supply.

CAUTION

Some of the power supply variable resistors are located close to the chassis or exposed terminals. Use extreme care when making adjustments to prevent damage to the power supply.

4-6. Power Supply 1A1PS1 Adjustments

(fig. 4-2)

a. Plus 15-V Adjustment.

(1) Adjust variable resistor VR4R14 to obtain a DVM indication of + 15. 00 (± 0. 02) V.

(2) If adjustment in (1) above does not result in required accuracy, adjust variable resistor A3R10 to obtain a DVM indication of +15. 00 (±0. 02) V.

b. Minus 15-V Adjustment.

(1) Adjust variable resistor VR5R14 to obtain a DVM indication of -15. 00 (±0. 02) V.

(2) If adjustment in (1) above does not result in required accuracy, adjust variable resistor A3R12 to obtain a DVM indication of -15. 00 (±0. 02) V.

c. Plus 5-V Adjustment. Adjust variable resistor VR6AIR13 to obtain a DVM indication of +5. 00 (±0. 01) V.

d. Plus 5-V Crowbar Adjustment. Adjust dual dc power supply B and VR6A1R22 for DVM indication of less than +2 V after DVM indication reaches +6. 4 (±0. 1) V.

Section III. REMOVAL AND REPLACEMENT

4-7. Power Supply 1A1PS1 Components, Removal and Replacement (fig. 4-3)

When components on the power supply are similar, the removal and replacement of a typical component is described. If applicable, tag and unsolder or disconnect wires prior to removing components. To gain access to all components except connector J1, remove cover MP1 as described in a below.

NOTE

When performing the following procedures, use sealing compound on attaching hardware when a mechanical locking device (lockwasher, locknut, etc) is not specified. When insulating compound has been used on components, use insulating compound on replacement components.

a. Cover MP1.

(1) Removal. Remove 18 screws (1) and flatwashers (2); remove cover (3).

(2) Replacement. Secure cover (3) by replacing 18 flatwashers (2) and screws (1).

b. Connector J1.

(1) Removal. Remove four screws (4), nuts (5), lockwashers (6), and flatwashers (7); remove connector (8).

(2) Replacement. Secure connector (8) by

replacing four screws (4), flatwashers (7), lockwashers (6), and nuts (5).

c. Diode CR1.

(1) Removal. Remove diode (9) using standard maintenance practices.

(2) Replacement. Replace diode (9) using standard maintenance practices.

d. Relay K1.

(1) Removal. Remove three screws (10) and flatwashers (11); remove relay (12).

(2) Replacement. Secure relay (12) by replacing three flatwashers (11) and screws (10).

e. Filters FL1 through FL13.

(1) Removal. Remove nut (13) and lockwasher (14); remove filter (15).

(2) Replacement. Secure filter (15) by replacing lockwasher (14) and nut (13).

f. Bus Bars W1 and W2.

(1) Removal. Remove screw (16), flatwashers (17), and lockwasher (18); remove bus bar (19).

(2) Replacement. Secure bus bar (19) by replacing lockwasher (18), flatwasher (17), and screw (16).

g. Power Controller A2.

(1) Removal. Remove four screws (20), flatwashers (21), and lockwashers (22); remove power controller (23).

(2) Replacement. Secure power controller (23) by replacing four lockwashers (22), flatwashers (21), and screws (20).

h. Relay K2.

(1) Removal. Open retaining clip (24) and remove relay (25).

(2) Replacement. Push relay (25) into retaining clip (24).

i. Diode CR2.

(1) Removal. Remove diode (26) using standard maintenance practices.

(2) Replacement. Replace diode (26) using standard maintenance practices.

j. Resistor Assembly A3.

(1) Removal. Remove two screws (27), flatwashers (28), and lockwashers (29); remove resistor assembly (30). Remove two screws (31), two flatwashers (32), lockwashers (33), and spacers (34).

(2) Replacement. Replace two lockwashers (33), flatwashers (32), screws (31), and spacers (34). Secure resistor assembly (30) by replacing two lockwashers (29), flatwashers (28), and screws (27).

k. Variable Resistors A3R10 and A3R12.

(1) Removal. Remove resistor assembly (30) as described in j above. Remove two screws (35), flatwashers (36), and nuts (37); remove retaining bar (38) and variable resistor (39).

(2) Replacement. Replace two flatwashers (36), and screws (35); replace variable resistor (39), retaining bar (38), and two nuts (37).
Replace resistor assembly (30) as described in j above.

l. Resistors A3R9 and A3Rl1.

(1) Removal. Remove resistor (40) using standard maintenance practices.

(2) Replacement. Replace resistor (40) using standard maintenance practices.

m. Capacitors C1, C2, and C3.

(1) Removal. Open retaining clip (41) and remove capacitor (42).

(2) Replacement. Push capacitor (42) into retaining clip (41).

n. Resistors R13 and R14.

(1) Removal. Remove resistor (45) using standard maintenance practices.

(2) Replacement. Replace resistor (45) using standard maintenance practices.

o. Voltage Regulators VR4 and VR5.

(1) Removal. Remove resistor (45) as described in n above. Remove four screws (43) and flatwashers (44); remove voltage regulator (46).

(2) Replacement. Secure voltage regulator (46) by replacing four flatwashers (44) and screws (43). Replace resistor (45) as described in n above.

p. Inductors L1, L2, and L3.

(1) Removal. Remove screw (47), flatwasher (48), and inductor (49).

(2) Replacement. Secure inductor (49) by replacing flatwashers (48) and screw (47).

q. Transformer and Rectifier Assembly A1.

(1) Removal. Remove four screws (50) and flatwashers (51); remove transformer and rectifier assembly (52)

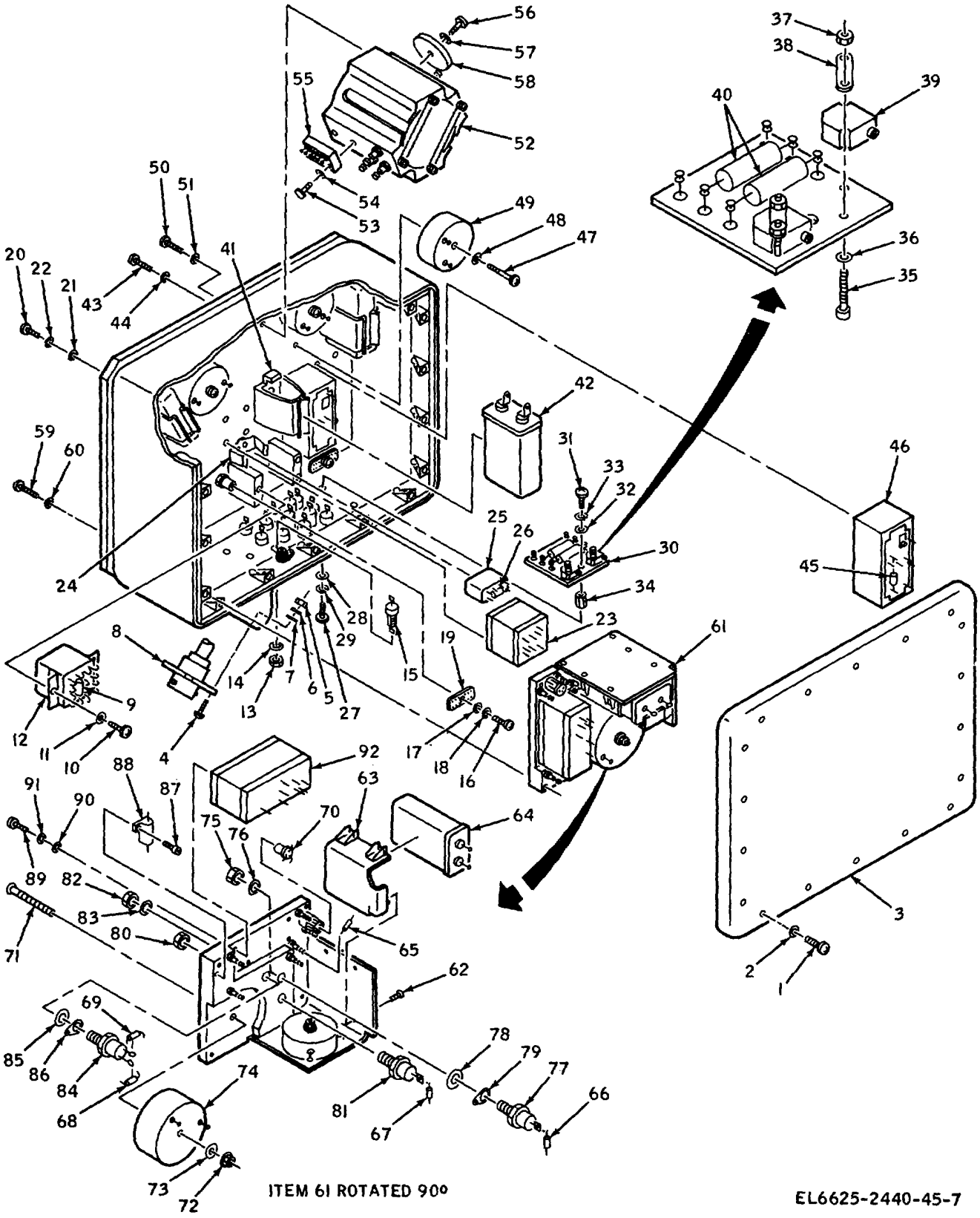

Figure 4-3. Removal and replacement of power supply components

1 Screw (18)
2 Flatwasher (18)
3 Cover
4 Screw (4)
5 Nut (4)
6 Lockwasher (4)
7 Flatwasher (4)
8 Connector
9 Diode
10 Screw (3)
11 Flatwasher (3)
12 Relay
13 Nut
14 Lockwasher
15 Filter
16 Screw
17 Flatwasher
18 Lockwasher
19 Bus bar
20 Screw (4)
21 Flatwasher (4)
22 Lockwasher (4)
23 Power controller
24 Retaining clip
25 Relay
26 Diode
27 Screw (2)
28 Flatwasher (2)
29 Lockwasher (2)
30 Resistor assembly
31 Screw (2)
32 Flatwasher (2)
33 Lockwasher (2)
34 Spacer (2)
35 Screw (2)
36 Flatwasher (2)
37 Nut (2)
38 Retaining bar
39 Variable resistor
40 Resistor
41 Retaining clip
42 Capacitor
43 Screw (4)
44 Flatwasher (4)
45 Resistor
46 Voltage regulator
47 Screw
48 Flatwasher
49 Inductor
50 Screw (4)
51 Flatwasher
52 Transformer and rectifier assembly
53 Screw (2)
54 Flatwasher (2)
55 Rectifier assembly
56 Screw
57 Flatwasher
58 Rectifier assembly
59 Screw (5)
60 Flatwasher (5)
61 Switching regulator and crowbar
62 Screw (4)
63 Bracket
64 Capacitor
65 Resistor
66 Capacitor
67 Resistor
68 Capacitor
69 Resistor
70 Transistor
71 Screw
72 Locknut
73 Flatwasher
74 Inductor
75 Nut
76 Flatwasher
77 Diode
78 Flatwasher
79 Ground lug
80 Nut
81 Transistor
82 Nut
83 Flatwasher
84 Screw
85 Flatwasher
86 Ground lug
87 Screw (2)
88 Resistor
89 Screw (4)
90 Flatwasher (4)
91 Lockwasher (4)
92 Regulator controller

Figure 4-3. Continued.

(2) Replacement. Secure transformer and rectifier assembly (52) by replacing four flatwashers (51) and screws (50).

r. Rectifier Assembly A1Z3.

(1) Removal. If necessary, remove transformer and rectifier assembly (52) as described in q above. Remove two screws (53) and flatwashers (54); remove rectifier assembly (55).

(2) Replacement. Secure rectifier assembly (55) by replacing two flatwashers (54) and screws (53). If transformer and rectifier assembly (52) has been removed, replace it as described in q above.

s. Rectifier Assembly A1Z1 and A1Z2.

(1) Removal. If necessary, remove transformer and rectifier assembly (52) as described in q above. Remove screw (56) and flatwasher (57); remove rectifier assembly (58).

(2) Replacement. Secure rectifier assembly (58) by replacing flatwasher (57) and screw (56). If transformer and rectifier assembly (52) has been removed, replace it as described in q above.

t. Switching Regulator and Crowbar VR6. .

(1) Removal. Remove five screws (59) and flatwashers (60); remove switching regulator and crowbar (61).

(2) Replacement. Secure switching regulator and crowbar (61) by replacing five flatwashers (60) and screws (59).

u. Capacitor VR6C1.

(1) Removal. If necessary, remove switching regulator and crowbar (61) as described in t above. Remove four screws (62); remove bracket (63) and capacitor (64).

(2) Replacement. Place capacitor (64) in bracket (63) and secure by replacing four screws (62). If switching regulator and crowbar (61) has been removed, replace it as described in t above.

v. Components VR6R1, VR6C3, VR6R2, VR6C2, and VR6R4.

(1) Removal. Remove resistor (65), capacitor (66), resistor (67), capacitor (68), and resistor (69) using standard maintenance practices.

(2) Replacement. Replace resistor (65), capacitor (66), resistor (67), capacitor (68), and resistor (69) using standard maintenance practices.

w. Transistor VR6Q1.

(1) *Removal.* Pull transistor (70) out of heat sink.

(2) *Replacement.* Push transistor (70) into heat sink.

x. Inductor VR6L1 a)?d VR6L2.

(1) Removal. If necessary, remove switching regulator and crowbar (61) as described in t above. Remove screw (71), locknut (72), and flatwasher (73); remove inductor (74).

(2) Replacement. Secure inductor (74) by replacing screw (71), flatwasher (73), and locknut (72). If switching regulator and crowbar (61) has been removed, replace it as described in t above.

y. Diode VR6CR1.

(1) Removal. Remove switching regulator and crowbar (61) as described in t above. Disconnect capacitor (66) as described in v above. Remove nut (75) flatwasher (76), diode (77), flatwasher (78), and ground lug (79).

(2) Replacement. Replace ground lug (79), flatwasher (78), diode (77), flatwasher (76), and nut (75). Connect capacitor (66) as described in v above. Replace switching regulator and crowbar (61) as described in t above.

z. Transistor VR6Q2.

(1) Removal. Remove switching regulator and crowbar (61) as described in t above. Disconnect capacitor (66) and remove resistor (67) as described in v above. Remove nut (80); remove transistor (81).

(2) Replacement. Secure transistor (81) by replacing nut (80). Connect capacitor (66) and replace resistor (67) as described in v above. Replace switching regulator and crowbar (61) as described in t above.

aa. Scr VR6Q3.

(1) Removal. Remove switching regulator and crowbar (61) as described in t above. Remove capacitor (68) and resistor (69) as described in v above. Remove nut (82), flatwasher (83), scr (84), flatwasher (85), and ground lug (86).

(2) Replacement. Replace ground lug (86), flatwasher (85), screw (84), flatwasher (83), and nut (82). Replace capacitor (68) and resistor (69) as described in v above. Replace switching regulator and crowbar (61) as described in t above.

ab. Resistor VR6R3.

(1) Removal. Remove two screws (87); remove resistor (88).

(2) Replacement. Secure resistor (88) by replacing two screws (87).

ac. Regulator Controller VR6A1.

(1) Removal. Remove switching regulator and crowbar (61) as described in t above. Remove four screws (89), flatwashers (90), and lockwashers (91); remove regulator controller (92).

(2) Replacement. Secure regulator controller (92) by replacing four lockwashers (91), flatwashers (90), and screws (89). Replace switching regulator and crowbar (61) as described in t above.

4-8. Power Supply 1A1PS1 Wiring Harness Repair

When repairing wiring harness, refer to the wire list (app B, sec II C to be published later) to determine the wire type, gage, color, and routing. Do not attempt to pull replacement wires through wiring harness. If damaged wiring is part of a twisted group (pair, triple, etc.), all wires of the group are replaced by a similarly twisted group. Secure replacement wires to the wiring harness and terminals using standard maintenance practices.

4-9. Special Purpose Electrical Cable Assembly Repair

Figure 3-3 illustrates single and multiconductor jacket and shield cables and the configuration of a typical special purpose electrical cable assembly. To repair cables, refer to figure 5-12 for wire type and size, paragraph 3-7 for connector removal and replacement, figure 3-3 for assembly; and repair by using standard maintenance practices.

Section IV. DEPOT OVERHAUL STANDARDS

4-10. Applicability of Depot Overhaul Standards

The tests outlined in this section are designed to measure the performance capability of a repaired equipment. Equipment that is to be returned to stock should meet the standards given in these tests.

4-11. Applicable References

a. Repair Standards. Applicable procedures and the general standards for repaired electronic equipment are given in TB SIG 3555-1, Depot Inspection Standard for Repaired Signal Equipment; TB SIG 355-2, Depot Inspection Standard for Refinishing Repaired Signal Equipment; and TB SIG 355-3, Depot Inspection Standard for Moisture and Fungus Resistant Treatment.

These procedures and standards form a part of the requirements for testing the equipment.

b. Modification Work Orders. Perform all applicable modification work orders pertaining to

this equipment before making the tests specified. DA Pam 310-7 lists all current MWO's.

4-12. Test Facilities Required

The test facilities required are identical to those listed in paragraph 4-2.

4-13. Test Procedures

Test procedures are the same as the self-test procedures required at the organizational level (TM 11-6625-2440-12). Acceptable standards of performance for depot overhaul are the same as those listed in these tests.

CHAPTER 5

FOLDOUT ILLUSTRATIONS

This chapter contains all fold-out illustrations referenced in previous chapters and the color code markings for MI-STD resistors and capacitors.

APPENDIX A

REFERENCES

The following publications contain information applicable to the operation and maintenance of Test Set, Gyro Stabilized Platform AN/ASM-385.

DA Pam 310-4	Military Publications: Index of Technical Manuals, Technical Bulletins, Supply Manuals (types 7, 8, and 9), Supply Bulletins, and Lubrication Orders.
DA Pam 310-7	U. S. Army Equipment Index of Modification Work Orders.
TB 746-10	Field Instructions for Painting and Preserving Electronics Command Equipment.
TM 11-6625-2440-12	Operator's and Organizational Maintenance Manual: Test Set, Gyro Stabilized Platform AN/ASM-385.
TM 11-6625-2440-20P	Organizational Repair Parts and Special Tools List: Test Set, Gyro Stabilized Platform AN/ASM-385.
TM 11-6625-2440-45P	General Support and Depot Maintenance Repair Parts and Special Tools List: Test Set, Gyro Stabilized Platform AN/ASM-385.
TM 38-750	The Army Maintenance Management System (TAMMS)

APPENDIX B

WIRE LISTS

Section I. INTRODUCTION

B-1. Scope

This appendix contains wire lists for the control display unit and electronics unit. The wire lists for the control-display unit and control-display unit card cage and power supply are in section II. The electronics unit and electronics unit card cage wire lists are in section III. This section contains introductory information including a list of column headings used in the wire lists with an explanation of the entries and definitions of symbols used.

B-2. Reference Designations

Reference designations in the wire lists are abbreviated; for full reference designation, prefix partial reference designations with the applicable reference designation listed in the following chart.

Wire List	*Section*	*Reference Designation*
Control-display unit	IIA	1A1
Control-display unit card cage	IIB	1A1MP3
Control-display unit power supply	IIC	1A1PS1
Electronics unit	IIIA	2A1
Electronics unit card cage	IIIB	2A1MP5

B3. Wire List Column Headings and Entries

Column heading	*Entry*
Component	Partial reference designation. of component to which the wire is attached
Pin	Specific pin, lug, terminal, etc, as marked on the component to which the wire is attached. A period precluding a letter, e. g. , A. signifies that the letter is a lower case letter on the component
From	Partial reference designation of components and associated pin, terminal, or lug number of point of origin. A period preceding a letter. e. g. , . A, signifies that the letter is a lower case letter on the component
To	Partial reference designation of component and associated pin, terminal, or lug number of point of termination. The symbol PT preceding an entry in this column indicates the pigtail to the shield of that entry. An asterisk in this column indicates that the entry in the Remarks column is a continuation of the line above
Signal	Code that defines one continuous circuit. An asterisk following the entry indicates that the signal is a complement of the basic signal.
Seg	Segment of circuit listed in Signal column. When a circuit is made up of more than one wire segment, this column is used to specify the segment of wire attached to component and pin specified
Gage	Wire size per American Wire Gage (AWG). If this column is blank, card cage wires are 28 AWG, control-display unit power supply wires are 20 AWG, and electronics unit and control-display unit wires are 22 AWG
Type	Abbreviations or symbols defining wire; definitions are as follows: B Solid bus wire; bare, insulated. or sleeved J Jumpier wire; stranded insulated wire with a 8-inch maximum length SL Shield lead wire; wire connecting shield to a termination point S1 Shielded single conductor S2 Shielded two-conductor group S3 Shielded three-conductor group T2 Twisted one-conductor group T3 Twisted three-conductor group T4 Tasted four-conductor group

Column heading	*Entry*

Color

Three-digit insulation color code. Colors are coded to a number as shown below for any digit position in the code. Each digit position represents the insulation color as follows:

First digit--Basic insulation color
Second digit-Color of first (wide) stripe
Third digit-Color of second (narrow) stripe

x x x

Color	*Number*
Black	0
Brown	1
Red	2
Orange	3
Yellow	4
Green	5
Blue	6
Violet	7
Gray	8
White	9

If this column is blank, the wire insulation is all white. If all three digits are alike, the first digit is the only significant one and the wire insulation is a solid color.

Group

Symbol defining groups of wires and identifying each member of group as follows:

SG-------- Shielded group; the two- or three-digit number that follows is used to identify each member of the group. Pin tie points for the other members of the group (quantity specified in Type column) are indicated by the same symbol listed elsewhere in this column. Pin tie points may be on the same component or on another component

TG-------- Twisted group; the two- or three-digit number that follows is used to identify each member of the group. Pin tie points for the other members of the group are indicated in the same manner as for shielded groups

Route

Not used

Remarks

General wire list information. Items and symbols included are as follows:

Grounds	Grounds are shown for reference only
Voltages	Ac and dc voltages are included for reference only
NC	indicates no connection (reserved for specific function)
SPARE	Indicates not used and not reserved for specific function
*	Indicates that termination of a shield for a multiple conductor group has been listed with another entry for that same group
$-FLT	Indicates shield of this wire floats at the termination listed in the Pin column
$-	Indicates shield of wire is tied to the pin or component listed (identification follows "--"). When followed by a comma and another entry, indicates shield is also tied to that entry
$-SH--	Indicates shield of wire is tied to shield of wire attached to listed pin (pin identification follows "SH-"). When followed by a comma and another entry, indicates shield of wire is also tied to that entry

Note

Numerical-reference to a note that provides special instruction. Numbers with the applicable Special instructions are listed below

Note number	*Special instruction*
1	Use appropriate size insulated sleeving on all 115 Vac terminations
2	Use shortest possible route for leads
3	Tie shields terminating on TB1 together and connect to W2
4	Tie shields terminating at connector J6 together and connect to W2

B-4. Sample Wire List Entry

A typical wire list entry is illustrated below with an explanation for each column entry.

PAGES B-3 TO B-8 MISSING FROM ORIGINAL DOCUMENT

PAGE #
B-3

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT FL1- FILTER

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
CB1- 002	001		085		18T3			TG016			1
CB1- 004	002		086		18T3			TG016			1
CB1- 006	003		087		18T3			TG016			1
	004	TB1-088	P115N	B	18					115 V 400	N 1
E05----	005		POCG	B	16					CHAS GND	

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT FL2- FILTER

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	001	K01-007	089	A							
CB2- 002	001		089		18						
	002	S02-005	093	B	18						
	002	K02- X2	093	D							

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT J03- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	A	TB1-01B	P115A	C	20S2999				SG006	$-SH-B	
	B	TB1-03B	P1158	C	20S2999				SG007	$-SH-A.D	
	C	TB1-05B	P115C	D	20S2000				SGO07	*	
	D	TB1-04A	P115B	F	20S2999				SG008	$-SH-B,W	
	E	TB1-06A	P115C	C	20S2000				SG008	*	
	F	TB1-19B	P15+	F						+15 VDC	
	G	TB1-20C	P15-	D	20					-15 VDC	
	H	P01- R	P15+R	A	20					+15 DC RET	
	J	W1A----	P05+	AA	20T2				TG011	+05 VDC	
	K	W1A----	P05+	AB	20T2				TG012	+05 VDC	
	L	P02-057	008								
	M	W03----	P28+	AA	20					+28 VDC	
	N	W03----	P28+	AB	20					+28 VDC	
	P	W03----	P28+	AC	20					+28 VDC	
	R	W03----	P28+	AD	20					+28 VDC	
	S	P02-070	P28+STR								
	T	TB1-07A	P115N	C	20					115V 400 N	1
	U	TB1-07B	P115N	D	20S2000				SG006	*	
	V	P02-078	P28+ST								
	W	TB1-09B	P26H1		S2999				SG010	$-W4,SH-D	
	X	TB1-IB	P26L0	C	S2000				SG010	*	
	Y	W05----	P28+R	AA	20					+28 DC RET	
	Z	W05----	P28+R	AB	20					+28 DC RET	
	A	W1A----	P05+	AC	20T2				TG013	+05 VDOC	
	B	W1A ----	P05+	AD	20T2				TG014	+05 VDC	
	C	W2A----	P05+R	AA	20T2				TG014	+05 DC RET	
	D	W2A----	P05+R	AB	20T2				TG013	+05 DC RET	
	E	W2A----	P05+R	AC	20T2				TG011	+05 DC RET	

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT J03- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	.F	E01----	POCG		20					CHAS.GND	
	.G	W05----	P28+R	AC	20					+28 DC RET	
	.H	W04 ----	P001SG	A	20					SHLD GND	
	.J	W2A----	P05+R	AD	20T2			TGO12		+05 DC RET	

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT J04- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	A	S3B- C1	011	A							
	B	S3A-007	068								
	C	S3D-010	069								
	D	S3A-008	105								
	E	S3A-009	071								
	F	S14-006	074	A							
	G	S07-003	072	A	T2	TG025					
	H	S07-004	P05+R	A	T2	TG025				+05 DC RET	
	J	P02-039	036								
	K	P02-069	019								
	L	P02-073	018								
	M									SPARE	
	N									SPARE	
	P	S14-001	075								
	Q									SPARE	
	R	S14-003	074								
	S	P02-005	024	A							
	T	S3C-004	076	A							
	U									SPARE	
	V									SPARE	
	w	S12-003	077								
	X	S38- C2	070								
	Y	S12-006	079								
	Z	P02-081	108								
	.A	P02-052	QGC21*	C							
	.B	P02-053	004								
	.C	P02-056	007								
	.D	S14-004	075	A							

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT J04- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	.E	P02-054	005								
	.F	P02-055	0e6								
	.G	P02-068	048								
	.H	P02-072	017	A							
	.I	S3C- C1	080	A							
	.J	513-003	KNGC	B							
	.K	S05-005	060								
	.L									SPARE	
	.M	S06-005	061								
	.N	S08-003	062								
	.P	S08-001	063								
	.Q	S09-003	064								
	.RK	509-001	065								
	.S	S10-003	066								
	.T	S10-001	067								
	.U	P02-051	003								
	.V									SPARE	
	:W									SPARE	
	.X									SPARE	
	.Y									SPARE	
	.Z									SPARE	
	AA									SPARE	
	BB									SPARE	
	CC									SPARE	
	DD	B01- S3	059X		S3999	SG004				$-SH-FF	
	EE	B01- S1	059Y		S3000	SG004				*	
	FF	P02-085	001	A	S2999	SG001				$-W4,SH-DD	
	GG	P02-086	002	B	S2000	SG001				*	

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT J04- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	HH	S05-003	060	B	S	1				$-SH-FF	
	JJ									SPARE	
	KK									SPARE	
	LL									SPARE	
	MM	B01- S2	059Z		S3222			SG004		*	
	NN	W 04 ----	P001SG	H	20					SHLD GRD	
	PP	104 ----	P001SG	G	20					SHLD GRO	

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT K01- RELAY

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	001									NC	
CB1- 005	002		096	A	T3			TG017			1
CB1-003	003		097	A	T3			TG017			1
CB1-001	004		098	A	T3			TG017			1
	005									NC	
	006	K02- X1	094								
FL2-001	007		089	A							
	008									NC	

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT K02- RELAY

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	A1	K02- B3	097	B	18	J					1
CB1-003	A1		097	C	18T2			TG018			1
S01-008	A2		101		18T2			TG019			1
	A3	K02- B1	096	B	18	J					1
CB1- 005	A3		096	C	18T2			TG018			
K02- A3	B1		096	B	18	J					
S01-005	B2		100		18T2			TG019			
K02- A1	B3		097	B	18	J					1
	C1									SPARE	
	C2									SPARE	
	C3									SPARE	
	D1									SPARE	
	D2									SPARE	
	D3									SPARE	
K01-006	X1		094								
FL2-002	X2		093	D							

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT MO1- METER

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
XDS01-002	+		P15+	B						+15 VDC	
TB1-18A	+		P15+	D						+15 VDC	
XDS01-001	-		P15-	E						-15 VDC	
TB1-17A	-		P15-	H						-15 VDC	

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT P01- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	A	TB1-01C	P115A	D	20T4	TG006				115V 400 A	1
	B	TB1-19A	P15+	A						+15 VDC	
	C									SPARE	
	D									SPARE	
	E									SPARE	
	F	TB1-20B	P15-	C	20					-15 VDC	
	G	W03----	P28+	AE	20					+28 VDC	
	H	W05----	P28+R	AD	20					+28 DC RET	
	J	W2A----	P05+R	AE	20T2	TG009				+05 DC RET	
	K									SPARE	
	L	W1A----	P05+	AF	20T2	TG009				+05 VDC	
	M	W1A ----	P05+	AE	20T2	TGO10				+05 VDC	
	N	XDS09- 002	009	B							
	P	TB1-05C	P115C	E	20T4	TG006				115V 400 C	
J03-H	R		P15+R	A	20					+15 DC RET	
	S	TB1-07C	P115N	E	20T4	TG006				115V 400 N	
	T		P05+R	AZ						+05 DC RET	
	U	W2A----	P05+R	AF	20T2	TGO10				+05 DC RET	
	V	TB1-03C	P115B	D	20T4	TG006				115V 400 B	

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT P02- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	001	XDS05-002	020								
	002	XDS06-002	021								
	003	XDS07-002	017								
	004	XDS08-002	023								
J04- S 005			024	A							
	006	XDS10-002	025								
	007									SPARE	
	008									SPARE	
	009									SPARE	
	010									SPARE	
	011									SPARE	
	012									SPARE	
	013									SPARE	
	014									SPARE	
	015									SPARE	
	016									SPARE	
	017									SPARE	
	018									SPARE	
	019									SPARE	
	020									SPARE	
	021									SPARE	
	022	530-003	050	C							
	023									SPARE	
	024									SPARE	
	025									SPARE	
	026									SPARE	
	027									SPARE	
	028									SPARE	

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT P02- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	029	B01- R1	026			S2999		SG003		$-SH-32	
	030	B01- R2	027			S2000		SG003		*	
	031									SPARE	
	032	T02-003	P26HI	A		S2999		SG005		$-SH-29 W4	
	033	T02-004	P26L0	A		S2000		SG005	*		
	034									SPARE	
	035									SPARE	
	036									SPARE	
	037	W03----	P28+	B						*28 VDC	
	038									SPARE	
J04- J	039		036								
	040									SPARE	
	041									SPARE	
	042									SPARE	
	043									SPARE	
	044									SPARE	
	045	XDS15-001	035								
	046	XDS14-001	033								
	047	XDS13-001	032								
	048	XDS12-001	031								
	049	XDS11-001	030								
	050									SPARE	
J04- .U	051		003								
J04- .A	052		QGC21*	C							
J04- .B	053		004								
J04- .E	054		005								
J04- .F	055		006								
J04- .C	056		007								

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT P02- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
J03- L	057		008								
	058									SPARE	
	059									SPARE	
	060	W2A----	P05+R	B						+05 DC RET	
	061	W2A----	P05+R	Z						+*05 DC RET	
	062	XDS09- 002	009	A							
	063	XDS04-002	010								
	064	XDS03-002	012								
	065									SPARE	
	066									SPARE	
	067									SPARE	
J04- .G	068		048								
J04- K	069		019								
J03- S	070		P28+STR								
	071	S3A- C1	016								
J04- .H	072		017	A							
J04- L	073		018								
	074									SPARE	
	075	W1A----	P05+	B						+05 VDC	
	076	W1A----	P05+							+05 VDC	
	077	S04-004	037								
J03- V	078		P28+ST								
	079	W03----	P28+	A						+28 VDC	
	080	W05----	P28+R	B						+28 DC RET	
J04- Z	081		108								
	082									SPARE	
	083	S13-803	KNGC	A							
	084									SPARE	

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT P02- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
J 04- FF	085		001	A		S2999		SG001		$-FLT	
J04- GG	086		002	B		S2000		SG001		*	
	087									SPARE	
	088									SPARE	
	089									SPARE	
	090	TB1-09A	P26HI	B		S2999		SG002		$-W4	
	091	TB1-11A	P26LO	B		S2000		SG002		*	
	092	TB1-19C	P15+	E						+15 VDC	
	093									SPARE	
	094									SPARE	
	095									SPARE	
	096									SPARE	
	097	S11-006	039								
	098									SPARE	
	099									SPARE	
	100	W03----	P28+							+28 VDC	
	101									SPARE	
	102									SPARE	
	103	W1A----	P05+	A						+05 VDC	
	104									SPARE	
	105	W2A----	P05+R	AV						+05 DC RET	
	106									SPARE	
	107	S11-005	P15-	A						-15 VDC	
	108									SPARE	
	109									SPARE	
	110									SPARE	
	111									SPARE	

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT P02- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	112									SPARE	
	113									SPARE	
	114									SPARE	
	115									SPARE	
	116									SPARE	
	117									SPARE	
	118									SPARE	
	119									SPARE	
	120									SPARE	
	121									SPARE	
	122									SPARE	
	123									SPARE	
	124									SPARE	
	125									SPARE	
	126									SPARE	
	127									SPARE	
	128									SPARE	
	129									SPARE	
	130									SPARE	
	131									SPARE	
	132									SPARE	

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT S01- SWITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	001									NC	
CB1-001	002		098	B	18	J					1
TB1-01A	003		P115A	B	18T3			TG007		115V 400 A	1
	004									NC	
	005	K02- B2	100		18T2	TG019					1
TBL-03A	006		P115B	B	18T3	TG097				115V 400 B	1
	007									NC	
	008	K02- A2	101		18T2	TG019					1
TB1-05A	009		P115C	B	18T3	TG007				115V 400 C	1
	010									NC	
	012										

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT S02- SWITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
CB2-001	002		103		18	J					
W03----	003		P28+	AF	18					+28 VDC	
FL2-002	005		093	B	18						
W05----	006		P28+R	AE	18					+28 DC RET	

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT S3A- SWITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
P02-071	C1		016								
	C2	S3D- C2	P28+R	G	J					+28 DC RET	
W05----	C2		P28+R	AG						+28 DC RET	
	001	S3A-002	P05+R	AP	B					+05 DC RET	
W2B----	001		P05+R	AW						+05 DC RET	
S3A-001	002		P05+R	AP	B					+05 DC RET	
	002	S3B-010	P05+R	AQ	J					+05 DC RET	
	003									NC	
	004									NC	
	005									NC	
	006									NC	
J04- B	007		068								
J04- D	008		105								
J04- E	009		071								
	010									NC	
	S3B-		SWITCH								
J04- A	C1		011	A							
J04- X	C2		070								
	001					NC					
	002	S38-003	P05+R	E	B					+05 DC RET	
	002	S3D- C1	P05+R	AN	J					+05 DC RET	
S3B-002	003		P05+R	E	B					+05 DC RET	
	003	S3B-004	P05+R	F	B					+05 DC RET	
S3B-003 004			P05+R	F	B					+05 DC RET	
	004	S3B-005	P05+R	G	B					+05 DC RET	
S35-004	005		P05+R	G	B					+05 DC RET	

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT S3B- SWITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	005	S3B-006	P05+R	H		B				+05 DC RET	
S3B-005	006		P05+R	H		B				+05 DC RET	
	006	S3B-007	P05+R	AJ		B				+05 DC RET	
S3B-006	007		P05+R	AJ		B				+05 DC RET	
	007	S3B-009	P05+R	AK		J				+05 DC RET	
	008									NC	
S3B-007	009		P05+R	AK		J				+05 DC RET	
	009	S3B-010	P05+R	AM		B				+05 DC RET	
S3B-009	010		P05+R	AM		B				+05 DC RET	
S3A-002	010		P05+R	AQ		J				+05 DC RET	
	S3C-		SWITCH								
J04- .I	C1		080	A							
S11-003	C1		080	B							
	001									NC	
	002									NC	
	003									NC	
J04- T	004		076	A							
	005									NC	
	006									NC	
	007									NC	
	008									NC	
	009									NC	
	010									NC	

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT S3D- SWITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
S3B-002		C1	P05+R	AN		J				+05 DC RET	
S3A- C2		C2	P28+R	G		J				+28 DC RET	
	001									NC	
	002									NC	
	003	S3 -004	050	A		B					
P02-022	003		050	C							
S3D-003	004		050	A		B					
	004	S3D-005	050	B		B					
S3D-004	005		050	R		B					
	005	XDS12-003	050	D							
	006									NC	
	007									NC	
	008									NC	
	009									NC	
J04- C	010		069								

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT S04- SWITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	001									NC	
	002									NC	
WZB----	003		P05+R	Y	20					+05 DC RET	
P02-077	004		037								

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT S05- SWITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	002	S05-005	060	A		B					
J04- HH	003		060	B	S1					$-FLT	
J04- .K	005		060								
S05-002	005		060	A		B					
	006	S11-002	P05+R	J						+05 DC RET	
	006	506-006	P05+R	K	J					+05 DC RET	

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT S06- SWITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	002									NC	
	003									NC	
J04- .M	005		061								
S05-006	006		P05+R	K		J				+05 DC RET	

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT S07- SWITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	001									NC	
	002									NC	
J04- G	003		072		A	T2		TG025			
J04- H	004		P05+R		A	T2		TG025		+05 CC RET	
W2B----	004		P05+R		AL					+05 DC RET	
	004	S14-002	P05+R		BA					+05DC RET	

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT S08- SWITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
J04- .P	001		063								
W2B----	002		P05+R	S						+05 DC RET	
	002	S08-005	P05+R	T		J				+05 DC RET	
J04- .N	003		062								
	004	S08-006	084	C		J					
S08-002	005		P05+R	T		J				+05 DC RET	
	005	S09-002	P05+R	U		J				+05 DC RET	
	006	S09-004	084								
S08-004	006		084	C		J					

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT S09- SWITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
J04- .R	001		065								
S08-005	002		P05+R	U		J				+05 DC RET	
	002	S09-005	P05+R	V		J				+05 DC RET	
J04- .Q	003		064								
S08-006	004		084								
	004	S09-006	084	B		J					
S09-002	005		P05+R	V		J				+05 DC RET	
	005	S10-002	P05+R	W		J				+05 DC RET	
	006	S12-005	084	A		J					
	S09-004	006	084	B		J					

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT S10- SWITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
J04- .T	001		067								
S09-005	002		P05+R	W		J				+05 DC RET	
	002	S10-005	P05+R	X		J				+05 DC RET	
J04- .S	003		066								
	004	S12-002	083	A		J					
	004	S 0-006	083	B		J					
S 10-002	005		P05+R	X		J				+05 DC RET	
S 10-004	006		083	B		J					

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT S11- SWITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
W2B----	002		P05+R	I	20					+05 DC RET	
S05-006	002		P05+R	J						+05 DC RET	
	003	S3C- C1	080	B							
P02-107	005		P15-	A						-15 VDC	
TB1-20A	005		P15-	B 20						-15 VDC	
TB1-20C	005		P15-	G						-15 VDC	
P02-097	006		039								

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT S12- SWITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	001									NC	
S10-004	002		083	A		J					
J04- W	003		077								
	004									NC	
S09-006	005		084	A		J					
J04- Y	006		079								

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT S13- SWI TCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	001									NC	
	002									NC	
P02-083	003		KNGC	A							
J04- .J	003		KNGC	B							
W2B----	G04		P05+R	R						+05 DC RET	

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT S14- SWITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
J04- P	001		075								
	002	S14-005	P05+R	AX		J				+05 DC RET	
S07-004	002		P05+R	BA						+05DC RET	
J04- R	003		074								
J04- .D	004		075	A							
S 14--002	005		P05+R	AX		J				+05 DC RET	
J04- F	006		074	A							

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT T01- TRANSFORMER

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	001	TB1-02C	P115A	F		S2999	SG012			$-SH-3	1
	002	TB1-08C	P115N	F		S2000	SG012			*	1
	003	TB1-10A	P26HI	C		S2999	SG009			$-W49SH-1	
	004	TB1-12A	P26LO	E		S2000	SG009			*	

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT T02- TRANSFORMER

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	001	TB1-11C	P26LO	D		S2000		SGO11		$-W4	
	002	TB1-09C	P26HI	D		S2999		SGOI 1		*	
P02-032	003		P26HI	A		S2999		SG905		$-FLT	1
P02-033	004		P26LO	A		S2000		SG05		*	1

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT TB1- TERMINAL BOARD

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	01A	S01-003	P115A	B	18T3		TGO07			115V 400 A	1
J03- A	01B		P115A	C	20S2999		SG006			$-FLT	1
P01- A	01C		P115A	D	20T4		TG006			115V 408 A	1
	01E	TB1-02E	P115A	A	18	J				115V 400 A	1
	02B										
T01-001	02C		P115A	F	S2999		SG012			$-FLT	1
TB1-01E	02E		P115A	A	18	J				115V 400 A	1
03A	S01-006		P115B	B	18T3		TG007			115V 400 B	1
J03- B	03B		P115B	C	20S2999		SG007			$-FLT	1
P01- V	03C		P115B	D	20T4		TG006			115V 400 B	1
	03E	TB1-04E	P115B	A	18	J				115V 400	1
J03-D	04A		P115B	F	20S2999		SG008			*-FLT	1
	04C										
T-B1-03E	04E		P115B	A	18	J				115V 400 B	1
	05A	S01-009	P115C	B	18T3		TG007			115V 400 C	1
J03- C	05B		P115C		20S2000		SG007			*	1
P01- P	05C		P115C	E	20T4		TG006			115 400 C	1
	05E	TB1-06E	P115C	A	18	J				115V 400 C	1
J03- E	06A		P115C	C	202000		SG008			*	1
E03----	06B		P115C	F	S2999		SG015			$-W4	1
	06C										
TB1-05E	06E		P115C	A	18	J				115V 406 C	1
J03- T	07A		P115N	C	20					115V 400 N	1
J03- U	07B		P115N	D	20S2000		SG006			*	1
E02----	07B		P115N	G	S2000		SG015			*	
P01- S	07C		P115N	E	20T4		TG006			115V 400 N	1
	07E	TB1-08E	P115N	A	18	J				115V 400 N	1
	Q08A										

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT TB 1- TERMINAL BOARD

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
FL1-004	08B		P115N	B	18					115 V 400	N 1
T01-002	08C		P115N	F		S2000		SG012		*	1
TB1-07E	08E		P115N	A	18	J				115V 409 N	1
P02-090	09A		P26HI	B		S2999		SG002		$-FLT	
J03- W	098		P26HI			S2999		SG010		$-FLT	
T02-002	09C		P26HI	D		S2999		SG011		$-FLT	
	09D	TB1-10D	P26HI	E		J				26V RMS HI	
T01-003	10A		P26HI	C		S2999		SGO09		$-FLT	
TB1-09D	10D		P26HI	E	J					26V RMS HI	
P02-091	11A		P26LO	B		S2000		SGO02		*	
J03- X	11B		P26LO	C		S2000		SG010		*	
T02-001	11C		P26LO	D		S2000		SG011		*	
	11D	TB1-12D	P26LO		J					26V RMS LO	
T01-004	12A		P26LO	E		S2000		SG009		*	
	12B									NC	
	12C									NC	
TB1-110	12D		P26LO	J						26V RMS LO	
	13A									SPARE	
	13B									SPARE	
	13C									SPARE	
	14A									SPARE	
	14B									SPARE	
	14C									SPARE	
	15A									SPARE	
	15B									SPARE	
	15C									SPARE	
	16A									SPARE	
	16B									SPARE	

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT TB1- TERMINAL BOARD

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	16C									SPARE	
	17A									SPARE	
	17A	M01- -	P15-	H						-15 VDC	
	17B									SPARE	
	17C									SPARE	
	17D	TB1-20D	P15-	F		J				-15 VDC	
	18A	M01- +	P15+	D						+15 VDC	
	18B									SPARE	
	18C									SPARE	
	18E	TBl-19E	P15+	C		B				+15 VDC	
P01- B	19A		P15+	A						+15 VDC	
	19B									SPARE	
J03- F	19B		P15+	F						+15 VDC	
P02-092	19C		P15+	E						+15 VDC	
TB1-18E	19E		P15+	C		B				+15 VDC	
	20A	S11-005	P15-	B	20					-15 VDC	
P01- F	20B		P15-	C	20					-15 VDC	
J03- G	20C		P15-	D	20					-15 VDC	
	20C	S11-005	P15-	G						-15 VDC	
TB1-17D	20D		P15-	F		J				-15 VDC	

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT W1A- BUS +5VDC

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
P02-076	---		P05+							+05 VDC	
P02-103	---		P05+	A						+05 VDC	
P02-075	---		P05+	B						+05 VDC	
	---	XS13-002	P05+	C						+05 VDC	
		XDS11-002	P05+	D						+05 VDC	
		XDS12-002	P05+	E						+05 VDC	
	---	XDS14-002	P05+	F						+05 VDC	
	---	XDS15-002	P05+	G						+05 VDC	
J03- J	---		P05+	AA	20T2	TG011				+05 VDC	
J03- K	---		P05+	AB	20T2	TG012				+05 VDC	
J03- .A	---		P05+	AC	20T2	TG013				+05 VDC	
J03- .B	---		P05+	AD	20T2	TG014				+05 VDC	
P01- M	---		P05+	AE	20T2	TG010				+05 VDC	
P01- L	---		P05+	AF	20T2	TG009				+05 VDC	
	-----	W-B----	P05+	AG	18		B			+05 VDC	

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT W1B- BUS +5VDC

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
W1A--	----		P05+	AG	18	B				+05 VDC	

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT W2A- BUS +5VDC RETURN

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
P02-060	---		P05+R	B						+05 DC RET	
	---	XDS11-003	P05+R	M						+05 DC RET	
P02-061	---		P05+R	Z						+05 DC RET	
J03- .C	---		P05+R	AA	20T2			TG014		+05 DC RET	
J03- .D	---		P05+R	AP	20T2			TG013		+05 DC RET	
J03- .E	---		P05+R	AC	20T2			TG011		+05 DC RET	
J03- .J	---		P05+R	AD	20T2			TG012		+05 DC RET	
P01- J	---		P05+R	AE	20T2			TG009		+05 DC RET	
P01- U	---		P05+R	AF	20T2			TG010		+05 DC RET	
P02-105	----		P05+R	AV						+05 DC RET	
	---	W2B----	P05+R	AY	18	B				+05 DC RET	

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT W2B- BUS +5VDC RETURN

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
P01-T	---		P05+R	Z						+05 DC RET	
	---	S11-002	P05+R	I	20					+05 DC RET	
	---	S13-004	P05+R	R						+05 DC RET	
	---	S08-002	P05+R	S						+05 DC RET	
	---	S04-003	P05+R	Y	20					+05 DC RET	
	---	S07-004	P05+R	AL						+05 DC RET	
	---	S3A-001	P05+R	AW						+05 DC RET	
W2A----	---		P05+R	AY	18	B				+05 DC RET	

SECTION IIA. CONTROL-DISPLAY UNIT WIRE UST

COMPONENT W03- BUS +28VDC

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	--	XDS03-001	P28+	R	20					+28 VDC	
P02-100	---		P28+							+28 VDC	
P02-079	---		P28+	A						+28 VDC	
P02-037	---		P28+	B						+28 VDC	
J03-M	---		P28+	AA	20					+28 VDC	
J03-N	---		P28+	AB	20					+28 VDC	
J03-P	---		P28+	AC	20					+28 VDC	
J03-R	---		P28+	AD	20					+28 VDC	
P01-G	---		P28+	AE	20					+28 VDC	
	---	S02-003	P28+	AF	18					+28 VDC	
	---	XDS02-001	P28+	AG						+28 VDC	

SECTION IIA. CONTROL--DISPLAY UNIT WIRE LIST

COMPONENT W04- BUS SHIELD GROUND

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
J03- .H	---		P001SG	A	20					SHLD GND	
	---	PT-P02-090	P001SG	B			SL000			SHLD GND	
	---	PT-J04- FF	P001SG	C			SL000			SHLD GND	
	---	PT-P02-032	P001SG	D			SL000			SHLD GND	
	---	PT-T01-003	P001SG	E			SL000			SHLD GND	
	---	PT-T02-001	P001SG	F			SL000			SHLD GND	
J04- PP	---		P001SG	G	20					SHLD GND	
J04- NN	---		P001SG	H	20					SHLD GND	
	---	PT-TB1-06B	P001SG	J			SL000			SHLD GND	
	---	PT-J03-W	P001SG	K			SL000			SHD GND	

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT W05- BUS +28VDC RETURN

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
P02-080	---		P28+R	B						+28 DC RET	
J03-Y	---		P28+R	AA	20					+28 DC RET	
J03-Z	---		P28+R	AB	20					+28 DC RET	
J03- .G	---		P28+R	AC	20					+28 DC RET	
P01-H	---		P28+R	AD	20					+28 DC RET	
	---	S02-006	P28+R	AE	18					+28 DC RET	
	---	XDS02-002	P28+R	AF						+28 DC RET	
		S3A-C2	P28+R	AG						+28 DC RET	

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT XDS01- LAMP

FROM	PIN	TO		SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	001	M01-	-	P15-	E						-15 VDC	
	002	M01-	+	P15+	B						+15 VDC	

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT XDS02- LAMP

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
W03----	001		P28+	AG						+28 VDC	
W05----	002		P28+R	AF						+28 DC RET	

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT XDS03- LAMP

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
P02-064	002		012								
	001	XDS03-003	P28+	C		J				+28 VDC	
W03---	001		P28+	R	20					+28 VDC	
XD S03-001	003		P28+	C		J				+28 VDC	
	003	XDS10-001	P28+	D		J				+28 VDC	

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT XDS04- LAMP

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
P02-063	002		010								
	001	XDS04-003	P28+	F		J				+28 VDC	
	001	XDS10-003	P28+	G		J				+28 VDC	
XDS04-01	003		P28+	F		J				+28 VDC	
	003	XDS09-001	P28+	H		J				+28 VDC	

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT XDS05- LAMP

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
P02-001	002		020								
	001	XDS05-003	P28+	K		J				+28 VDC	
	001	XDS07-003	P28+	L		J				+28 VDC	
	003	XDS09-003	P28+	J		J				+28 VDC	
XDS05- 001	003		P28-+	K		J				+28 VDC	

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT XDS06- LAMP

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
P02-002	002		021								
	001	XDS06-003	P28+	O		J				+28 VDC	
	001	XDS08-001	P28+	P		J				+28 VDC	
	003	XDS07-001	P28+	N		J				+28 VDC	
XDS06-001	003		P28+	O		J				+28 VDC	

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT XDS07- LAMP

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
P02-003	002		017								
	001	XDS07-003	P28+	M		J				+28 VDC	
XDS06-003	001		P28+	N		J				+28 VDC	
XDS05-001	003		P28+	L		J				+28 VDC	
XDS07-001	003		P28+	M		J				+28 VDC	

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT XDS08- LAMP

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
P02-004	002		023								
	001		P28+	P		J				+28 VDC	
	001	XDS08-003	P28+	Q		J				+28 VDC	
XDS-8-001	003		P28+	O		J				+28 VDC	

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT XDS09- LAMP

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
P02-062	002		009	A							
P01- N	002		009	B							
XDS04-003	001		P28+	H		J				+28 VDC	
	001	XDS09-003	P28+	I		J				+28 VDC	
XDS09-001	003		P28+	I		J				+28 VDC	
XDS05-003	003		P28+	J		J				+28 VDC	

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT XDS10- LAMP

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
P02-006	002		025								
XDS03-003	001		P28+	D		J				+28 VDC	
	001	XDS10-003	P28+	E		J				+28 VDC	
XDS10-001	003		P28+	E		J				+28 VDC	
XDS04-001	003		P28+	G		J				+28 VDC	

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT XDS11- LAMP

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
P02-049	001		030								
W1A----	002		P05+	D						+05 VDC	
W2A----	003		P05+R	M						+05 DC RET	

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT XDS12- LAMP

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
P02-048	001			031							
W1A----	002			P05+	E					+05 VDC	
S3D-005	003			050	D						
	003	XDS13-003		050	E						
	003	XDS14-003		050	F						

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT XDS13- LAMP

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
P02-047	001		032								
W1A----	002		P05+	C						+05 VDC	
XDS12-003	003		050	E							

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT XDS14- LAMP

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
P 02-046	001		033								
W1A----	002		P05+	F						+05 VDC	
XDS12-003	003		050	F							
	003	XDS15-003	050	G							

SECTION IIA. CONTROL-DISPLAY UNIT WIRE LIST

COMPONENT XDS15- LAMP

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
P02-045	001		035								
W1A----	002		P05+	G						+05 VDC	
XDS14-003	003		050	G							

SECTION IIB. CONTROL-DISPLAY UNIT CARD CAGE WIRE LIST

COMPONENT J05- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	001	XA3-053	020	A							
	002	XA3-054	021	A							
	003	XA3-055	017	A							
	004	XA3-056	023	A							
	005	XA2-056	024	A							
	006	XA1-049	025	A							
	007										
	008										
	009										
	010										
	011										
	012										
	013										
	014										
	015										
	016										
	017										
	018										
	019										
	020										
	021										
	022	XA3-060	022	A							
	023										
	024										
	025										
	026										
	027										
	028										

SECTION IIB. CONTROL-DISPLAY UNIT CARD CAGE WIRE LIST

COMPONENT J05- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	029	XA2-033	026		T2			TG03			
	030	XA2-037	027		T2			TG03			
	031										
	032	XA2-040	028		T2			TG04			
	033	XA2-038	029		T2			TG04			
	034										
	035										
	036										
	037	XA2-036	P28+	C						+28 VDC	
	038										
	039	XA2-044	036								
	040										
	041										
	042										
	043										
	044										
	045	XA2-028	035								
	046	XA2-047	033								
	047	XA2-014	032	A							
	048	XA2-049	031								
	049	XA2-053	030								
	050										
	051	XA3-040	003								
	052	XA3-046	QGC21*	A							
	053	XA3-047	064	A							
	054	XA3-048	005	A							
	055	XA3-049	006	A							
	056	XA3-050	007	A							

SECTION IIB. CONTROL-DISPLAY UNIT CARD CAGE WIRE LIST

COMPONENT J05- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	057	XA3-044	008	A							
	058										
	059										
	060	XA3-001	P05+R	C						+05 DC RET	
	061	XA3-032	P05+R	D						+05 DC RET	
	062	XA3-059	009								
	063	XA3-061	010	A							
	064	XA3-062	012	A							
	065										
	066										
	067										
	068	XA3-002	048	A							
	069	XA3-035	019	A							
	070	XA3-026	P28+STR								
	071	XA3-036	016								
	072	XA3-043	017								
	073	XA3-033	018								
	074										
	075	XA3-034	P05+	D						+05 VDC	
	076	XA3-003	P05+	C						+05 VDC	
	077	XA3-052	037								
	078	XA3-029	P28+ST								
	079	XA3-030	P28+	B						+28 VDC	
	080	XA3-027	P28+R	A						+28 DC RET	
	081	XA3-025	108	A							
	082										
	083	XA4-033	KNGC								
	084										

SECTION IIB. CONTROL-DISPLAY UNIT CARD CAGE WIRE LIST

COMPONENT J05- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	085	XA4-021	001		T2			TG01			
	086	XA4-026	002		T2			TG01			
	087										
	088										
	089										
	090	XA4-062	P26HI		T2			TG02		26 VRMS HI	
	091	XA4-061	P26LO		T2			TG02		26 VRMS LO	
	092	XA2-006	P15+	B						+15 VDC	
	093										
	094										
	095										
	096										
	097	XA4-045	039								
	098										
	099										
	100	XA4-043	P28+	A						+28 VDC	
	101										
	102										
	103	XA4-034	P05+	A						+05 VDC RT	
	104										
	105	XA4-032	P05+R	A						+05 VDC RT	
	106										
	107	XA4-042	P15-	A						-15 VDC	
	108										
	109										
	110										
	111										
	112										

SECTION IIB. CONTROL-DISPLAY UNIT CARD CAGE WIRE LIST

COMPONENT J05- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	113										
	114										
	115										
	116										
	117										
	118										
	119										
	120										
	121										
	122										
	123										
	124										
	125										
	126										
	127										
	128										
	129										
	130										
	131										
	132										

SECTION IIB. CONTROL-DISPLAY UNIT CARD CAGE WIRE LIST

COMPONENT XA1- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	001										
	002										
	003										
	004	XA2-007	P15R	A						15V RET	
	004	XA1-028	P28+R	D						+28 DC RET	
	005										
	006										
	007										
	008										
	009										
	010										
	011										
	012										
	013										
	014										
	015	XA1-017	P28+	E	B					+28 VDC	
	016										
	017	XA2-036	P28+	D						+28 VDC	
XA1-015	017		P28+	E	B					+28 VDC	
	018										
	019										
	020										
	021										
	022										
	023										
	024										
	025										
	026										

SECTION IIB. CONTROL-DISPLAY UNIT CARD CAGE WIRE LIST

COMPONENT XA1- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	027										
	028	XA3-027	P28+R	B						+28 DC RET	
XA1-004	028		P28+R	D						+28 DC RET	
	029										
	030										
	031										
	032										
	033	XA3-038	019	8							
	034										
	035	XA3-037	048	B							
	037	XA3-053	020	B							
	038	XA3-054	021	B							
	039										
	040	XA3-042	040								
	041										
	042	XA3-041	047								
	043										
	044	XA3-055	017	B							
	045	XA3-056	023	B							
	046										
	047										
	048										
J05-006	049		025	A							
	051										
	053										
	054	XA2-026	043								
	055										
	056	XA3-028	044								

SECTION IIB. CONTROL-DISPLAY UNIT CARD CAGE WIRE LIST

COMPONENT XA1- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	057	XA2-035	K1CL0								
	058										
	059										
	060	XA2-014	032	B							
	061	XA2-061	041								
	062										

SECTION IIB. CONTROL-DISPLAY UNIT CARD CAGE WIRE LIST

COMPONENT XA2- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	001										
	002										
	003										
	004										
	005	XA4-042	P15-	B						-15 VDC	
J05-092	006		P15+	B						+15 VDC	
XA1-004	007		P15R	A						15V RET	
	008										
	009										
	010										
	011										
	012										
	013										
J05-047	014		032	A							
XA1-060	014		032	B							
	015	XA3-051	037	E							
	015	XA2-025	037	F							
	016	XA3-048	005	B							
	017										
	018										
	019										
	020										
	021										
	022										
	023										
	024	XA3-003	P05+	F						+05 VDC	
	025	XA2-027	037	D							
XA2-015	025		037	F							

SECTION IIB. CONTROL-DISPLAY UNIT CARD CAGE WIRE LIST

COMPONENT XA2- CNNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
XA1-054	026		043								
	027	XA2-054	037	C							
XA2-025	027		037	D							
J05-045	028		035								
	029	XA2-059	042								
	030										
	031	XA3-001	P05+R	F						+05 DC RET	
	032										
J05-029	033		026			T2		TG03			
	034										
XA1-057	035		K1CL0								
J05-037	036		P28+	C						+28 VDC	
XA1-017	036		P28+	C						+28 VDC	
J05-030	037		027		T2			TG03			
J05-033	038		029		T2			TG04			
	039										
J05-032	040		028		T2			TG04			
	041										
	042										
	043										
J05-039	044		036								
	045										
	046	XA3-047	004	B							
J05-046	047		033								
	048	XA2-052	037	A							
J05-048	049		031								
050		XA3-050	007	B							
051		XA3-046	QGC21*	B							

SECTION IIB. CONTROL-DISPLAY UNIT CARD CAGE WIRE LIST

COMPONENT XA2- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
XA2-048	052		037	A							
	052	XA2-054	037	B							
J05-049	053		030								
XA2-052	054		037	B							
XA2-027	054		037	C							
	055	XA3-044	008	B							
	055	XA2-058	008	C							
J05-005	056		024	A							
	057										
XA2-055	058		008	C							
XA2-029	059		042								
	060	XA3-649	006	B							
XA1-061	061		041								
	062										

SECTION IIB. CONTROL-DISPLAY UNIT CARD CAGE WIRE LIST

COMPONENT XA3- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
J05-060	001		P05+R	C						+05 DC RET	
	001	XA3-032	P05+R	E						+05 DC RET	
XA2-031	001		P05+R	F						+05 DC RET	
J05-068	002		048	A							
J05-076	003		P05+	C						+05 VDC	
	003	XA3-034	P05+	E						+05 VDC	
XA2-024	003		P05+	F						+05 VDC	
	004										
	005										
	006										
	007										
	008										
	009										
	010										
	011										
	012										
	013										
	014										
	015										
	016										
	017										
	018										
	019										
	020										
	021										
	022										
	023	XA3-062	012	B						S TST LMP	
	024	XA3-061	010	B						GSP TT LMP	

SECTION IIB. CONTROL-DISPLAY UNIT CARD CAGE WIRE LIST

COMPONENT XA3- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
J05-081	025		108	A							
J05-070	026		P28+STR								
J05-080	027		P28+R	A					+28 DC RET		
XA1-028	027		P28+R	B					+28 DC RET		
XA1-056	028		044								
J05-078	029		P28+ST								
J05-079	030		P28+	B					+28 VDC		
	031										
J05-061	032		P05+R	D					+05 DC RET		
XA3-001	032		P05+R	E					+05 DC RET		
J05-073	033		018								
J05-075	034		P05+	D					+05 VDC		
XA3-003	034		P05+	E					+05 VDC		
J05-069	035		019	A							
J05-071	036		016								
XA1-035	037		048	B							
XA1-033	038		019	B							
	039										
J05-051	040		003								
XA1-042	041		047								
XA1-040	042		040								
J05-072	043		017								
J05-057	044		008	A							
XA2-055	044		008	B							
	045										
J05-052	046		QGC21*	A							
XA2-051	046		QGC21*	B							
J05-053	047		004	A							

SECTION IIB. CONTROL-DISPLAY UNIT CARD CAGE WIRE LIST

COMPONENT XA3- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
XA2-046	047		004	B							
J05-054	048		005	A							
XA2-016	048		005	B							
J05-055	049		006	A							
XA2-060	049		006	B							
J05-056	050		007	A							
XA2-050	050		007	B							
XA2-015	051		037	E							
J05-077	052		037								
J05-001	053		020	A							
XA1-037	053		020	B							
J05-002	054		021	A							
XA1-038	054		021	B							
J05-003	055		017	A							
XA1-044	055		017	B							
J05-004	056		023	A							
XA1-045	056		023	B							
	057										
	058										
J05-062	059		009								
J05-022	060		022	A							
J05-063	061		010	A							
XA3-024	061		010	B							
J05-064	062		012	A							
XA3-023	062		012	B							

SECTION IIB. CONTROL-DISPLAY UNIT CARD CAGE WIRE LIST

COMPONENT XA4- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	001	XA4-032	P05+R	B						+05 VDC RT	
	002										
	003	XA4-034	P05+	B						+05 VDC	
	005										
	006										
	007										
	008										
	010										
	011										
	012										
	013										
	014										
	015										
	016										
	017										
	018										
	019										
	020										
J05-085	021		001				T2	TG01			
	022										
	023										
	024										
	025										
J05-086	026		002				T2	TG01			
	027										
	028										
	029										
	030										

SECTION IIB. CONTROL-DISPLAY UNIT CARD CAGE WIRE LIST

COMPONENT XA4- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	031										
J05-105	032		P05+R	A						+05 VDC RT	
XA4-001	032		P05+R	B						+05 VDC RT	
J05-083	033		KNGC								
J05-103	034		P05+	A						+05 VDC	
XA4-003	034		P05+	B						+05 VDC	
	035										
	036										
	037										
	038										
	039										
	040										
	041										
J05-107	042		P15-	A						-15 VDC	
XA2-005	042		P15-	B						-15 VDC	
J05-100	043		P28+	A						+28 VDC	
	044										
J05-097	045		039								
	046										
	047										
	048										
	049										
	050										
	051										
	052										
	053										
	054										
	055										

SECTION IIB. CONTROL-DISPLAY UNIT CARD CAGE WIRE LIST

COMPONENT XA4- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	056										
	057										
	058										
	059										
	060										
J05-091	061		P26L0			T2		TG02		26 VRMS LO	
J05-090	062		P26HI			T2		TG02		26 VRMS HI	

SECTION IIC. CONTROL-DISPLAY UNIT POWER SUPPLY WIRE LIST

COMPONENT A001- TRANSFORMER AND RECTIFIER ASSY

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	E1	K001- C1	014	A							
	E2	K001- B1	015	A							
	E3	K001- A1	016	A							
	E4	FL01-2	003	A		T4		TG-1			
	E5	E002- --	P0CG	B						CHAS GND	
	E6	W001- 11	POPG1	H	16					PWR GND	2
	E7	W002- 5	POPG2	C	16					PWR GND	2

SECTION IIC. CONTROL-DISPLAY UNIT POWER SUPPLY WIRE LIST

COMPONENT A1Z1- DIODE BRIDGE

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	4	A1Z2- 4	018	A							
	5	A1Z2- 5	017	A							
	A1Z2-		DIODE BRIDGE								
A1Z1- 4	4		018	A							
	4	L001- 1	018	B							
A1Z1- 5	5		017	A							
	5	L002- 1	017	B							
	A1Z3-		DIODE BRIDGE								
	7	L003- 1	019	A 16 B999							

SECTION IIC. CONTROL-DISPLAY UNIT POWER SUPPLY WIRE LIST

COMPONENT A002- MODULE NO. 1

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	1	FL08- 2	010	A							
	2	K002- 6	020	A		B999					
	3	K002- 2	021	A		B999					
	4	FL05- 2	007	A							
	4	K001- X2	007	B							
	5	W002- 3	POPG2	B						PWR GND	2
	6	K002- 5		022	A	B999					
	7	K002- 8		023	A	B999					2
	8	VR06- E4		013	B						
	9	K001- X1		025	A	B999					2
	10	K002- 7		024	A	B999					2
	10	VR6L1- 2		024	B	B999					2

SECTION IIC. CONTROL-DISPLAY UNIT POWER SUPPLY WIRE LIST

COMPONENT A003- COMPONENT ASSY

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	1	VR04- 2	027	A							
	2	VR05- 2	029	A							
	3	VR04- 1	026	A							
	6	VRO5- 1	028	A							

SECTION IIC. CONTROL-DISPLAY UNIT POWER SUPPLY WIRE LIST

COMPONENT C001- CAPACITOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	+	VR04-	5	030	A		B999				2
	+	L001-	2	030	B		B999				2
	-	W001-	5	POPG1	D					PWR GND	2
	C002-		CAPACITOR								
	+	W001-	9	POPG1	G					PWR GND	2
	-	L002-	2	031	B		8999				2
	-	VR05-	5	031	C						
	C003-		CAPACITOR								
	+	VR6L 1-	2	024	C 16		2				
	+	L003-	2	024	D 16		2				
	-	W002-	7	POPG2	D 16					PWR GND	2

SECTION IIC. CONTROL--DISPLAY UNIT POWER SUPPLY WIRE LIST

COMPONENT CR01- DIODE

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	A	K001- X1	025	B							
	C	K001- X2	007	C							

SECTION IIC. CONTROL-DISPLAY UNIT POWER SUPPLY WIRE LIST

COMPONENT E001- TERMINAL LUG

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
J001- C		--	POCG	A						CHAS GND	
	E002-		TERMINAL LUG								
A001- E5	--		POCG	B						CHAS GND	

SECTION IIC. CONTROL-DISPLAY UNIT POWER SUPPLY WIRE LIST

COMPONENT FL01- FILTER

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
J001- S	1		115N	A						115V N PH	1
A001- E4	2		003	A		T4	TG-1				
	FL02-		FILTER								
J001- A	1		115A	A						115V A PH	1
	2	K001- C2	004	A		T4	TG-1				
	FL03-		FILTER								
J001- V	1		115B	A						115V B PH	1
	2	K001- B2	005	A		T4	TG-1				
	FL04-		FILTER								
J001- P	1		115C	A						115V C PH	1
	2	K001- A2	006	A		T4	TG-1				

SECTION IIC. CONTROL-DISPLAY UNIT POWER SUPPLY WIRE LIST

COMPONENT FL05- FILTER

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
J001- G	1		P028+	A						+28VDC	
A002- 4	2		007	A							
	FL06-		FILTER								
J 001- N	1		001	A							
	2	K002- 1	008	A							
	FL07-		FILTER								
J001- T	1		002	A							
	2	K002- 4	009	A							
	FL08-		FILTER								
J001- H	1		P028+R	A						+28VDC RET	
A002- 1	2		010	A							

SECTION IIC. CONTROL-DISPLAY UNIT POWER SUPPLY WIRE LIST

COMPONENT FL09- FILTER

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
J001-8	1		P015+	A						+15VDC	
	2	VR04- 3	011	A							
	FL10-		FILTER								
J001- R	1		P015R	A						15VDC RET	
	2	W001- 1	P0PG1	A 16				PWR GND 2			
	FL11-		FILTER								
J001- F	1		P015-	A						-15VDC	
	2	VR05- 3	012	A							
	FL12-		FILTER								
	1	HY02- A2	P05+	C						+5V/+5.9V	
	2	VR06- E4	013	A 16							2
	FL13-		FILTER								
HY01- A2	1		P05+R	C		+5V RET					
	2	W002- 1	P0PG2	A 16	PWR GND		2				

SECTION IIC. CONTROL-DISPLAY UNIT POWER SUPPLY WIRE LIST

COMPONENT HY01- HYBRID (NEAR FL13)

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
J001- J	A1		P05+R	A						+5V RET	
	A2	FL13- 1	P05+R	C						+5V RET	
J001- U	A3		P05+R	B						+5V RET	
	HY02-			HYBRID (NEAR FL12)							
J001- L	A1		P05+	A							
FL12-1	A2		P05+	C							
J001-M	A3		P05+	B							

SECTION IIC. CONTROL-DISPLAY UNIT POWER SUPPLY WIRE UST

COMPONENT J001- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	A	FL02- 1	115A	A						115V A PH	1
	B	FL09- 1	P015+	A						+15VDC	
	C	E001- --	P0CG	A						CHAS GRD	
D										SPARE	
E										SPARE	
	F	FL11- 1	P015-	A						-15V0C	
	G	FL05- 1	P028+	A						+28VDC	
	H	FL08- 1	P028+R	A						+28VDC RET	
	J	HY01- A1	P05+R	A						+5V RET	
K										SPARE	
	L	HY0Z- .A1	P05+	A							
	M	HY02- A3	P05+	B							
	N	FL06- 1	001	A							
	P	FL04- 1	115C	A						115V C PH	1
	R	FL10- 1	P015R	A						15VDC RET	
	S	FL01- 1	115N	A						115V N PH	1
	T	FL07- 1	002	A							
	U	HY0L- A3	P0S+R	B						+5V RET	
	V	FL03- 1	115B	A						115V B PH	1

SECTION IIC. CONTROL-DISPLAY UNIT POWER SUPPLY WIRE LIST

COMPONENT K001- RELAY

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
A001- E3	A1		016	A							
FL04-	2	A2	006	A		T4		TG-1			
		A3							NC		
A001- E2	B1		015	A							
FL03- 2	B2		005	A		T4		TG-1			
		B3							NC		
A001- E1	C1		014	A							
FL02- 2	C2		004	A		T4		TG-1			
	C3								NC		
	D1								SPARE		
	D2								SPARE		
	D3								SPARE		
A002- 9	X1		025	A		8999					2
CR01- A	X1		025	B							
A002- 4	X2		007	B							
CR01- C	X2		007	C							

SECTION IIC. CONTROL-DISPLAY UNIT POWER SUPPLY WIRE LIST

COMPONENT K002- RELAY

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
FL06- 2	1		008	A							
A002- 3	2		021	A		B999					
	3								NC		
FL07- 2	4		009	A							
A002- 6	5		022	A		B999					
A002- 2	6		020	A		B999					
A002- 10	7		024	A		B999					2
A002- 7	8		023	A		B999					2

SECTION IIC. CONTROL-DISPLAY UNIT POWER SUPPLY WIRE LIST

COMPONENT L001- INDUCTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
A1Z2- 4	1		018	B							
C001- +	2		030	B		B999					2
	L002-		INDUCT0R								
A1Z2- 5	1		017	B							
C002--	2		031	B		B999					2
	L003-		INDUCT0R								
A1Z3- 7	1		019	A	16	B999					
C003- +	2		024	D	16						2

SECTION IIC. CONTROL-DISPLAY UNIT POWER SUPPLY WIRE LIST

COMPONENT VR04- BUILDING BLOCK REGULATOR NO. 3

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
A003- 3	1		026	A							
A003- 1	2		027	A							
FL09- 2	3		011	A							
	3	VR04- 6	011	B		B999					
	4	W001- 3	P0PG1	B						PWR GND	2
	4	VR04- 7	P0PG1	C						PWR GND	2
C001- +	5		030	A		B999		2			
VR04- 3	6		011	B		B999					
VR04- 4	7		P0PG1	C						PWR GND	2
	8									NC	
	VR05-		BUILDING BLOCK REGULATOR N0.4								
A003- 6	1		028	A							
A003- 2	2		029	A							
FL11- 2	3		012	A							
	3	VR05- 6	012	B		B999					
	4	W001- 7	P0PG1	E						PWR GND	2
	4	VR05- 7	P0PG1	F						PWR GND	2
0002--	5		031	C							
VR05- 3	6		012	B		B999					
VR05- 4	7		P0PG1	F						PWR GND	2
	8									NC	

SECTION IIC. CONTROL-DISPLAY UNIT POWER SUPPLY WIRE LIST

COMPONENT VR06- SWITCHING REGULATOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
FL12- 2	E4		013	A	16						2
A002- 8	E4		013	B							
	E6	W002- 9	POPG2	E	16					PWR GAD	2

SECTION IIC. CONTROL-DISPLAY UNIT POWER SUPPLY WIRE LIST

COMPONENT VR6L1- SWITCHING REGULATOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
A002- 10	2		024	B		B999					2
C003- +	2		024	C	16						2

SECTION IIC. CONTROL-DISPLAY UNIT POWER SUPPLY WIRE LIST

COMPONENT W001- BUS BAR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
FL10- 2	1		POPG1	A	16					PWR GND	2
VR04- 4	3		POPG1	B						PWR GND	2
C001- -	5		POPG1	D						PWR GND	2
VR05- 4	7		POPG1	E						PWR GND	2
C002- +	9		POPG1	G						PWR GND	2
A001- E6	11		POPG1	H	16					PWR GND	2
	W002-		BUS BAR								
FL13- 2	1		POPG2	A	16					PWR GND	2
A002- 5	3		POPG2	B						PWR GND	2
A001- E7	5		POPG2	C	16					PWR GND	2
C003- -	7		POPG2	D						PWR GND	2
VR06- E6	9		POPG2	E	16					PWR GND	2

SECTION III. ELECTRONICS UNIT WIRE LIST

COMPONENT CBI- CIRCUIT BREAKER

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
J12- A	002		P115AO	B	18S 1					$-SH-2	1
J06-020	001		P115AO		22S1					$-SH-2	1
	001	XA17-019	P115AO	A	18S1					$-SH-1,2	1

COMPONENT CB1- CIRCUIT BREAKER

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
J12- W	002		P26HHI	B		S1				$-SH-2	
	001	XA17-022	P26HHI	A		S1				$-SH-1,2	
J06-011	001		P26HHI	I		S1				$-SH-2	
	001	TB1-08B	P26HHI	J		S1				$-SH-2	

SECTION III. ELECTRONICS UNIT WIRE LIST

COMPONENT CB3- CIRCUIT BREAKER

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
J12- E	002		P115CO	C	18S1					$-SH-2	1
	001	T02-002	705	B	S1					$-SH-1	1

SECTION III. ELECTRONICS UNIT WIRE UST

COMPONENT CB4- CIRCUIT BREAKER

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
J12- C	002		P115CO	B	18S1					$-SH-1	1
	001	T01-002	674	C	S1					$-SH-2	1

SECTION III. ELECTRONICS UNIT WIRE LIST

COMPONENT E01-GROUND LUG CHASSIS GROUND

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
J12- .F	---		POCG		20					CHAS. GND	

SECTION IIIA. ELECTRONICS UNIT WIRE UST

COMPONENT E07 STANDOFF

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
J06-053	---		630X			S3 000		SG04		$-SH-E2	
	---	S4A-001	630X	A		S3 000		SG05		$-SH-E2	
	---	E04---	630X	B		J					

SECTION III. ELECTRONICS UNIT WIRE LIST

COMPONENT E03 STANDOFF

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
J06-044	---		631Y			S3	999	SGO4		*	
	---	S4B-001	631Y	A		S3	999	SGO5		*	
	---	EO6----	631Y	B		J					

SECTION III. ELECTRONICS UNIT WIRE LIST

COMPONENT EO4 STANDOFF

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
EO2---	---		630X	B		J					

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT E05 STANDOFF

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
J06-054	---		632Z			S3	222	SG04		*	
	---	S4C-001	632Z	A		S3	222	SG05		*	
	---	E07---	632Z	B		J					

SECTION III. ELECTRONICS UNIT WIRE LIST

COMPONENT E06 STANDOFF

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
E03---	---		631Y	B		J					

SECTION IIIA. ELECTRONICS UNIT WIRE UST

COMPONENT E07 STANDOFF

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
E05---	---		632Z	B		J					

SECTION III. ELECTRONICS UNIT WIRE LIST

COMPONENT E08 STANDOFF

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
J06-045	---		633X			S3	000	SG06			$-SH-E8
	---	S4A-002	633X	A		S3	000	SG07			$-SH-E8
	---	EJ0---	633X	B		J					

SECTION III. ELECTRONICS UNIT WIRE LIST

COMPONENT E09 STANDOFF

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
J06-045	---		634Y			S3	999	SG06			*
	---	S4B-002	634Y	A		S3	999	SG07			*
	---	E12---	634Y	B		J					

SECTION III. ELECTRONICS UNIT WIRE LIST

COMPONENT E11 STANDOFF

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
E08	---		633X	B		J					

SECTION III. ELECTRONICS UNIT WIRE LIST

COMPONENT E11 STANDOFF

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
J06-055	---		635Z			S3	222	SG06		*	
	---	S4C-002	635Z	A		S3	222	SG07		*	
	---	E113---	635Z	B		J					

SECTION III. ELECTRONICS UNIT WIRE LIST

COMPONENT E12 STANDOFF

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
E09 ---	---		634Y	B	J						

SECTION III. ELECTRONICS UNIT WIRE LIST

COMPONENT E13 STANDOFF

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
E11---	E13		635Z	B		J					

SECTION III. ELECTRONICS UNIT WIRE LIST

COMPONENT E14 STANDOFF

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
J06-056	---		636X			S3	000	SG08		$-SH-E14	
---	S4A-003		636X	A		S3	000	SG09		$-SH-E14	
---	E16---		636X	B		J					

SECTION III. ELECTRONICS UNIT WIRE LIST

COMPONENT E15 STANDOFF

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
JO6-047	---		637Y			S3	999	SG08		*	
---	S41-003		637	A		S3	999	SG09		*	
---	E18---		637	B		J					

SECTION III. ELECTRONICS UNIT WIRE UST

COMPONENT E16 STANDOFF

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
E14----	---		636X	B		J					

SECTION III. ELECTRONICS UNIT WIRE LIST

COMPONENT E17 STANDOFF

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
J06-057	---		638Z			S3	222	SG08		*	
	---	S4C-003	638Z	A		S3	222	SG09		*	
	---		E19---	638Z	B		J				

COMPONENT E18 STANDOFF

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
E15---		---		637Y	B		J				

SECTION III. ELECTRONICS UNIT WIRE LIST

COMPONENT .E19 STANDOFF

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
E17---	---		638Z	B		J					

SECTION III. ELECTRONICS UNIT WIRE UST

COMPONENT J01- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	A	S2D- C	698			S1				S-D	
	B									SPARE	
	C									SPARE	
	D	PT-SH-A	P001SG	S	SL000					SHD GND	
	E									SPARE	
	F									SPARE	
	G									SPARE	

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT J02- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	A	S2B- C	690			S1				$-E	
	B	TB1-20B	SIGGRD	G						SIG GND	
	C									SPARE	
	D									SPARE	
	E	PT-SH-A	P001SG	R		SL000				SHD GND	

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT J03- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	A	S3A-018	935			S2999		SG30		$-SH-C	
	B	S3E-018	936			S2000		SG30		*	
	C	S4A- C	700			S3000		SG20		$-G,SH-A	
	D	S4C- C	702			S3222		SG20		*	
	E									NC	
	F	S4B- C	701			S3999		SG20		*	
	G	PT-SH-C	P001SG O			SL000				SHD GND	

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT J04- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	A	TB1-07A	P26HHI	C		S2999	SG32			$-SH-D	
	B	TB1-05A	P26HLO	B		S2000	SG32			*	
	C	S2A- C	686			S1				$-FLT	
	D	S3E- C	685			S1				$-E,SH-A	
	E	PT-SH-D	POO1SG	P	SLOOO					SHD GND	
	F									SPARE	

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT J05- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	001									SPARE	
	002									SPARE	
	002									SPARE	
	003	S2C- C	692	24	S1					$-W2-11	
	004									SPARE	
	005	TB1-07B	P26HHI	D	24	52999		SG33		$-9,10	
	006	TB1-06B	P26HLO	C	24	S2000		SG33		*	
	007	TBl-08C	P26HHI	H	24	S2999		SG45		$-10	
	008	TB1-09C	P26HLO	Q	24	S2000		SG45		*	
	009	PT-SH-5	P001SGAN		24	SL000				SHD GND	
	010	PT-SH-5	P001SGAG		24	SL000				SHD GND	
	011									SPARE	
	012									SPARE	
	013									SPARE	

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT J06- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	001	W05-001	P28+R	A						+28 DC RET	
	002	W04-001	P28+	A						+28 VDC	
	003	W04-001	P28+	B						+28 VOC	
	004	W04-001	P28+	C						+28 VDC	
	005	T02-001	600		S1						4
	006	T01-001	601		S1						4
	007	W05-001	P28+R	B						+28 DC RET	
	008	105-001	P28+R	C						+28 DC RET	
	009	W04-001	P28+	D						+28 VDC	
	010	J12- L	622								
	011	CB2-001	P26HHI	I	S1						4
	012	J12- B	P115BO	A	S1						4
	013	XA17-020	P115BO	B	S1						4
	014									SPARE	
	015	XA17-018	650Z		S3222	SG16					4
	016	XA17- U	649Y		S3999	SG16				*	
	017	S3C-003	602								
	018	S3A-005	P23.5H		S2000	SG46					4
	019	TB1-098	P26HLO	R						26 VRMS	
	020	CB1-001	P115AO		22S1						4
	021							SPARE			
	022							SPARE			
	023	XA17-012	643Y	S3999	SG12						4
	024	XA17- V	648X	S3000	SG16			*			
	025	XA17-016	647Z	S3222	SG14						4
	026	S50- C	683	S3222	SG29						4
	027	S3E-005	P23.5L	S2999	SG46			*			
	028	53B-003	P28SW								

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT J06- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	029	W02-003	P001SG	A						SHD GRD	
	030	S3C-001	011								
	031	W09-003	P00NG	D	22S1						4
	032	XA17-014	644Z			S3222	SG12			*	
	033	XA17- N	642X			S3000	SG12			*	
	034	A17-R	646Y			S3999	SG14			*	
	035	S5C-C	682			S3000	SG29			*	
	036	S5E-C	684			S3999	SG29				
	037	S3C-013	071								
	038									SPARE	
	039	S48-004	628Y	A		S3999	SG03				4
	040	XA17- M	641Z			S3222	SG10			*	
	041	XA17-009	640Y			S3999	SG10			*	
	042	XA17-L	639X			S3000	SG10				4
	043	XA17-T	645X			S3000	SG14			*	
	044	E03---	631Y			S3999	SG04				4
	045	E08---	633X			S3000	SG06				4
	046	E09---	634Y			S3999	SG06			*	
	047	E15---	637Y			S3999	SG08				4
	048	S4A-004	627X	A		S3000	SG03			*	
	049	S4C-004	629Z	A		S3222	SG03			*	
	050	TB2- 18C	604			T2	TG01				
	051	TB2-16C	606			T2	TG02				
	052	TB2-14C	608			T2	TG03				
	053	E02---	630X			S3000	SG04			*	
	054	E05---	6A2Z			S3222	SG04			*	
	055	E11---	635Z			S3222	SG06			*	
	056	E14---	636X		S3000	SG08				*	

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT J06- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	057	E17---	638Z			S3222		SG08		*	
	058	S3B-013	036								
	059	TB2-17C	603			T2		TG01			
	060	T82-15C	605			T2		TG02			
	061	TB2-13C	607			T2		TG03			
	062	TB2-12C	610			T2		TG04			
	063	TB2-10C	612			T2		TG05			
	064	TB2-06C	616			T2		TG07			
	065	T82-08C	614			T2		TG06			
	067	TB2-02C	619			T2		TG08			
	068	TB1-02C	618			S2999		SG01			4
	069	TB1-01C	617			S2000		SG01		*	
	070	TB2-1C	609			T2		TG04			
	071	TB2-09C	611			T2		TG08			
	072	TB2-05C	615			T2		TG07			
	073	TB2-07C	613			T2		TG06			
	074	S3C-004	QGC21*								
	075	TB2-01C	072			T2		TG08			
	076	TB1-04C	321	C		S2999		SG02			4
	077	TB1-03C	620			S2000		SG02			
	078	S3C-009	623								
	079	S3C-012	624								
	080	S3C-011	625								
	081	J11- D	105	24							
	082	S3C-002	626								
	083	J11- C	069								
	084	S3C-007	019								
	085	S3C-006	018								

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT J07- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	001	S3A-006	P26AC0			S2000		SG47		*	
	002	S38-004	P30+			T2		TG20		+30 VDC	
	003	S3B-005	P30-			T2		TG20		-30 VDC	
	004									SPARE	
	005	S3B-011	655								
	006	S3B-006	P28+RG			T2		TG21		+28V REG	
	007	S3B-007	P28-RG			T2		TG21		-28V REG	
	008	S3B-008	P15+PC			T2		TG09		+15V PREC	
	009									NC	
	010									SPARE	
	011									SPARE	
	012									SPARE	
	013									SPARE	
	014									SPARF	
	015									SPARE	
	016	S30-014	656HI								
	017									SPARE	
	018									SPARE	
	019									SPARE	
	020	PT-SH-46	SIGGRDA		A	SL000				SIG GRD A	
	021	S3C-015	080								
	022	S3C-016	659								
	023	S3A-015	020			S1				$-SH-25,30	
	024	S3A-007	P26AC90			S2999	SG47			$-SH-23	
	025	S3A-008	660			S1				$-SH-23	
	026	S3A-002	P24X								
	027	S3B-012	P48FL								
	028									SPARE	

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT J07- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	029	S3B-009	P15-PC		T2		TG09			-15V PREC	
	030	S3A-010	662		S2999		SG18			$-SH-41,23	
	031									SPARE	
	032									SPARE	
	033	S3B-016	663								
	034	S08-009	654		S1					$-FLT	2
	035	S3D-013	658								
	036									SPARE	
	037									SPARE	
	038	S3C-017	KNGC								
	039									SPARE	
	040									SPARE	
	041	S3A-012	666			S2000	SG19			$-W2 ,SH-30	
	042	S3A-011	667			S2999	SG19			$-SH-52	
	043	S3B-010	P05+							+05 VDC	
	044	S3A-009	661			S2000	SG18			*	
	045	S38-015	664								
	046	S08-003	653			S1				$-20	2
	047	S3D-012	657HI								
	048									SPARE	
	049	S3C-005	048								
	050	S10-003	669	A		S1				$-SH-52	
	051									SPARE	
	052	S10-009	670	A		S1				$-SH-50,42	
	053	S3C-008	673	A							

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT J08- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	A	XA17-003	711			S2000	SG28			$-F	2
	B	XA17- A	710			S2999	SG28			*	2
	C	W02-010	P001SGAL							SHD GND	
	D	XA17-C	711	A		S2000	SG26			*	2
	E	XA17-A	710	A		S2999	SG26			*-J	2
	F	PT-SH-A	P001SGAJ			SL00				SHD GND	
	G									NC	
	H									NC	
	J	PT-SH-D	P001SGAK			SL000				SHD GND	
	K	W02-011	P001SGAM							SHD GND	

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT J 09- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	A	S09-002	924			S2000		SG34		$-D	
	B	S09-005	920			S2999		SG34			
	C	W02-006	P001SG W							SHD GND	
	D	PT,-SH-A	P001SG T			SL000		SHD GND			
	E	S09-008	922			S2000		SG35		$-J	
	F	S09-011	923			S2999		SG35		*	
	H	TB1-07C	P26HHI E			S2999		SG36		$-L,SH-P	
	J	PT-SH-E	P001SG U			SL000				SHD GND	
	K	W02-007	P001SG X							SHD GMD	
	L	PT-SH-H	P001SG Y			SL000				SHD GND	
	M	TB1-06C	P26HLO E			S2000		SG36		*	
	N	PT-SH-P	P001SG V			SL000				SHD GND	
	P	TB1-08A	P26HHI G			S2999		SG37		$-N,SH-H	
	R	TB1-06A	P26HLO F			S2000		SG37		*	

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT J 10- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	A	S10-002	926			S2000		SG38		$-B	
	B	PT-SH-A	P001SGAA			SL000				SHD GND	
	C	S10-008	928			S2000		SG39		$-J	
	D	W02-008	P001SGAC							SHD GND	
	E	S10-005	927			S2999		SG38		*	
	F	W02-009	P001SGAD							SHD GND	
	G									NC	
	H									NC	
	J	PT-SH-C	P001SGAB			SL000				SHD GND	
	K	S10-011	929			S2999		SG39		*	
	010	PT-SH-7	P001SGAR			SL000				SHD GND	

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT J 11- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	A	S3C-001	011	A	24						
	B	S3C-002	068		24						
J06-083	C		069								
J06-081	D		105		24						
	E	S3C-013	071	A	24						
	F	P01-018	075		24						
	G	T82-01A	072	B	24T2			TG10			
	H	TB2-02A	619	B	24T2			TG10			
	J	S3B-013	036	A	24						
	K	S3C-007	019	A	24						
	L	S3C-006	018	A	24						
	P	P01-038	075	A	24						
	R	P01-037	074		24						
	S	P01-058	007	A							
	T	P01-036	076		24						
	W	P01-032	077		24						
	X	P01-050	425		24						
	Y	P01-034	079		24						
	Z	P01-052	426		24						
	.A	S3C-004	QGC21*	A	24						
	.B	P01-020	004		24						
	.C	P01-021	007		24						
	.D	P01-019	074	B	24						
	.E	P01-022	005		24						
	.F	P01-023	006		24						
	.G	S3C-005	048	A	24						
	.H	S3C-008	673	B	24						
	.J	S3C-015	080	A	24						

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT J11- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	.J	S3C-017	KNGC	A	24						
	.K	P01-024	060		24						
	.M	P01-025	061		24						
	.N	P01-026	062	B	24						
	.P	P01-027	063	B	24						
	.Q	P01-028	064	B	24						
	.R	P01-029	065	B	24						
	.S	P01-030	066	B	24						
	.T	P01-031	067	B	24						
	.U	S1E-016	003								
	DD	S4A-004	627X			S3000		SG21		$-FLT	
	EE	S4B-004	628Y			S3999		SG21		*	
	FF	S5C-001	706			S2000		SG24		$-FLT	
	GG	S5C-004	707			S2999		SG24		*	
	HH	P01-097	106								
	KK	P01-089	107								
	MM	S4C-004	629Z			S3222		SG21		*	

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT J12- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	A	CB1-002	P115AO	B	18S1					$-FLT	
J06-012	B		P115BO	A	S1					$-FLT	
	C	CB4-002	P115C0	B	18S1					$-FLT	
	D	XA17-020	P11580	C	S1					$-FLT	
	E	CB3-002	P115CO	C	18S1					$-FLT	
	F	S1A-002	P15+		T2			TG11		+15 VDC	
	G	S1A-003	P15-		T2			TG11		-15 VDC	
	H	W06-006	P05+R	B						+05 DC RET	
	J	W03-001	P05+	A						+05 VDC	
	K	W03-001	P05+	B						+05 VDC	
J06-010	L		622								
	M	M01- +	P28+	E	18					+28 VDC	
	N	W04-002	P28+	F	18					+28 VDC	
	P	W04-003	P28+	G	18					+28 VDC	
	R	W04-003	P28+	H	18					+28 VDC	
	S	P01-091	010								
	T	W09-001	P00NG	E	22S1					$-FLT	
	U									NC	
	V	S5A- C	P28+ST								
	W	CB2-002	P26HHI	B	S1					$-FLT	
	X	TB 1--09A	P26HLO							26 VRMS	
	Y	M01- -	P28+R	E						+28 DC RET	
	Z	W05-003	P28+R	F						+28 DC RET	
	.A	W03-002	P05+	C						+05 VDC	
	.B	W03-002	P05+	D						+05 VDC	
	.C	W06-004	P05+R	S						+05 DC RET	
	.D	W06-004	P05+R	T						+05 CC RET	
	.E	W06-005	P0S+R	U						+05 DC QET	

SECTION IIIA. ELECTRONICS UNIT WIRE UST

COMPONENT J 12- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	.F	E01----	P0CG		20					CHAS. GND	
	.G	W05-003	P28+R	G						+28 DC RET	
	.H	W02-004	P001SG	J						SHD GND	
	.J	W06-005	P05+R	V						+05 DC RET	

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT M0 1- METER

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
J12- M	+		P28+	E	18					+28 VDC	
	+	W04-002	P28+	I	18					+28 VDC	
J12- Y	-		P28+R	E						+28 DC RET	
	-	W05-003	P28+R	H						+28 DC RET	

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT P01- PLUG

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	001	W03-003	P05+	E						+05 VDC	
	002	W03-003	P05+	F						+05 VDC	
	003	W03-003	P05+	G						+05 VDC	
	004	W03-004	P05+	H						+05 VDC	
	005	W03-004	P05+	I						+05 VDC	
	006	W06-002	P05+R	M						+05 DC RET	
	007	W06-002	P05+R	N						+05 DC RET	
	008	W06-002	POS+R	0						+05 DC RET	
	009	W06-003	P05+R	P						+05 DC RET	
	010	W06-003	P05+R	Q						+05 DC RET	
	011									SPARE	
	012	S5A- C	P28+ST	A							
	013									SPARE	
	014	S11-001	401	A							
	015	S11-003	402	A							
	016									SPARE	
	017									SPARE	
J11- F	018		075		24						
J11- .D	019		074	B	24						
J11- .B	020		004		24						
J11- .C	021		007		24						
J11- .E	022		005		24						
J11- .F	023		006		24						
J11- .K	024		060		24						
J11- .M	025		061		24						
J11- .N	026		062	B	24						
J11- .P	027		063	B	24						
J11- .Q	028		064	B	24						

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT P01- PLUG

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
J11- .R	029		065	B	24						
J11- .S	030		066	B	24						
J11- .T	031		067	B	24						
J11- W	032		077		24						
	033									SPARE	
J11- Y	034		079		24						
	035									SPARE	
J11-T	036		076		24						
J11-R	037		074		24						
J11-P	038		075	A	24						
	039	S3C-015	080	B							
	040	TB1-01A	423			S2000		SG27		$-FLT	
	041	TB1-02A	618	A		S2999		SG27		*	
	042	TB1-03A	620	C		S2000		SG28		$-FLT	
	043	TB1-04A	321	B		S2999		SG28		*	
	044									SPARE	
	045									SPARE	
	046	S3C-009	623	A							
	047	S3C-012	624	A							
	048	S3C-011	625	A							
	049									SPARE	
J11- X	050	425	24								
	051									SPARE	
J11- Z	052		426	24							
	053	S5A-008	427								
	054	S5A-009	428								
	055									NC	
	056									NC	

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT P01- PLUG

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	057										
J11- S	058		007	A							
	059	S3B-003	P28SW	A						28 VDC SW	
	060	TB1-20C	SIGGRD	F						SIG GND	
	061									SPARE	
	062									SPARE	
	063	W04-004	P28+	J						+28 VDC	
	064	W05-004	P28+R	I						+28 DC RET	
	065									SPARE	
	066									SPARE	
	067									SPARE	
	068	TB2-05A	429	B		T2		TG12			
	069	TB2-06A	616	A		T2		TG12			
	070	SPARE									
	071	TB2-07A	430	C		T2		TG13			
	072	TB2-08A	614	A		T2		TG13			
	073	TB2-09A	431	B		T2		TG14			
	074	TB2-10A	612	A		T2		TG14			
	075	TB2-11A	432			T2		TG15			
	076	TB2-12A	610			T2		TG15			
	077	TB2-13A	433	B		T2		TG16			
	078	TB 2-14A	608	A		T2		TG16			
	079	TB2-15A		434	B	T2		TG17			
	080	TB2-16A		606	A	T2		TG17			
	081									SPARE	
	082	TB2-17A		435	B	T2		TG18			
	083	TB2-18A		604	A	T2		TG18			
	084									SPARE	

SECTION IIA. ELECTRONICS UNIT WIRE LIST

COMPONENT P01- PLUG

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	085	S6A- C	510								
	086	S6A-001	436								
	087	S6A-002	437								
	088	S6A-004	438								
J11- KK	089		107								
	090									SPARE	
J12- S	091		010								
	092	S68-001	439								
	093	S6B-002	440								
	094	S6B-004	441								
	095									SPARE	
	096									SPARE	
J11- HH	097		106								
	098	S6C-001	442								
	099	S6C-002	443								
	100	S6C-004	444								
	101									SPARE	
	102									SPARE	
	103									SPARE	
	104	S6 D-001	445								
	105	S6D-002	446								
	106	S60-004	447								
	107									SPARE	
	108									SPARE	
	109									SPARE	
	110	S6E-001	448								
	111	S6E-002	449								
	112	S6E-004	450								

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT P01- PLUG

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	113									SPARE	
	114									SPARE	
	115									SPARE	
	116	S6F-001	451								
	117	S6F-002	452								
	118	S6F-004	453								
	119									SPARE	
	120									SPARE	
	121									SPARE	
	122									SPARE	
	123									SPARE	
	124									SPARE	
	125									SPARE	
	126									SPARE	
	127									SPARE	
	128									SPARE	
	129									SPARE	
	130									SPARE	
	131									SPARE	
	132									SPARE	

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT P02- PLUG

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	001	S1B-001	454								
	002	S1B-002	455								
	003	S1B-003	456								
	004	S1B-004	457								
	005	S1B-005	458								
	006	S1B-G06	459								
	007	S1B-007	460								
	008	S18-008	461								
	009	S1B-009	462								
	010	S10-003	475								
	011	S1B-011	901								
	012	S1B-012	902								
	013	S1B-013	903								
	014	S1B-014	904								
	015	S18-015	905								
	016	S18-016	906								
	017	S18-017	907								
	018									SPARE	
	019									SPARE	
	020	TB2-01B	072	D							
	021	S1C-001	464								
	022	S1C-002	465								
	023	S1C-003	466								
	024	S1C-004	467								
	025	S1C-005	468								
	026	S1C-006	469								
	027	S1C-007	470								
	028	S1C-008	471								

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT P02- PLUG

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	029	S1C-009	472								
	030	S1C-010	513								
	031	S1C-011	513	A							
	032	S1C-012	908								
	033	S1C-013	909								
	034	S1C-014	910								
	035	S1C-015	911								
	036	S1C-016	912								
	037	S1C-017	913								
	038									SPARE	
	039									SPARE	
	040									SPARE	
	041	S1D-001	473								
	042	S1D-002	474								
	043	S1D-010	522								
	044	S1D-004	476								
	045	S1D-005	477								
	046	S1D-006	478								
	047	S1D-007	479								
	048	S1C-008	480								
	049	S1D-009	481								
	050	S1D-010	482								
	051	S1D-011	483								
	052	S1D-012	484								
	053	S1D-013	914								
	054	S1D-014	915								
	055	S1D-015	916								
	056	S1D-016	917								

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT P02- PLUG

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	057	SID-017	918								
	058									SPARE	
	059									SPARE	
	060									SPARE	
	061	S1A-001	P05+	J						+05 VDC	
	062	S1A-002	P15+	A						+15 VDC	
	063	S1A-003	P15-	A						-15 VDC	
	064	S1A-004	403								
	065	S1A-005	486								
	066	S1A-006	485								
	067	S1A-007	899								
	068	S1A-008	487								
	069	S1A-009	488								
	070	S1A-010	489								
	071	S1A-011	490								
	072	S1A-012	491								
	073	S1A-013	900								
	074									SPARE	
	075									NC	
	076									NC	
	077									SPARE	
	078									SPARE	
	079									SPARE	
	080									SPARE	
	081									SPARE	
	082									SPARE	
	083									SPARE	
	084									SPARE	

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT P02- PLUG

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	085									SPARE	
	086	S7A-001	492								
	087	S7A-002	493								
	088	S7A-004	494								
	089									NC	
	090									NC	
	091									SPARE	
	092	S7B-001	495								
	093	S7B-002	496								
	094	S7B-004	497								
	095									SPARE	
	096									SPARE	
	097									SPARE	
	098	S7C-001	498								
	099	S7C-002	499								
	100	S7C-004	500								
	101									SPARE	
	102									SPARE	
	103									SPARE	
	104	S7C-001	501								
	105	S7D-002	502								
	106	S70-004	503								
	107									SPARE	
	108									SPARE	
	109									SPARE	
	110	S7E-001	504								
	111	S7E-002	505								
	112	S7E-004	506								

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT P02- PLUG

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	113									SPARE	
	114									SPARE	
	115									SPARE	
	116	S7F-001	507								
	117	S7F-002	508								
	118	S7F-004	509								
	119									SPARE	
	120									SPARE	
	121									SPARE	
	122									SPARE	
	123									SPARE	
	124									SPARE	
	125									SPARE	
	126									SPARE	
	127									SPARE	
	128									SPARE	
	129									SPARE	
	130									SPARE	
	131									SPARE	
	132									SPARE	

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT R01- RESISTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
T01-001	001		600	A	S1					$-FLT	1
T01-002	002		674	B	S1					$-FLT	1

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT R02- RESISTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
T02-001	001		601	A		S1				$-FLT	1
T02-002	002		705	A		S1				$-FLT	1

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT S1A- SW ITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	C	S2C-009	697								
P02 -061	001		P05+	J						+05 VDC	
	001	S1 A-014	P05+	K						+05 VDC	
J12- F	002		P15+		T2			TG11		+15 VDC	
P02-062	002		P15+	A						+15 VDC	
J12- G	003		P15-		T2			TG11		-15 VDC	
P02-063	003		P15-	A							
P02-064	004		403								
P02-065	005		486								
P02-066	006		485								
P02-067	007		899								
P02-068	008		487								
P02-069	009		488								
P0-070	010		489								
P0Z-071	011		490								
P02-072	012		491								
P02-073	013		900								
S1A-001	014		P05+	K						+05 VDC	
	014	W03-005	P05+	L						+05 VDC	
	015									NC	
	016									NC	
S5A- C	017		P28+ST	B							
	018									NC	

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT S1B- SWITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	C	S2C-008	696								
P02-001	001		454								
P02-002	002		455								
P02-003	003		456								
P02-004	004		457								
P02-005	005		458								
P02-006	006		459								
P02-007	007		460								
P02-008	008		461								
P02-009	009		462								
P02-043	010		522								
P02-011	011		901								
P02-012	012		902								
P02-013	013		903								
P02-014	014		904								
P02-015	015		905								
P02-016	016		906								
P02-017	017		907								
	018									NC	

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT S1C- SWITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	C	S2C-007	695								
P02-021	001		464								
PO2-022	002		465								
P02-023	*03		466								
P02-024	004		467								
P02-025	005		468								
P02-026	006		469								
P02-027	007		470								
P02-028	008		471								
P02-029	009		472								
P02-030	010		513								
P02-031	011		513	A							
P02-032	012		918								
P02-033	013		909								
P02-034	014		910								
P02-035	015		911								
P02-036	016		912								
P02-037	017		913								
	018									NC	

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT SID- SWITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	C	S2C-006	694								
P02-041	001		473								
P02-042	002		474								
P02-010	003		475								
P02-044	004		476								
P02-045	005		477								
P02-046	006		478								
P02-047	007		479								
P02-048	008		480								
P02-049	009		481								
P02-050	010		482								
P02-051	011		483								
P02-052	012		484								
P02-053	013		914								
P02-054	014		915								
P02-055	015		916								
P02-056	016		917								
P02-057	017		918								
	018									NC	

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT S1E- SWITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	C	W05-004	P28+R	J						+28 DC RET	
	001									NC	
	002									NC	
	003									NC	
	004									NC	
	005									NC	
	006									NC	
	007									NC	
	008									NC	
	009									NC	
	010									NC	
	011									NC	
	012									NC	
	013									NC	
	014									NC	
	015									NC	
J11- .U	016		003								
	017									NC	
	018									NC	

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT S2A- SWITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
J04- C	C		686			S1				$-SH-C	
	001	S3A- C	689			S3000	SG31			$-FLT	1
	001	S2C-001	689	A							1
	002									NC	
	003									NC	
	004									NC	
	005									NC	
	006									NC	
	007									NC	
	008									NC	
	009									NC	
	010									NC	

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT S2B- SWITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
J02- A	C		690			S1				$-FLT	
	001									NC	
	002	S38- C	691			S3999		SG31		*	
	003									NC	
	004									NC	
	005									NC	
	006									NC	
	007									NC	
	008									NC	
	009	S2C-009	697	A		J					
	010									NC	

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT S2C- SWITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
J05-003	C		692			S1				$-SH-S2D-C	
S2A-001	001		689	A							1
	001	S2D-001	689	B	J						1
	002									NC	
	003	S3C- C	693			S3222		SG31		$-FLT	
	004	S2D-004	699	A	J						
	005	NC									
S1D- C	006		694								
	006	S20-006	694	A							
S1B- C	007		695								
	007	S20-007	695	A							
S1B- C	008		696								
	008	S20-008	696	A							
S1A- C	009		697								
S2B-009	009		697	A	J						
	010									NC	

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT S2D- SWITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
J01-A	C		698			S1				$-W2-12,	
	C	*	698	A						SH-S2C-C	
S2C-001	001		689	B		J					1
	002									NC	
	003									NC	
	004	S3D- C	699								
S2C-004	004		699	A		J					
	005	NC									
S2C-006		006	694	A							
S2F-007		007	695	A							
S2C-008		008	696	A							
	009									NC	
	010									NC	

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT S3A- SWITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
S09-009	C		686	A		S1				$-SH-S3 B-C	
S2A-001	C		689			S3000		SG31		$-W2-5	
	001	XA17-W	679			S1				$-FLT	1
	001	XA17-W	679	A							1
	002	XA17-X	677			S1				$-FLT	1
	002	XA17-X	677	A							1
	003	XA17-Y	675			S1				$-FLT	1
	003	XA17-Y	675	A							1
	003	S3E-008	675	P		J					1
	004	XA17- Z	681			S1				$-FLT	
J06-018	005		P23.5H			S2000	SG46			$-FLT	
J07-001	006		P26AC0			S2000	SG47			$-FLT	
J07-024	007		P26AC90			S2999	SG47			*	
J07-025	008		660			S1				$-FLT	
J07-044	009		661			52000	SG18			$-FLT	
J07-030	010		662			52999	SG18			*	
J07-042	011		667			S2999	SG19			$-FLT	
J07-041	012		666			S2000	SG19			*	
	013	T02-004	703			S1				$-FLT	
	014	T01-004	704			S1				$-FLT	
J07-023	015		020			S1				$-FLT	
	016									NC	
	017									NC	
J03- A	018		935			S2999	G30			$-FLT	

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT S3B- SWITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
S2B-002	C		691			S3999		SG31		$-SH-C	
	001	W04-004	P28+	K						+28 VOC	
J07--026	002		P24X								
J06-028	003		P28SW								
P01--059	003		P28SW	A							
J07-002	004		P30+			T2		TG20		+30 VDC	
J07-003	005		P30-			T2		TG20		-30 VDC	
J07-006	006		P28+RG	T2		TG21				+28V REG	
J07-007	007		P28-RG	T2		TG21				-28V REG	
J07-008	008		P15+PC	T2		TG09				+15V PREC	
J07-029	009		P15-PC	T2		TG09				-15V PREC	
J07-043	010		P05+							+05 VDC	
J07-005	011		655								
J07-027	012		P48FL								
J06-058	013		036								
J11-	013		036	A		24					
	014									NC	
J07-045	015		064								
J07-033	016		063								
	017									NC	
	018									NC	

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT S3C- SWITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
S2C-003	C		693			S3222		SG31		*	
J06-030	001		011								
J11-A	001		011	A	24						
J11-B	002		068		24						
J06-082	002		626								
J06-017	003		602								
J06-074	004		QGC21*								
J11- .A	004		QGC21*	A	24						
J07-049	005		048								
J11- .G	005		048	A	24						
J06-085	006		018								
J11- L	006		018	A	24						
J06-084	007		019								
J11- K	007		019	A	24						
J07-053	008		673	A							
J11- .H	008		673	B	24						
J06-078	009		623								
P01-046	009		623	A							
	010									NC	
J06-080	011		625								
P01-048	011		625	A							
J06-079	012		624								
P01-047	012		624	A							
J06-037	013		071								
J11- E	013		071	A	24						
	014									NC	
J07-021	015		080								
J11- .I	015		080	A	24						

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT S3C- SWITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
P01-039	015		080	B							
J07-022	016		659								
J07-038	017		KNGC								
J11- .J	017		KNGC	A	24						
	018									NC	

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT S3D- SWITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
S20-004	C		699								
	001	TB1-018	617	B		S1				$-FLT	
	002	TB1-03B	620	B		S1				$-FLT	
	003	TB2-17B	603	A							
	004	TB2-15B	605	A							
	005	TB2-136	607	A							
	006	T82-11B	609	A							
	007	TB2-098	611	A							
	008	TB2-07B	613	B							
	009	TB2-05B	615	B							
J07-047	012		657HI								
J07-035	013		658								
J07-016	014		656HI								
	015									NC	
	016									NC	
	017									NC	
	018									NC	

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT S3E- SWITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
J04- D	C		685			S1				$-FLT	
S09-012	C		685	A		S1				$-FLT	
	001	W09-004	P00NG	F		S1				$-FLT	
	001	S3E-002	P00NG	G		B				NEUTRAL	
S3E-001	002	P00NG		G		B				NEUTRAL	
	002	S3E-003	P00NG	H		B				NEUTRAL	
S3E-002	003	P00NG		H		B				NEUTRAL	
	003	S3E-013	P00NG	L						NETURAL	
	004	TB 1-05B	P26HLO	A		S1				$-FLT	
	004	S3E-006	P26HLO	J		B				26 VRMS	
J06-027	005		P23.5L			S2999		SG46		*	
S3E-004	006		P26HLO	J		B				26 VRMS	
	006	S3E-007	P26HLO	K		B				26 VRMS	
	007	S3E-009	P26HLO	D		J				26 VRMS	
S3E-006	007		P26HLO	K		B				26 VRMS	
	008	S3E-015	675	A		J					1
S3A-003	008		675	P		J					1
S3E-007	009		P26HLO	D		J				26 VRMS	
	009	S3E-010	P26HLO	G		B				26 VRMS	
S3E-009	010		P26HLO	G		B				26 VRMS	
	010	S3E-011	P26HLO	M		B				26 VRMS	
	011	S3E-012	P26HLO	L		B				26 VRMS	
S3E-010	011		P26HLO	M		B				26 VRMS	
S3E-011	012		P26HLO	I		B				26 VRMS	
	013	S3E-014	P00NG	K		R				NEUTRAL	
S3E-003	013		P00NG	L						NETURAL	
S3E-013	014		P00NG	K		B				NEUTRAL	
S3E-008	015		675	A		J					1

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT S3E- SWITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	016										NC
	017										NC
J03- B	018		936			S2000		SG30			*

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT S4A- SWITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
J03-C	C		700			S3000		SG20		$-FLT	
E02---	001	XA17-F	630X	A		S3000		SG05		$-FLT	
E08---	002	XA17-H	633X	A		S3000		SG07		$-FLT	
E14---	003	XA17-K	636X	A		S3000		SG09		$-FLT	
J11- DD	004		627X			S3000		SG21		$-SH-4	
J06-048	004		627X	A		S3000		SG03		$-SH-4	
S09-003	004		627X	B		S2000		SS22		$-SH-4	
	005									NC	
	006	XA17-V	648X	A		S3000		SG17		$-FLT	
	007	XA17-T	645X	A		S3000		SG15		$-FLT	
	008	XA7-N	642X	A		S3000		SG13		$-FLT	
	009	XA17-L	639X	A		S3000		SG11		$-FLT	

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT S4B- SWITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
J03- F	C		701			S3999		SG20		*	
E03---	001	XA17- E	631Y	A		S3999		SG05		*	
E09---	002	XA17-006	634Y	A		S3999		SG07		*	
E15---	003	XA17- J	637Y	A		S3999		SG09		*	
J11- EE	004		628Y			S3999		SG21		*	
J06-039	004		628Y	A		S3999		SG03		*	
S09-006	004		628Y	B		S2999		SG22		*	
	005									NC	
	006	XA17-U	649Y	A		S3999		SG17		*	
	007	XA17-R	646Y	A		S3999		SG15		*	
	008	XA17-012	643Y	A		S3999		SG13		*	
	009	XA17-009	640Y	A		S3999		SG11		*	

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT S4C- SWITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
J03- D	C		702			S3222		SG20		*	
E05---	001	XA17-005	632Z	A		S3222		SG05		*	
E11---	002	XA17-007	635Z	A		S3222		SG07		*	
E17---	003	XA17-008	638Z	A		S3222		SG09		*	
J11- MM	004		629Z			S3222		SG21		*	
J06-049	004		629Z	A		S3222		SG03		*	
	005									NC	
	006	XA17-018	650Z	A		S3222		SG17		*	
	007	XA17-016	647Z	A		S3222		SG15		*	
	008	XA17-014	644Z	A		S3222		SG13		*	
	009	XA17- M	641Z	A		S3222		SG11		*	

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT S4D- SWITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	C						NC				
001						NC					
002						NC					
003						NC					
004						NC					
005						NC					
006						NC					
007						NC					
008						NC					
009						NC					
010						NC					

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT S5A- SWITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
J12- V	C		P28+ST								
P01-012	C		P28+ST	A							
	C	S1A-017	P28+ST	B							
	001									NC	
	002									NC	
	003									NC	
	004									NC	
	005									NC	
	006									NC	
	007									NC	
P01-053	008		427								
P01-054	009		428								
	010									NC	
	011									NC	
	012									NC	
	013									NC	
	014									NC	
	015									NC	
	016									NC	
	017									NC	
	018									NC	

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT S5B- SWITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	C									NC	
	001									NC	
	002									NC	
	003									NC	
	004									NC	
	005									NC	
	006									NC	
	007									NC	
	008									NC	
	009									NC	
	010									NC	
	011									NC	
	012									NC	
	013									NC	
	014									NC	
	015									NC	
	016									NC	
	017									NC	
	018									NC	

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT S5C- SWITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
J06-035	C		682			S3000		SG29		$-SH-1	
J11- FF	001		706			S2000		SG24		$-SH-C	
S5C-001	002		706	A		J					
	002	S5C-003	706	B		J					
S5C-002	003		706	B		J					
	003	S5D0-001	706	C		J					
J11- GG	004		707			S2999		SG24		*	
	004	S5C-005	707	A		B					
S5C-004	005		707	A		B					
	005	S5C-006	707	B		B					
SSC-005	006		707	B		B					
	006	S5D-002	707	C							
	007									NC	
	008									NC	
	009									NC	
	010									NC	
	011									NC	
	012									NC	
	013									NC	
	014									NC	
	015									NC	
	016									NC	
	017									NC	
	018									NC	

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT S5D- SWITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
J06-026	C		683			S3222		SG29		*	
S5C-003	001		706	C		J					
	001	S5D-005	706	D		J					
S5C-006	002		707	C							
	002	S5D-003	707	F		B					
	003	S5D-004	707	D		B					
S5D-002	003		707	F		B					
S5D-003	004		707	D		B					
	004	S5E-001	707	E		J					
S5D-001	005		706	D		J					
	005	S5D-006	706	E		B					
	006									NC	
S5D-005	006		706	E	B						
	006	S5E-003	706	F	J						
	007									NC	
	008									NC	
	009									NC	
	010									NC	
	011									NC	
	012									NC	
	013									NC	
	014									NC	
	015									NC	
	016									NC	
	017									NC	
	018									NC	

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT S5E- SWITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
J06-036	C		684			S3999		SG29		*	
S5D-004	001		707	E		J					
	001	S5E-002	707	G		B					
S5E-001	002		707	G		B					
	002	S5E-006	707	H		J					
S5D-006	003		706	F		J					
	003	S5E-004	706	G		B					
S5E-003	004		706	G		B					
	004	S5E-005	706	H		B					
S5E-004	005		706	H		B					
S5E-002	006		707	H		J					
	007									NC	
	008									NC	
	009									NC	
	010									NC	
	011									NC	
	012									NC	
	013									NC	
	014									NC	
	015									NC	
	016									NC	
	017									NC	
	018									NC	

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT S6A- SWITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
P01-085	C		510								
	C	S6B- C	510	A		J					
	-C	S6B- -C	P05+R	A		J				+05 DC RET	
	-1	S6A-001	436	A		B					
	-2	S6A-002	437	A		B					
	-4	S6A-004	438	A		B					
P01-086	001		436								
S6A- -1	001		436	A		B					
P01-087	002		437								
S6A- -2	002		437	A		B					
P01-088	004		438								
S6A- -4	004		438	A		B					

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT S6B- SWITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
S6A- C	C		510	A		J					
	C	S6C- C	510	B		J					
S6A- -C	-C		P05+R	A		J				+05 DC RET	
	-C	S6C- -C	P05+R	B		J				+05 DC RET	
	-1	S6B-001	439	A		B					
	-2	S6B-002	440	A		B					
	-4	S6B-004	441	A		B					
P01-092	001		439								
S6B- -1	001		439	A		B					
P01-093	002		440								
S6B- -2	002		440	A		B					
P01-094	004		441								
S6B- -4	004		441	A		B					

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT S6C- SWITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
S6B- C	C		510	B		J					
	C	S6D- C	510	C		J					
S68- -C	-C		P05+R	B		J				+05 DC RET	
	-C	S6D- -C	P05+R	C		J				+05 DC RET	
	-1	S6C-001	442	A		B					
	-2	S6C-002	443	A		B					
	-4	S6C-004	444	A		B					
P01-098	001		442								
S6C- -1	001		442	A		B					
P01-099	002		443								
S6C- -2	002		443	A		B					
P01-100	004		444								
S6C- -4	004		444	A		B					

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT S6D- SWITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
S6C-C	C		510	C		J					
	C	S6E- C	510	D		J					
S6C- -C	-C		P05+R	C		J				+05 DC RET	
	-C	S6E- -C	P05+R	D		J				+05 DC RET	
	-1	S6D-001	445	A		B					
	-2	S6D-002	446	A		B					
	-4	S6D-004	447	A		B					
P01-104	001		445								
S6D- -1	001		445	A		B					
P01-105	002		446								
S6D- -2	002		446	A		B					
P01-106	004		447								
S6D- -4	004		447	A		B					

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT S6E- SWITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
S6D- C	C		510	D		J					
	C	S6F- C	510	E		J					
S6D- -C	-C		P05+R	D		J				+05 DC RET	
	-C	S6F- -C	P05+R	E		J				+05 DC RET	
	-1	S6E-001	448	A		B					
	-2	S6E-002	449	A		B					
	-4	S6E-004	450	A		B					
P01-110	001		448								
S6E- -1	001		448	A		B					
P01-111	002		449								
S6E- -2	002		449	A		B					
P01-112	004		450								
S6E- -4	004		450	A		B					

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT S6F- SWITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
S6E- C	C		510	E		J					
	C	S7A- C	510	F							
S6E- -C	-C		P05+R	E		J				+05 DC RET	
	-C	S7A- -C	P05+R	F						+05 DC RET	
	-1	S6F-001	451	A		B					
	-2	S6F-002	452	A		B					
	-4	S6F-004	453	A		B					
P01-116	001		451								
S6F- -1	001		451	A		B					
P01-117	002		452								
S6F- -2	002		452	A		B					
P01-118	004		453								
S6F- -4	004		453	A		B					

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT S7A- SWITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
S6F- C	C		510	F							
	C	S7B- C	510	G		J					
S6F- -C	-C		P05+R	F						+05 DC RET	
	-C	S7B- -C	P05+R	G		J				+05 DC RET	
	-1	S7A-001	492	A		B					
	-2	S7A-002	493	A		B					
	-4	S7A-004	494	A		B					
P02-086	001		492								
S7A- -1	001		492	A		B					
P02-087	002		493								
S7A- -2	002		493	A		B					
P02-088	004		494								
S7A- -4	004		494	A		B					

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT S7B- SWITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
S7A- C	C		510	G		J					
	C	S7C- C	510	H		J					
S7A- -C	-C		P05+R	G		J				+05 DC RET	
	-C	S7C- -C	P05+R	H		J				+05 DC RET	
	-1	S7B-001	495	A		B					
	-2	S7B-002	496	A		B					
	-4	S7B-004	497	A		B					
P02-092	001		495								
S7B- -1	001		495	A		B					
P02-093	002		496								
S7B- -2	002		496	A		B					
P02-094	004		497								
S7B- -4	004		497	A		B					

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT S7C- SWITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
S7B- C	C		510	H		J					
	C	S7D- C	510	I		J					
S7B- -C	-C		P05+R	H		J				+05 DC RET	
	-C	S7D- -C	P05+R	I		J				+05 DC RET	
	-1	S7C-001	498	A		B					
	-2	S7C-002	499	A		B					
	-4	S7C-004	500	A		B					
P02-098	001		498								
S7C- -1	001		498	A		B					
P02-099	002		499								
S7C- -2	002		499	A		B					
P02-100	004		500								
S7C- -4	004		500	A		B					

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT S7D- SWITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
S7C- C	C		510	I		J					
	C	S7E- C	510	J		J					
S7C- -C	-C		P05+R	I		J				+05 DC RET	
	-C	S7E- -C	P05+R	J		J				+05 DC RET	
	-1	S7D-001	501	A		B					
	-2	S7D-002	502	A		B					
	-4	S7D-004	503	A		B					
P02-104	001		501								
S7D- -1	001		501	A		B					
P02-105	002		502								
S7D- -2	002		502	A		B					
P02-106	004		503								
S7D- -4	004		503	A		B					

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT S7E- SWITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
S7D- C	C		510	J		J					
	C	S7F- C	510	K		J					
S7D- -C	-C		P05+R	J		J				+05 DC RET	
	-C	S7F- -C	P05+R	K		J				+05 DC RET	
	-1	S7E-001	504	A		B					
	-2	S7E-002	505	A		B					
	-4	S7E-004	506	A		B					
P02-110	001		504								
S7E- -1	001		504	A		B					
P02-111	002		505								
ST7E- -2	002		505	A		B					
P02-112	004		506								
S7E- -4	004		506	A		B					

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT S7F- SWITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
S7E- C	C		510	K		J					
S7E- -C	-C		P05+R	K		J				+05 DC RET	
	-C	W06-002	P05+R	L						+05 DC RET	
	-1	S7F-001	507	A		B					
	-2	S7F-002	508	A		B					
	-4	S7F-004	509	A		B					
P02-116	001		507								
S7F- -1	001		507	A		B					
P02-17	002		508								
S7F- -2	002		508	A		B					
P02-118	004		509								
S7F- -4	004		509	A		B					

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT S08- SWITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	001	S08-004	932			J					
	002	XA17-002	651			S2000		SG40		$-SH-3	2
J07-046	003		653			S1				$-6, SH- 2	2
S08-001	004		932			J					
	005	XA1 7-01	934			S2999		SG40		*	2
	006	PT-SH-3	SIGGRD	B		SL000				SIG GND A	
	006	S08-012	SIGGRD	C		J				SIG GND A	
	006	TB 1-20A	SIGGRD	E						SIG GND	
	007	S08-010	933			J					
	008	XA17- B	652			S2000		SG41		$-SH-9	2
J07-034	009		654			S1				$-12,SH-8	2
S08-007	010		933			J					
	011	XA17-001	934	A		S2999		SG41		*	2
S08-006	012		SIGGRD	C		J				SIG GND A	
	012	PT-SH-9	SIGGRD	D		SL000				SIG GND A	

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT S09- SWITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	001	S09-004	919			J					
J09- A	002		924			S2000		SG38		$-SH-3	
	003	S4A-004	627X	B		S2000		SG22		$-SH-2	
S09-001	004		919			J					
J09- B	005		920			S2999		SG34		*	
	006	S4B-004	628Y	B		S2999		SG22		*	
	007	S09-010	921			J					
J09- E	008		922			S2000		SG35		$-SH-9	
	009	S3A- C	686	A		S1				$-SH-8, 12	1
S09-007	010		921			J					
J09- F	011		923			S2999		SG35		*	
	012	S3E- C	685	A		S1				$-SH-9	1

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT S10- SWITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	001	S10-004	930			J					
J10- A	002		926			S2000		SG38		$-SH-3	
J07-050	003		669	A		S1				$-6,SH-2	
S10-001	004		930			J					
J10- E	005		927			S2999		SG38		*	
	006	PT-SH-3	P001SGAE			SL000				SHD GND	
	007	S10-010	931			J					
J10- C	008		928			S2000		SG39		$-SH-9	
J07-052	009		670	A		S1				$-12,SH-8	
S10-007	010		931			J					
J10- K	011		929			S2999		SG39		*	
	012	PT-SH-9	P001SGAF			SL000				SHD GND	

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT S11- SWITCH

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
P01-014	001		401	A							
	002	W06-001	P05+R							+05 DC RET	
P01-015	003		402	A							
	004									SPARE	
	905									SPARE	
	006									SPARE	

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT T01- TRANSFORMER

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
J06-006	001		600			S1				S-SH-1,4	1
	001	R01-001	600	A		S1				S-SH-1,2	1
	002	R01-002	674	B		S1				S-S-2, 2	1
C84-001	002		674	C		S1				S-SH-2	1
	003	T02-003	P00NG	B						NEUTRAL	
S3A-014	004		704			S1				$-SH-1	

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT T02- TRANSFORMER

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
J06-005	001		601			S1				$-SH-1,4	1
	001	R02-001	601 A			S1				$-SH-1,2	1
	002	XA17-021	674			S1				$-SH-1,2	
	002	R02-002	705	A		S1				$-SH-1,2	1
CB3-001	002		705	p		S1				$-SH-2	1
T01-003	003		P00NG	B						NEUTRAL	
	003	W09-002	P00NG	C						NEUTRAL	
S3A-013	004		703			S1				$-W2-1, SH1	

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT TB1- TERMINAL BOARD

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
P01-040	01A		423			S2000		SG27			3
S3D-001	01B		617	B		S1					3
J06-069	01C		617			S2000		SG01		$-FLT	
P01-041	02A		618	A		S2999		SG27		*	3
	02B									NC	
J06-068	02C		618			S2999		SG01		*	
P01-042	03A		620	C		S2000		SG28			3
S3D-002	03B		620	B		S1					3
J06-077	03C		620			S2000		SG02		$-FLT	
P01-043	04A		321	B		S2999		SG28		*	3
	04B									NC	
J06-076	04C		321	C		S2999		SG02		*	
J04- B	05A		P26HLO	B		S2000		SG32		*	3
S3E-004	05B		P26HLO	A		S1					3
	05C									NC	
	05E	TB 1-06E	P26HLO	N	B					26 VRMS	
J09- R	06A		P26HLO	F		S2000		SG37			
	06A	TB1-09A	P26HLO	P		J					
J05-006	06B		P26HLO	C 24		S2000		SG33			3
J09- M	06C		P26HLO	E		S2000		SG36			3
TB1-05E	06E		P26HLO	N	B					26 VRMS HZ	
J04- A	07A		P26HHI	C		S2999		SG32			3
J05-005	07B		P26HHI	D 24		S2999		SG33			3
J09- H	07C		P26HHI	E		S2999		SG36		*	
	007E	TB1-08F	P26HHI	F		B					
J09- P	08A		P26HHI	G		S2999		SG37		*	
C82-001	08B		P26HHI	J		S1				$-FIT	
J05-007	08C		P26HHI	H 24		S2999		SG45		$-FLT	

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT TB1- TERMINAL BOARD

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
TB1-07E	08E		P26HHI	F		B					
J12- X	09A		P26HLO							26 VRMS	
TB1-06A	09A		P26HLO	P		J					
J06-019	098		P26HLO	R						26 VRMS LO	
J05-008	09C		P26HLO	Q	24	S2000		SG45		*	
S08-006	20A		SIGGRD	E						SIG GND	
J02- B	20B		SIGGRD	G						SIG GND	
P01-060	20C		SIGGRD	F						SIG GND	

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT TB2- TERMINAL BOARD

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
J11- G	01A		072	B		24T2		TG01			
P02-020	01B		072	D							
J06-075	01C		072			T2		TG08			
J11- H	02A		619	B		24T2		TG10			
J06-067	02C		619			T2		TG08			
P01-068	05A		429	B		T2		TG12			
S3D-009	058		615	B							
J06-072	05C		615			T2		TG07			
P01-069	06A		616	A		T2		TG12			
J06-064	06C		616			T2		TG07			
P01-071	07A		430	C		T2		TG13			
S3D-008	07B		613	B							
J06-073	07C		613			T2		TG06			
P01-072	08A		614	A		T2		TG13			
J06-065	08C		614			T2		TG06			
P01-073	09A		431	B		T2		TG14			
S3D-007	09B		611	A							
J06-071	09C		611			T2		TG05			
P01-074	10A		612	A		T2		TG14			
J06-063	10C		612			T2		TG05			
P01-075	11A		432			T2		TG15			
S3D-006	11B		609	A							
J06-070	11C		609			T2		TG04			
P01-076	12A		610			T2		TG15			
J06-062	12C		610	A		T2		TG04			
P01-077	13A		433	B		T2		TG16			
S3D-005	13B		607	A							
J06-061	13C		607			T2		TG03			

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT TB2- TERMINAL BOARD

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
P01-078	14A		608	A		T2		TG16			
J06-052	14C		608			T2		TG03			
P01-079	15A		434	B		T2		TG17			
S3D-004	15B		605	A							
J06-060	15C		605			T2		TG02			
P01-080	16A		606	A		T2		TG17			
J06-051	16C		606			T2		TG02			
P01-082	17A		435	B		T2		TG18			
S3D-003	17B		603	A							
J06-059	17C		603			T2		TG01			
P01-083	18A		604	A		T2		TG18			
J06-050	18C		604			T2		TG01			

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT W01- GROUND BUS SIGNAL GROUND

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	001	W11-0001	P0CG	A	16						
	W02-		GROUND BUS SHIELD GROUND								W02-
	001	PT-T02-4	P001SG	G		SL000				SHD GND	
	002	PT-TB1-01A	P001SG	K		SL000				SHD GND	
	002	PT-J07-041	P001SG	L		SL000				SHD GND	
J06-029	003		P001SG	A						SHD GID	
	003	PT-J06-031	P001SG	M		SL000				SHD GND	
J12- .H	004		P001SG	J						SHD GND	
	005	PT-S3A-C	P001SG	Q		SL000				SHD GND	
J09-C	006		P001SG	W						SHD GND	
J09-K	007		P001SG	X						SHD GND	
J10-D	008		P001SGA	C						SHD GND	
J10-F	009		P001SGA	D						SHD GND	
J08-C	010		P001SGA	L						SHD GND	
J08-K	011		P001SGA	M						SHD GND	
	011	PT-J05-003	P001SGA	S		SL000				SHD GND	
	012	W11-002	P0CG	B	16						
	012	PT-S2D-C	P001SGA	Q		SL000				SHD GND	

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT W03- GROUND BUS +5 VDC

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
J12-J	001		P05+	A						+05 VDC	
J12-K	001		P05+	B						+05 VOC	
J12- .A	002		P05+	C						+05 VDC	
J12- .B	002		P05+	D						+05 VDC	
PO1-001	003		P05+	E						+05 VDC	
P01-002	003		P05+	F						+05 VDC	
P01-003	003		P05+	G						+05 VDC	
P01-004	004		P05+	H						+05 VDC	
P01-005	004		P05+	1						+05 VDC	
S1A-014	805		P05+	L						+05 VDC	
	W04-		GROUND BUS +28 VDC								
J06-002	001		P28+	A						+28 VDC	
J06-003	001		P28+	B						+28 VDC	
J06-004	001		P28+	C						+28 VDC	
J06-009	001		P28+	D						+28 VDC	
J12-N	002		P28+	F 18						+28 VDC	
M01-+	002		P28+	I 18						+28 VDC	
J12-P	003		P28+	G 18						+28 VDC	
J12-R	003		P28+	H 18						+28 VDC	
P01-063	004		P28+	J						+28 VDC	
S3B-001	004		P28+	K						+28 VDC	

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT W05- GROUND BUS +28 VDC RET

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
J06-001	001		P28+R	A						+28 DC RET	
J06-007	001		P28+R	B						+28 DC RET	
J06-008	001		P28+R	C						+28 DC RET	
J12- Z	003		P28+R	F						+28 DC RET	
J12- .G	003		P28+R	G						+28 DC RET	
M01- -	003		P28+R	H						+28 DC RET	
P01-064	004		P28+R	1						+28 DC RET	
S1E- C	004		P28+R	J						+28 DC RET	
	005	W11-003	P0CG	C	16						
	W06-	GROUND BUS +5 VDC RET									
S11-002	001		P05+R							+05 DC RET	
STF- -C	002		P05+R	L						+05 DC RET	
P01-006	002		P05+R	M						+05 DC RET	
P01-007	002		P05+R	N						+05 CC RET	
P01-008	002		P05+R	0						+05 DC RET	
P01-009	003		P05+R	P						+05 DC RET	
P01-010	003		P05+R	Q						+05 DC RET	
J12- ,C	004		P05+R	S						+05 DC RET	
J12- .D	004		P05+R	T						+05 DC RET	
J12- .E	005		P05+R	U						+05 DC RET	
J 12- .J	005		P05+R	V						+05 DC RET	
J12- H	006		P05+R	R						+05 DC RET	
	007	W11-004	P0CG	E	16						

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT W09- GROUND BUS NEUTRAL GROUND

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
J12-T	001		P00NG	E	22	S1				$-SH-3, 4	
T02-003	002		P00NG	C						NEUTRAL	
J06-031	003		P00NG	D	22	S1				$-SH-1	
S3E-001	004		P00NG	F		S1				$-SH-1	
	005	W11-003	P0CG	D	16						
	W10-		GROUND BUS +15 VOC								
	W11-		GROUND BUS CHASSIS GRD								
W01-001	001		P0CG	A	16						
W02-012	002		P0CG	B	16						
W05-005	003		P0CG	C	16						
W09-005	003		P0CG	D	16						
W06-007	004		P0CG	E	16						

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT XA17- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
J08-B	A		710			S2999		SG28		$-SH-A	2
J08-E	A		710	A		S2999		SG26		S-SH-A,1	2
S08-008	B		652			S2000		SG41		*	2
J08-D	C		711	A		S2000		SG26		*	2
	E								NC		
	F									NC	
	H									NC	
	J									NC	
J06-042	L		639X			S3000		SG10		*	
S4A-009	L		639X	A		S3000		SG11		*	
J06-040	M		641Z			S3222		SG10		*	
S4C-009	M		641Z	A		S3222		SG11		*	
J06-033	N		642X			S3000		SG12		*	
S4A-008	N		642X	A		S3000		SG13		*	
J06-034	R		646Y			S3999		SG14		*	
S4B-007	R		646Y	A		S3999		SG15		*	
J06-043	T		645X			S3000		SG14		*	
S4A-007	T		645X	A		S3000		SG15		*	
J06-016	U		649Y			S3999		SG16		*	
S4B-006	U		649Y	A		S3999		SG17		*	
J06-024	V		648X			S3000		SG16		*	
S4A-006	V		648X	A		S3000		SG17		*	

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT XA17- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
S3A-001	W		679			S1					
S3A-001	W		679	A						*	1
S3A-002	X		677			S1					
S3A-002	X		677	A						*	1
S3A-003	Y		675			S1					
S3A-003	Y		675	A						*	1
S3A-004	Z		681			S1					
S08-005	001		934			S2999		SG40		$-SH-A,1	2
S08-011	001		934	A		S2999		SG41			2
S08-002	002		651			S2000		SG40		*	2
J08-A	003		711			S2000		SG28		*	2
	005									NC	
	006									NC	
	007									NC	
	008									NC	
J06-041	009		640Y			S3999		SG10			
S4B-009	009		640Y	A		S3999		SG11			
	010									NC	
	011									NC	
J06-023	012		643Y			S3999		SG12			
S48-008	012		643Y	A		S3999		SG13			
	013									NC	
J06-032	014		644Z			S3222		SG12		*	
S4C-008	014		644Z	A		S3222		SG13		*	
	015									NC	
J06-025	016		647Z			S3222		SG14			
S4C-007	016		647Z	A		S3222		SG15			

SECTION IIIA. ELECTRONICS UNIT WIRE LIST

COMPONENT XA17- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	017									NC	
J06-015	018		650Z			S3222		SG16			
S4C-006	018		650Z	A		S3222		SG17			
CB1-001	019		P115AO	A	18S1					$-FLT	1
J06-013	020		P11SBO	B	S1					$-SH-20	1
J12-D	020		P11SBO	C	S1					$-SH-20	1
T02-002	021		674		S1					$-SH-1, 2	1
CB2-001	022		P26HHI	A	S1					$-FLT	

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT J13- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	001	W7B-001	P05+	AH						+05 VDC	
	002	W7B-001	P05+	Al						+05 VDC	
	003	W7B-002	P05+	AJ						+05 VDC	
	004	W7B-002	P05+	AK						+05 VDC	
	005	W78-003	P05+	AL						+05 VDC	
	006	W8C-009	P05+R	A!						+05 DC RET	
	00'1	W8C-009	P05+R	AJ						+05 DC RET	
	008	W8C-010	P05+R	AK						+05 DC RET	
	809	W8C-010	P05+R	AL						+05 DC RET	
	010	W8C-011	P05+R	AM						+05 DC RET	
	011										
	012	XA16-017	P28+ST								
	013										
	014	XA05-062	401								
	015	XA05-060	402								
	016										
	017										
	018	XA07-060	074	A							
	019	XA06-060	075	A							
	020	XA10-004	004								
	021	XA10-011	522								
	022	XA10-022	005								
	023	XA10-057	006								
	024	XA10-049	060								
	025	XA10-033	061								
	026	XA08-040	062	A							
	027	XA08-014	063	A							
	028	XA08-039	064	B							

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT J13- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	029	XA08-013	065	B							
	030	XA08-036	066								
	031	XA08-016	067								
	032	XA10-044	077								
	033										
	034	XA10-046	079								
	035										
	036	XA16-040	076								
	037	XA03-048	074	B							
	038	XA02-048	075	B							
	039	XA16-054	039								
	040	XA08-023	423								
	041										
	042	XA09--033	424			T2	000	TG17			
	043	XA09- 004	P05+R	CB		T2		TG17			
	044										
	045										
	046	XA10-052	518								
	047	XA10-038	521								
	048	XA10-040	517								
	049										
	050	XA10-053	425	A							
	051										
	052	XA09-035	426	A							
	053	XA01-036	427								
	054	XA01-051	428								
	055	XA08-028	516								
	056	XA08-057	515								

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT J13- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	057										
	058	XA04-054	007								
	059	XA16-016	008								
	060	XA16-049	009								
	061										
	062										
	063	XA01-029	P28+							+28 VDC	
	064	XA01-026	P28+R							+28 DC RET	
	065										
	066										
	067										
	068	XA03-047	429								
	069	W8C-012	P05+R	AP						+05 DC RET	
	070										
	071	XA03-041	430								
	072	W8B-001	P05+R	AQ						+05 DC RET	
	073	XA02-047	431								
	074	W8B-001	P05+R	AR						+05 DC RET	
	075	XA02-041	432								
	076	W88B-002	P05+R	AS						+05 DC RET	
	077	XA08-026	433								
	078	W8B-002	P05+R	AT						+05 DC RET	
	079	XA08-049	434								
	080	W88-003	P05+R	AU						+05 DC RET	
	081										
	082	XA08-046	435								
	083	W8B-003	P05+R	AV						+05 DC RET	
	084										

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT J13- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	085	XA16-036	510								
	086	XA12-050	436								
	087	XA12-055	437								
	088	XA12-056	438								
	089										
	090										
	091	XA16-046	010								
	092	XA12-039	439								
	093	XA12-045	440								
	094	XA12-044	441								
	095										
	096										
	097	XA11-053	011								
	098	XA13-050	442								
	099	XA13-055	443								
	100	XA13-056	444								
	101										
	102										
	103										
	104	XA13-039	445								
	105	XA13-045	446								
	106	XA13-044	447								
	107										
	108										
	109										
	110	XA14-050	448								
	111	XA14-055	449								
	112	XA14-056	450								

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT J13- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	113										
	114										
	115										
	116	XA14-039	451								
	117	XA14-045	452								
	118	XA14-044	453								
	119										
	120										
	121										
	122										
	123										
	124										
	125										
	126										
	127										
	128										
	129										
	130										
	131										
	132										

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT J14- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	001	XA01-047	454	A							
	002	XA01-016	455	A							
	003	XA02-029	456								
	004	XA02-026	457								
	005	XA08-010	458	A							
	006	XA08-038	459	A							
	007	XA08-050	460								
	008	XA08-025	461								
	009	XA08-018	462								
	010	XA15-055	523								
	018										
	019										
	020	XA16-042	012								
	021	XA01-046	464	A							
	022	XA01-015	465	A							
	023	XA03-029	466								
	024	XA03-026	467								
	025	XA08-015	468	A							
	026	XA08-011	469	A							
	027	XA08-017	470								
	028	XA08-019	471								
	029	XA08-056	472								
	030	XA08-061	513								
	031	XA08-031	514								
	038										
	039										
	040										
	041	XA04-059	473								

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT J14- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	042	XA04-058	474								
	043	XA15-051	525								
	044	XA08-006	476	A							
	045	XA08-004	477	A							
	046	XA08-062	478								
	047	XA09-055	535	B		T2	000	TG12			
	048	XA09-046	536	B		T2		TG14			
	049	XA09-057	533			T2	000	TG09			
	050	XA09-039	534	B		T2	000	TG10			
	051	XA12-041	483								
	052	XA12-036	484								
	058										
	059										
	060										
	061	W7C-001	P05+	A						+05 VDC	
	062										
	063										
	064	XA11-044	403	A							
	065	XA11-056	486	A							
	066	XA11-043	485	A							
	068	XA11-059	487	A							
	069	XA10-058	488	A							
	070	XA10-060	489	A							
	071	XA01-047	490	A							
	072	XA10-017	491	A							
	074										
	075	XA09-022	P05+R	CP		T2	TG12			RETURN	
	076	XA09-014	P05+R	CR		T2 000	TG14			RETURN	

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT J14- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	077										
	078										
	079										
	080										
	081										
	082										
	083										
	084										
	085										
	086	XA12-051	492								
	087	XA12-053	493								
	088	XA12-057	494								
	089	XA09-025	P05+R	CM		T2		TG09		RETURN	
	090	XA09-006	P05+R	CN		T2		TG10		RETURN	
	091										
	092	XA12-040	495								
	093	XA12-042	496								
	094	XA12-047	497								
	095										
	096										
	097										
	098	XA13-051	498								
	099	XA13-053	499								
	100	XA13-057	500								
	101										
	102										
	103										
	104	XA13-040	501								

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT J14- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	105	XA13-042	502								
	106	XA13-047	503								
	107										
	108										
	109										
	110	XA14-051	504								
	111	XA14-053	505								
	112	XA14-057	506								
	113										
	114										
	116	XA14-040	507								
	117	XA14-042	508								
	118	XA14-047	509								

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT XA01- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	001	XA01-032	P05+R	AN						+05 DC RET	
	001	W8C-O11	P05+R	CT						+05 DC RET	
	002										
	003	XA01-019	P05+	AC						+05 VDC	
	003	W7C-001	P05+	AE						+05 VDC	
	004										
	005										
	006										
	007										
	008										
	009										
	010										
	011	XA01-026	P28+R	A						+28 DC RET	
	012	XAO1-029	P28+	A						+28 VDC	
	013	XA01-014	300	A							
XA01-013	014		300	A							
	014	XA01-056	300	B							
J14-022	015		465	A							
	015	XA03-040	465	B							
J14-002	016		455	A							
	016	XA02-040	455	B	J						
	017	XA01-018	301	A							
XA01-017	018		301	A							
	018	XA01-052	301	B							
XA01-003	019		P05+	AC						+05 VDC	
	019	XA01-034	P05+	AD						+05 VDC	
	021										
	022										

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT XA01- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	023										
	024										
	025										
J13-064	026		P28+R							+28 DC RET	
XA01-011	026		P28+R	A	B					+28 DC RET	
	027										
	028										
J13-063	029		P28+							+28 VDC	
XA01-012	029		P28+	A						+28 VDC	
	030										
	031										
	032	XA01-039	P05+R	AF						+05 DC RET	
XA01-001	032		P05+R	AN						+05 DC RET	
	033										
XA01-019	034		P05+	AD						+05 VDC	
	035										
J13-053	036		427								
	037	XA01-044	302	A							
	038										
	039	XA01-040	P05+R	AC						+05 DC RET	
XA00-032	039		P05+R	AF						+05 DC RET	
XA01-039	040		P05+R	AC						+05 DC RET	
	040	XA01-054	P05+R	AD						+05 DC RET	
	041	XA01-048	303	A							
	042										
	043										
XA01-037	044		302	A							
	044	XA01-045	302	B							

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT XA01- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
XA01-044	045		302	B							
J14-021	046		464	A							
	046	XA03-046	464	B							
J 14-001	047		454	A							
	047	XA02-046	454	B							
XA01-041	048		303	A							
	048	XA01-049	303	B							
XA01-048	049		303	B							
	050										
J13-054	051		428								
XA01-018	052		301	B							
XA01-040	054		P05+R	AD						+05 DC RET	
	054	XA01-055	P05+R	AE						+05 DC RET	
XA01-054	055		P05+R	AE						+05 DC RET	
XA01-014	056		300	B							
	057										
	058										
	059										
	060										
	061										
	062										

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT XA02- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	001	XA02-032	P05+R	AA						+05 DC RET	
	002										
	003	XA02-034	P05+	AA						+05 VC	
	004										
	005										
	006										
	007										
	008										
	009										
	010										
	011										
	012										
	013										
	014										
	015										
	016										
	017										
	018										
	019										
	020										
	021										
	022										
	023										
	024										
	025										
J14-004	026		457								
	027	XA02-030	425	D	J						
	027	XA03-027	425	E	J						

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT XA02- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	028	XA07-058	305								
J14-003	029		456								
XA02-027	030		425	D	J						
	031	XA07-057	304								
XA02-001	032		P05+R	AA						+05 DC RET	
	032	W8C-007	P05+R	AB						+05 DC RET	
	033										
XA02-003	034		P05+	AA						+05 VDC	
	034	W7C-012	P05+	AB						+05 VDC	
	035										
	036										
	037										
	038	XA04-043	312		J						
	039										
XA01-016	040		455	B	J						
J13-075	041		432								
	042	XA03-042	344	A	J						
	043	XA03-043	491	C	J						
	044	XA03-044	490	C	J						
	045										
XA01-047	046		454	B	J						
J13-073	047		431								
J13-038	048		075	B							
	049	XA04-041	313		J						
	050										
	051										
	053										
	054	XA02-055	308	B							

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT XA02- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	054	XA03-054	308	C							
	055	XA02-056	308	A							
XA02-054	055		308	B							
XA02-055	056		308	A							
	057										
	058										
	059										
	060										
	061										
	062										

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT XA03- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	001	XA03-032	P05+R	Y						+05 DC RET	
	002										
	003	XA03- 034	P05+	X						+05 VDC	
	004										
	005										
	006										
	007										
	008										
	009										
	010										
	011										
	012										
	013										
	014										
	015										
	016										
	017										
	018										
	019										
	020										
	021										
	022										
	023										
	024										
	025										
J14-024	026		467								
XA02-027	027		425	E	J						
	027	XA03-030	425	F	J						

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT XA03- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	028	XA06-058	335								
J14-023	029		466								
XA03-027	030		425	F	J						
	030	XA11-042	425	G							
	031	XA06-057	334								
XA03-001	032		P05+R	Y						+05 DC RET	
	032	W8C-007	P05+R	Z						+05 DC RET	
	033										
XA03-003	034		P05+	X						+05 VDC	
	034	W7C-012	P05+	Y						+05 VDC	
	035										
	036										
	037										
	038	XA04-039	310								
	039										
XA01-015	040		465	B							
J13-071	041		430								
XA02-042	042		344	A	J						
	042	XA04-057	344	B	J						
	043	XA10-017	491	B							
XA02-043	043		491	C	J						
	044	XA10-047	490	C							
XA02-044	044		490	C	J						
	045										
XA01-046	046		464	B							
J13-068	047		429								
J13-037	048		074	B							
	049	XA04-042	311								

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT XA03- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	050										
	051										
	053										
XA02-054	054		308	C							
	054	XA03-055	308	C							
XA03-054	055		308	D							
	055	XA03-056	308	E							
XA03-055	056		308	E							
	056	XA04-051	308	F							
	057										
	058										
	059										
	060										
	061										
	062										

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT XA04- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	001	XA04-032	P05+R	W						+05 DC RET	
	002										
	003	XA04-034	P05+	AF						+05 VDC	
	004										
	005										
	006										
	007										
	008										
	009										
	010										
	011										
	012										
	013										
	014										
	015										
	016										
	017										
	018										
	019										
	020										
	021										
	022	XA09-012	P05+R	CJ	T2	000	TG07			RETURN	
	023										
	024										
	025										
	026	XA09-008	P05+R	CC	T2		TG01			RETURN	
	027										
	028										

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT XA04- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	029										
	030										
	031										
XA04-001	032		P05+R	W						+05 DC RET	
	032	W8C-006	PO5+R	X						+05 DC RET	
XA04-003	034		P05+	AF						+05 VDC	
	034	W7C-009	P05+	AG						+05 VDC	
	035									NC	
	036									NC	
	037									NC	
	038										
XA03-038	039		310								
	040										
XA02-049	041		313	J							
XA03-049	042		311								
XA02-038	043		312	J							
	044										
	045										
	046										
	047										
	048										
	049										
	050										
XA03-056	051		308	F							
	051	XA04-052	308	G							
XA04-051	052		308	G							
	052	XA04-053	308	H							
XA04-052	053		308	H							

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT XA04- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	053	XA09-042	308	J		T2		TG07			
J13-058	054		007								
	055	XA04-056	013								
	055	XA16-043	013	A							
XA04-055	056		013								
XA03-042	057		344	B	J						
	057	XA09-040	526	B		T2	000	TG01			
J 14-042	058		474								
J14-041	059		473								
	060	XA05-057	314	J							
	061	XA10-054	336								
	062	XA05-058	315	J							

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT XA05- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	001	XA05-032	POS+R	U						+05 DC RET	
	002										
	003	XA05-034	P05+	V						+05 VDC	
	004										
	005										
	006										
	007										
	008										
	009										
	010										
	011										
	012										
	013										
	014										
	015										
	016										
	017										
	018	XA09-013	P05+R	CK						RETURN	
	019	XA09-005	P05+R	CY	T2		TG13			+05 DC RET	
	020										
	021										
	022										
	023										
	024										
	025										
	026										
	027										
	028										

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT XA05- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	029										
	030										
	031										
XA05-001	032		P05+R	U						+05 DC RET	
	032	W8C-006	P05+R	V						+05 DC RET	
	033										
XA05-003	034		P05+	V						+05 VDC	
	034	W7C-01	P05+	W						+05 VDC	
	035										
	036										
	037										
	038										
	039	XA08-006	476	B							
	640	XA08-035	329								
	041										
	042										
	043										
	044	XA08-033	327								
	045	XA05-056	014		J						
	046	XA08-004	477	B							
	047	XA08-005	330								
	048	XA08-037	328								
	049	XA09-036	015		T2	000	TG13				
	050										
	051	XA05-052	308	K							
	051	XA09-042	308	M							
XA05-051	052		308	K							
	052	XA05-053	308	L							

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT XA05- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
XA05-052	053		308	L							
	054										
	055										
XA05-045	056		014		J						
XA04-060	057		314		J						
XA04-062	058		315		J						
	059										
J13-015	060		402								
	061	XA15-048	346								
J13-014	062		401								

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT XA06- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	001	XA06-032	P05+R	S						+05 DC RET	
	001	XA06-060	P05+R	AZ	J					+05 DC RET	
	002										
	003	XA06-034	P05+	T						+05 VDC	
	004										
	005										
	006										
	007										
	008										
	009										
	010										
	011										
	012										
	013										
	014										
	015										
	016										
	017										
	018	XA09-016	P05+R	CI						RETURN	
	019	XA09-010	P05+R	CH	T2		TG06			+05 DC RET	
	020										
	021										
	022										
	023										
	024										
	025										
	026										
	027										

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT XA06- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	028										
	029										
	030										
	031										
XA06-001	032		P05+R	S						+05 DC RET	
	032	W8C-005	P05+R	T						+05 DC RET	
	033										
XA06-003	034		P05+	T						+05 VDC	
	034	W7C-011	PO5+	U						+05 VDC	
	035										
	036										
	037										
	038										
	039	XA08-015	468	B							
	040	XA08-043	325								
	041										
	042										
	043										
	044	XA08-042	323								
	045	XA06-056	016								
	046	XA08-011	469	B							
	047	XA08-044	326								
	048	XA08-045	324								
	049	XA09-036	015	A	T2	000	TG06				
	050										
	051	XA06-052	530	A							
	051	XA09-047	530	C							
XA06-051	052		530	A	B						

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT XA06- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	052	XA06-053	530	B							
XA06-052	053		530	B							
	054										
	055										
X406-045	056		016								
AA03-031	057		334								
XA03-028	058		335								
	059										
XA06-001	060		P05+R	AZ	J					+05 DC RET	
	061	XA07-061	318	B	J						
J13-019	060		075	A							

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT XA07- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	001	XA07-032	P05+R	Q						+05 DC RET	
	001	W8C-005	P05+R	R						+05 DC RET	
	002										
	003	XA07-034	P05+	R						+05 VDC	
	004										
	005										
	006										
	007										
	008										
	009										
	010										
	011										
	012										
	013										
	014										
	015										
	016										
	017										
	018	XA09-015	P05+R	CS						RETURN	
	019	XA09-053	P05+R	DA	T2	000	TG15				
	020										
	021										
	022										
	023										
	024										
	025										
	026										
	027										

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT XA07- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	028										
	029										
	030										
	031										
XA07-001	032		P05+R	Q						+05 DC RET	
	032	XA07-062	P05+R	AX						+05 DC RET	
	33										
XA07-003	034		P05+	R						+05 VOC	
	034	W7C-010	P05+	S						+05 VOC	
	035										
	036										
	037										
	038										
	039	XA08-010	458	B	J						
	040	XA08-008	321		J						
	041										
	042										
	043										
	044	XA08-007	319		J						
	045	XA07-056	019		J						
	046	XA08-038	459	B	J						
	047	XA08-041	322		J						
	048	XA08-009	320		J						
	049	XA09-062	018		T2		TG15				
	050										
	051	XA09-046	536	A							
051	XA07-052		536	C							
XA07-051	052		536	C							

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT XA07- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	052	XA07-053	536	D							
XA07-052	053		536	D							
	054										
	055										
XA07-045	056		019	J							
XA02-031	057		304								
XA02-028	058		305								
	059										
J13-018	060		074	A							
	061	XA15-040	318	A							
XA06-061	061		318	B	J						
XA07-032	062		P05+R	AX						+05 DC RET	

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT XA08- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	001	XA08-032	P05+R	0						+05 DC RET	
	002										
	003	XA08-034	P05+	P						+05 VDC	
J14-045	004		477	A							
XA05-046	004		477	B							
XA05-047	005		330								
J14-044	006		476	A							
XA05-039	006		476	B							
XA07-044	007		319		J						
XA07-040	008		321		J						
XA07-048	009		320		J						
J14-005	010		458	A							
XA07-039	010		458	B	J						
J14-026	011		469	A							
XA06-046	011		469	B							
	012									NC	
J13-029	013		065	B							
J13-027	014		063	A							
J14-025	015		468	A							
XA06-039	015		468	B							
J13-031	016		067								
J 14-027	017		470								
J14-009	018		462								
J14-028	019		471								
	020	XA08-051	020		J						
	021									NC	
	022									NC	
J13-040	023		423								

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT XA08- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	024	XA09-047	530	D							
J14-008	025		461								
J13-077	026		433								
	027									NC	
J13-055	028		516								
	029									NC	
	030									NC	
J14-031	031		514								
XA08-001	032		P05+R	0						+05 DC RET	
	032	W8C-004	P05+R	P						+05 DC RET	
XA05-044	033		327								
XA08-003	034		P05+	P						+05 VDC	
	034	W7C-009	P05+	Q						+05 VDC	
XA05-040	035		329								
J13-030	036		066								
XA05-048	037		328								
J 14-006	038		459	A							
XA07-046	038		459	8	J						
J13-028	039		064	B							
J13-026	040		062	A							
XA07-047	041		322		J						
XA06-044	042		323								
XA06-040	043		325								
XA06-047	044		326								
XA06-048	045		324								
J13-082	046		435								
	047									NC	
	048									NC	

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT XA08- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
J13-079	049		434								
J14-007	050		460								
XA08-020	051		020								
	051	XA16-062	020								
	052	XA16-055	021								
	053									NC	
	054									NC	
	055									NC	
J14-029	056		472								
J13-056	057		515								
	058									NC	
	059									NC	
	060									NC	
J14-030	061		513								
J14-046	062		478								

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT XA09- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	001	XA09-032	P05+R	M							
	001	XA09-004	P05+R	BA							
	002	XA009-048	339								
	003	XA09-034	P05+	N						+05 VDC	
XA09-001	004		P05+R	BA							
	004	XA09-005	P05+R	BC							
J13-043	004		P05+R	CB	T2		TG17				
XA09-004	005		P05+R	BC							
	005	XA09-006	P05+R	CV							
XA05-019	005		P05+R	CY	T2		TG13			+05 DC RET	
	006	XA09-007	P054R	BD							
J14-090	006		P05+R	CN	T2		TG10			RETURN	
XA09-005	006		P05+R	CV							
XA09-006	007		P05+R	BD							
	007	XA09-008	P05+R	BE							
	007	XA12-004	P05+R	??	T2		TG18			RETURN	
XA09-007	008		P05+R	??							
	008	XA09-009	P05+R	??							
XA04-026	008		P05+R	??	T2		TG01			RETURN	
XA09-008	009		P05+R	BF							
	009	XA09-010	P05+R	BG							
	009	XA14-004	P05+R	CD	T2		TG02			RETURN	
XA09-009	010		P05+R	BG							
	010	XA09-011	P05+R	BH							
XA06-019	010		P05+R	CH	T2	999	TG06			+05 DC RET	
XA09-010	011		P05+R	BH							
	011	XA09-012	P05+R	BI							

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT XA09- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	011	XA13-004	P05+R	CF		T2000	TG19			RETURN	
XA09-011	012		P05+R	BI							
	012	XA09-013	P05+R	BJ							
XA04-022	012		P05+R	CJ		T2000	TG07			RETURN	
XA09-012	013		P05+R	BJ							
	013	XA09-014	P05+R	BK							
XA05-018	013		P05+R	CK						RETURN	
XA09-013	014		P05+R	BK							
	014	XA09-015	P05+R	BL							
J14-076	014		P05+R	CR		T2000	TG14			RETURN	
XA09-014	015		P05+R	BL							
	015	XA09-016	P05+R	BM							
XA07-018	015		P05+R	CS						RETURN	
XA09-015	016		P05+R	BM							
	016	XA09-020	P05+R	BN							
XA06-018	016		P05+R	CI						RETURN	
	017										
	018										
	019										
X409-016	020		P05+R	BN							
	020	XA09-021	P05+R	BO							
	020	Y01-003	P05+R	CA		T2		TG16		RETURN	
XA09-020	021		P05+R	BO							
	021	XA09-022	P05+R	BP							
XA09-021	022		P05+R	BP							
	022	XA09-023	P05+R	BQ							
J 14-075	022		P05+R	CP		T2		TG12		RETURN	
XA09-022	023		P05+R	BQ							

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT XA09- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	023	XA09-024	P05+R	BR							
XA09-023	024		P05+R	BR							
	024	XA09-025	P05+R	BS							
	024	XA12-006	P05+R	CL		T2	TG20			RETURN	
XA09-024	025		P05+R	BS							
	025	XA09-026	P05+R	BT							
J14-089	025		P05+R	CM		T2	TG09			RETURN	
XA09-025	026		P05+R	BT							
	026	XA09-032	P05+R	BU							
	027	XA09-028	061	A							
XA09-027	028		061	A							
	028	XA10-033	061	B							
	029	XA11-039	022								
	030	XA09-031	023								
	030	XA10-056	023	A							
XA09-030	031		023								
XA09-001	032		P05+R	M						+05 DC RET	
	032	W8C-004	P05+R	N						+05 DC RET	
XA09-026	032		P05+R	BU							
J13-042	033		424			T2000	TG17				
XA09-003	034		P05+	N						+05 VDC	
	034	W7C-008	P05+	0						+05 VDC	
J13-052	035		426	A							
	035	XA16-035	426	B							
XA05-049	036		015			T2000	TG13				
XA06-049	036		015	A		T2000	TG06				
	037	XA09-038	024								
XA09-037	038		024								

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT XA09- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	038	XA09-054	024	A		J					
	039	XA12-035	534	A		T2 000		TG18			
J14-050	039		534	B		T2 000		TG10			
	040	XA14-035	526	A		T2 000		TG02			
XA04-057	040		526	B		T2 000		TG01			
	041	XA13-035	527	A		T2		TG19			
XA04-053	042		308	J		T2		TG07			
XA05-051	042		308	M							
	043	XA09-044	025								
XA09-043	044		025								
	044	XA16-060	025	A							
	045	XA11-038	026								
XA07-051	046		536	A							
J14-048	046		536	B		T2		TG14			
XA06-051	047		530	C							
XA08-024	047		530	C							
XA09-002	048		339								
	049									NC	
	050										
	051	Y01-002	337			T2 000		TG16			
	052										
XA07-019	053		P05+R	DA		T2000		TG15			
XA09-038	054		024	A		J					
J14-047	055		535	B		T2000		TG12			
	056	XA12-037	532			T2 000		TG20			
J14-049	057		533			T20 00		TG09			
	058	XA16-059	027								

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT XA09- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	059	XA09-060	528								
XA09-059	060		528								
	060	XA09-061	528	A							
XA09-060	061		528	A							
XA07-049	062		018			T2		TG15			

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT XA10- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	001	XA10-032	P05+R	K						+05 DC RET	
	002	XA16-041	028								
	003	XA10-034	P05+	L						+05 VOC	
J13-020	004		004								
	004	XA11-051	004	A							
	005									NC	
	006 007 008 009										
J13-021	011		522								
	012	XA15-036	519								
	013									NC	
	014										
	015 016										
J14-072	017		491	A							
XA03-043	017		491	B							
	018									NC	
	019 020	XA15-045	520								
	021										
J13-022	022 023		005								
	024 025										
	026										
	027										

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT XA10- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	028										
	029										
	030										
	031										
XA10-001	032		P05+R	K						+05 DC RET	
	032	W8C-003	P05+R	L						+05 DC RET	
J13-025	033		061								
XA09-028	033		061	B							
XA10-003	034		P05+	L						+05 VDC	
	034	W7C-007	P05+	M						+05 VDC	
	035	XA11-044	403	B							
	036									NC	
	037									NC	
J13-047	038		521								
	039									NC	
J13-048	040		517								
	041										
	042										
	043	XA11-056	486	B							
J13-032	044		077								
J13-034	046		079								
J14-071	047		490	A							
XA03-044	047		490	B							
	048									NC	
J13-024	049		060								
	049	XA16-056	060	A							
	050	XA11-059	487	B							
	051	XA16-052	029								

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT XA10- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
J13-046	052		518								
	052	XA16-039	518	A							
J13-050	053		425	A							
	053	XA11-042	425	B							
	053	XA100-062	425	C							
XA04-061	054		336								
XA09-030	056		023	A							
J13-023	057		006								
J14-069	058		488	A							
	058	XA11-046	488	B							
	059	XA11-043	485	B							
J14-070	060		489	A							
	060	X A1-049	489	B							
	061	XA12-054	539								
XA10-053	062		425	C							
	062	XA16-051	425	H							

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT XA11- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	001	XA11-032	P05+R	I						+05 DC RET	
	002										
	003	XA11-034	P05+	J						+05 VC	
	004										
	005										
	006										
	007										
	008										
	009										
	010										
	011										
	012										
	013										
	014										
	015										
	016										
	017										
	018										
	019										
	020										
	021										
	022										
	023										
	024										
	025										
	026										
	027										
	028										

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT XA11- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	029										
	030										
	031										
XA11-001	032		P05+R	I						+05 DC RET	
	032	W8C-003	P05+R	J						+05 DC RET	
	032	XA11-054	P05+R	CW	J					+05 DC RET	
	033										
XA11-003	034		P05+	J						+05 VDC	
	034	W7C-006	P05+	K						+05 VDC	
	035										
	036										
	037	XA11-045	031		J						
XA09-045	038		026								
XA09-029	039		022								
	040	XA16-057	032		T2 000			TG04			
	041	XA11-047	030		J						
XA10-053	042		425	B							
XA03-030	042		425	G							
J14-066	043		485	A							
XA10-059	043		485	P							
J14-064	044		403	A							
XA10-035	044		403	B							
XA1-037	045		031		J						
	045	XA11-060	031	A	J						
XA10-058	046		488	B							
	046	XA11-052	488	C	J						
XA11-041	047		030		J						
	048	XA11-049	489	C	B						

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT XA11- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
XA10-060	049		489	B							
XA11-048	049		489	C							
	050	XA16-058	033		T2			TG04			
XA10-004	051		004	A							
XA11-046	052		488	C	J						
J13-097	053		011								
	053	XA16-053	011	A							
XA11-032	054		P05+R	CW	J					+05 DC RET	
	055									NC	
J14-065	056		486	A							
XA10-043	056		486	B							
	057	XA12-041	483	A							
	058	XA12-036	484	A							
J14-068	059		487	A							
XA10-050	059		487	B							
XA11-045	060		031	A	J						
	060	XA11-061	031	B							
XA11-060	061		031	B							
	062	XA16-061	034								

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT XA12- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	001	XA12-032	P05+R	G						+05 CC RET	
	002										
	003	XA12-034	P05+	H						+05 VDC	
XA09-007	004		P05+R	CO		T2		TG18		RETURN	
	005										
XA09-024	006		P05+R	CL		T2		TG20		RETURN	
	007										
	008										
	009										
	010										
	011										
	012										
	013										
	014										
	015										
	016										
	017										
	018										
	019										
	020										
	021										
	022	XA13-022	475	D							
	023	XA13-023	463	0							
	024										
	025										
	026										
	027										
	028										

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT XA12- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	029										
	030										
	031										
XA12-001	032		P05+R	G						+05 DC RET	
	032	W8C-002	P05+R	H						+05 DC RET	
	033									NC	
XA12-003	034		P05+	H						+05 VDC	
	034	W7C-005	P05+	I						+05 VDC	
XA09-039	035		534	A		T2 000		TG18			
J14-052	036		484								
XA11-058	036		484	A							
XA09-056	037		532			T2 000		TG20			
	038	XA13-037	332								
J13-092	039		439								
J14-092	040		495								
J14-051	041		483								
XA11-057	041		483	A							
J14-093	042		496								
	043									NC	
J13-094	044		441								
J13-093	045		440								
	046										
J14-094	047		497								
	049										
J13--086	050		436								
J14-086	051		492								
	052									NC	
J14-087	053		493								

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT XA12- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
XA10-061	054		539								
J13-087	055		437								
J13-088	056		438								
J14-088	057		494								
	058										
	059										
	060										
	061										
	062										

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT XA13- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	001	XA13-032	P05+R	E						+05 DC RET	
	002										
	003	XA13-034	P05+	F						+05 VDC	
XA09-011	004		P05+R	CF	T2 000			TG19		RETURN	
	005										
	006										
	007										
	008										
	009										
	010										
	011										
	012										
	013										
	014										
	015										
	016										
	017										
	018										
	019										
	020										
	021										
	022	XA14-022	475	C							
XA12-022	022		475	D							
	023	XA14-023	463	C							
XA12-023	023		463	D							
	024										
	025										
	026										

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT XA13- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	027										
	028										
	029										
	030										
	031										
XA13-001	032		P05+R	E						+05 DC RET	
	032	W8C-002	P05+R	F						+05 DC RET	
	033									NC	
XA13-003	034		P05+	F						+05 VDC	
	034	W7C-004	P05+	G						+05 VDC	
XA09-041	035		527	A	T2			TG19			
	036									NC	
XA12-038	037		332								
	038	XA14-037	333								
J13-104	039		445								
J14-104	040		501								
	041									NC	
J14-105	042		502								
	043									NC	
J13-106	044		447								
J 13-105	045		446								
	046										
J14-106	047		503								
	048									NC	
	049										
J13-098	050		442								
J14-098	051		498								
	052									NC	

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT XA13- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
J14-099	053		499								
	054									NC	
J13-099	055		443								
J13-100	056		444								
J14-100	057		500								
	058										
	059										
	060										
	061										
	062										

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT XA14- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	001	XA14-032	P05+R	C						+05 DC RET	
	002										
	003	XA14-034	P05+	D						+05 VDC	
XA09-009	004		P05+R	CD	T2			TG02		RETURN	
	005										
	006										
	007										
	008										
	009										
	010										
	011										
	012										
	013										
	014										
	015										
	016										
	017										
	018										
	019										
	020										
	021										
	022	XA15-044	475	B							
XA13-022	022		475	C							
	023	XA15-035	463	B							
XA13-023	023		463	C							
	024										
	025										
	026										

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT XA14- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	027										
	028										
	029										
	030										
	031										
XA14-001	032		P05+R	C						+05 DC RET	
	032	W8C-001	P05+R	D						+05 DC RET	
	033									NC	
XA14-003	034		P05+	C						+05 VDC	
	034	W7C-003	P05*	E						+05 VDC	
XA09-040	035		526	A	T2 000			TG02			
XA13-038	037		333								
	038										
J13-116	039		451								
J14-116	040		507								
	041									NC	
J14-117	042		508								
	043									NC	
J13-118	044		453								
J13-117	045		452								
	046										
J14-118	047		509								
	048									NC	
	049										
J13-110	050		448								
J14-110	051		504								
	052									NC	
J14-111	053		505								

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT XA14- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	054									NC	
J13-111	055		449								
J13-112	056		450								
J14-112	057		506								
	058										
	059										
	060										
	061										
	062										

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT XA15- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	001	XA15-032	P05+R	A						+05 DC RET	
	002										
	003	XA15-034	P05+	B						+05 VDC	
	004										
	005										
	006										
	007										
	008										
	009										
	010										
	011										
	012										
	013										
	014										
	015										
	016										
	017										
	018										
	019										
	020										
	021										
	022										
	023										
	024										
	025										
	026										
	027										
	028										

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT XA15- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	029										
	030										
	031										
XA15-001	032		P05+R	A						+05 DC RET	
	032	W8C-001	P05+R	B						+05 DC RET	
	033										
XA15-003	034		P05+	B						+05 VDC	
	034	W7C-002	P05+	C						+05 VDC	
XA14-023	035		463	B							
XA10-012	036		519								
	037										
	038										
	039	XA15-49	537	A	J						
XA07-061	040		318	A							
	041									NC	
	042									NC	
	043									NC	
XA14-022	044		475	B							
XA10-019	045		520								
	046										
J 14-043	047	XA15-053	538	A	J						
XA05-061	048		346								
XA15-039	049		537	A	J						
	049	XA15-50	537	B	J						
XA15-049	050		537	B	J						
J14-043	051		523								
	052									NC	
	053	XA15-54	538	B	J						
XA15-47	053		538	A	J						
XA15-53	054		538	B	J						

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT XA15- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
J14-010	055		525							NC	
	056										
	057									NC	
	058										
	059										
	060									NC	
	061										
	062									NC	

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT XA16- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	001	XA16-032	P05+R	CX	J					+05 DC RET	
	002										
	003	XA16-034	P05+	AN	J					+05 VDC	
	004										
	005										
	006										
	007										
	008										
	009										
	010										
	011										
	012										
	013										
	014										
	015										
J13-059	016		008								
J13-012	017		P28+ST								
	018										
	019										
	020										
	021										
	022										
	023										
	024										
	025										
	026										
	027										
	028										

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT XA16- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
	029										
	030										
	031										
XA16-001	032		P05+R	CX	J					+05 DC RET	
	032	W8B-004	P05+R	CZ						+05 DC RET	
	033										
XA16-003	034		P05+	AN	J					+05 VDC	
	034	W78-004	P05+	AP						+05 VOC	
XA09-035	035		426	B							
J13-085	036		510								
	037										
	038	XA16-053	011	B							
XA10-052	039		518	A							
J13-036	040		076								
XA10-002	041		028								
J14-020	042		012								
XA04-055	043		013	A							
	044										
	045	Y01-001	338								
J13-091	046		010								
	047										
	048										
J13-060	049		009								
	050										
XA10-062	051		425	H							
XA10-051	052		029								
XA11-053	053		011	A							
XA16-038	053		011	B							

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT XA16- CONNECTOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
J13-039	054		039								
XA08-052	055		021								
XA10-049	056		060	A							
XA11-040	057		032		T2 000			TG04			
XA11-050	058		033		T2			TG04			
XA09-058	059		027								
XA09-044	060		025	A							
XA11-062	061		034								
XA08-051	062		020	A							

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT Y01- OSCILLATOR

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
XA16-045	001		338								
XA09-051	002		337		T2	000		TG16			
XA09-020	003		P05+R	CA	T2			TG 16		RETURN	

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT W7C- GROUND STUD BOTTOM

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
J14-061	001		P05+	A						+05 VDC	
XA01-003	001		P05+	AE						+05 VOC	
XA15-034	002		P05+	C						+05 VDC	
XA14-034	003		P05+	E						+05 VDC	
XA13-034	004		Pe5+	G						+05 VOC	
XA12-034	005		P05+	I						+05 VDC	
XA11-034	806		P05+	K						+05 VOC	
XA10-034	007		P05+	M						+05 VDC	
XA09-034	008		P05+	O						+05 VDC	
XA08-034	009		P05+	O						+05 VOC	
XA04-034	009		P05+	AG						+05 VDC	
XA07-034	010		P05+	S						+05 VDC	
XA06-034	011		P05+	U						+05 VDC	
XA05-034	*11		P05+	w						+05 VDC	
XA03-034	012		P05+	Y						+05 VOC	
XA02-034	012		P05+	AB						+05 VOC	
	012	W7B-012	P05+	AM						+05 VDC	
	W7B-		GROUND STUD			MIDDLE					
J13-001	001		P05+	AH						+05 VDC	
J13-002	001		P05+	AI						+05 VDC	
J13-003	002		P05+	AJ						+05 VDC	
J13-004	002		P05+	AK						+05 VDC	
J13-005	003		P05+	AL						+05 VDC	
XA16-034	004		P05+							+05 VDC	
W7C-012	012		P05+	AM						+05 VDC	

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT W8C- GROUND STUD BOTTOM

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
XA15-032	001		P05+R	B						+05 DC RET	
XA14-032	001		P05+R	D						+05 DC RET	
XA13-032	002		P05+R	F						+05 DC RET	
XA12-032	002		P05+R	H						+05 DC RET	
XA11-032	003		P05+R	J						+05 DC RET	
XA10-032	003		P05+R	L						+05 DC RET	
XA09-032	004		P05+R	N						+05 DC RET	
XA08-032	004		P05+R	P						+05 DC RET	
XA07-001	005		P05+R	R						+05 DC RET	
XA06-032	005		P05+R	T						+05 DC RET	
XA05-032	006		P05+R	V						+05 DC RET	
XA04-032	806		P05+R	X						+05 DC RET	
XA03-032	007		P05+R	Z						+05 DC RET	
XA02-032	007		P05+R	AB						+05 DC RET	
	008										
J13-006	009		P05+R							+05 DC RET	
J13-007	009		P05+R							+05 DC RET	
J13-008	010		P05+R							+05 DC RET	
J13 009	010		P05+R							+05 DC RET	
J13-010	011		P05+R	Am						+05 DC RET	
XA01-001	011		P05+R	CT							
J13-069	012		P05+R	AP						+05 DC RET	
	012	W8B-012	P05+R	CU						+05 DC RET	
	W8B-		GROUND STUD		MIDDLE						
J13-072	001		P05+R	AQ						+05 DC RET	
J13-074	001		P05+R	AR						+05 DC RET	

SECTION IIIB. ELECTRONICS UNIT CARD CAGE WIRE LIST

COMPONENT W8B- GROUND STUD MIDDLE

FROM	PIN	TO	SIGNAL	SEG	GAGE	TYPE	COLOR	GROUP	ROUTE	REMARKS	NOTE
J13-076	002		P05+R	AS						+05 DC RET	
J13-078	002		P05+R	AT						+05 DC RET	
J13-080	003		P05+R	AU						+05 DC RET	
J13-083	003		P05+R	AV						+05 DC RET	
XA16-032	004		P05+R	CZ						+05 DC RET	
W8C-012	012		P05+R	CU						+05 DC RET	

GLOSSARY

Section I. SYMBOLS

Ax - Acceleration along the X-coordinate axis.
Ay - Acceleration along the Y-coordinate axis.
ΔV - Incremental velocity.
ΔVx - Incremental velocity in the east-west direction, along the X-axis.
ΔVy - Incremental velocity in the north-south direction, along the Y-axis.
ΔVGC - Incremental velocity derived from. ΔVy or ΔVx during gyrocompass.
Δw - Digital voltage torque pulses which cause angular motion about the platform stable element axes.
ΔWx - Digital voltage torque pulses which cause angular motion about the platform stable element X-axis.
Δwy - Digital voltage torque pulses which cause angular motion about the platform stable element Y-axis.
Ω - Earth rate.
λ - Earth-latitude position of test site.

Section II. TERMS

Acceleration.--Rate of velocity change per unit time.

Align.--Orienting the platform stable element with respect to the local geodetic vertical and true north heading.

Earth rate.--The angular velocity of the earth spinning about its polar axis (15.041 degrees per hour).

Enable.--To bring a circuit or device to the active state by means of a logical 1.

Gyro bias 1.--Alignment of platform ninety-degree-seeking (lower gyroscope prior to adjusting X- and Z-gyro bias.

Gyro bias 2.--Alignment of platform north-seeking (upper) gyroscope prior to adjusting Y and Z-gyro bias.

Gyrocompass.--The process by which the platform stable element is aligned to true north.

Stable element.--The portion of the platform gimbal assembly which houses gyroscopes, accelerometers, and various supporting electronics.

True heading.--Angle measured clockwise from true north to the platform heading.

Velocity.--Rate of distance change per unit time.

X-axis.--The platform stable element axis oriented in east-west direction with respect to true north.

Y-axis.-The platform stable element axis oriented in north-south direction with respect to true north.

Z-axis.--The platform stable element axis oriented coincident with the local vertical

.

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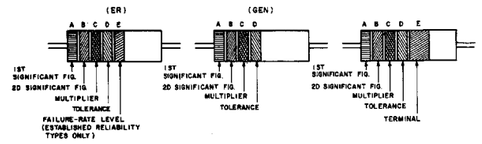


COLOR CODE MARKING FOR COMPOSITION TYPE RESISTORS.

COLOR-CODE MARKING FOR FILM-TYPE RESISTORS.

TABLE I
COLOR CODE FOR COMPOSITION TYPE AND FILM TYPE RESISTORS.

BAND A		BAND B		BAND C		BAND D		BAND E		
COLOR	FIRST SIGNIFICANT FIGURE	COLOR	SECOND SIGNIFICANT FIGURE	COLOR	MULTIPLIER	COLOR	RESISTANCE TOLERANCE (PERCENT)	COLOR	FAILURE RATE LEVEL	TERM.
BLACK	0	BLACK	0	BLACK	1			BROWN	M	
BROWN	1	BROWN	1	BROWN	10			RED	P	
RED	2	RED	2	RED	100			ORANGE	R	
ORANGE	3	ORANGE	3	ORANGE	1,000			YELLOW	S	
YELLOW	4	YELLOW	4	YELLOW	10,000	SILVER	±10 (COMP. TYPE ONLY)	WHITE		SOLDERABLE
GREEN	5	GREEN	5	GREEN	100,000	GOLD	±5			
BLUE	6	BLUE	6	BLUE	1,000,000	RED	±2 (NOT APPLICABLE TO ESTABLISHED RELIABILITY)			
PURPLE (VIOLET)	7	PURPLE (VIOLET)	7							
GRAY	8	GRAY	8	SILVER	1.01					
WHITE	9	WHITE	9	GOLD	0.1					

BAND A — THE FIRST SIGNIFICANT FIGURE OF THE RESISTANCE VALUE (BANDS A THRU D SHALL BE OF EQUAL WIDTH.)

BAND B — THE SECOND SIGNIFICANT FIGURE OF THE RESISTANCE VALUE.

BAND C — THE MULTIPLIER (THE MULTIPLIER IS THE FACTOR BY WHICH THE TWO SIGNIFICANT FIGURES ARE MULTIPLIED TO YIELD THE NOMINAL RESISTANCE VALUE.)

BAND D — THE RESISTANCE TOLERANCE.

BAND E — WHEN USED ON COMPOSITION RESISTORS, BAND E INDICATES ESTABLISHED RELIABILITY FAILURE-RATE LEVEL. ON FILM RESISTORS, THIS BAND SHALL BE APPROXIMATELY 1-1/2 TIMES THE WIDTH OF OTHER BANDS, AND INDICATES TYPE OF TERMINAL.

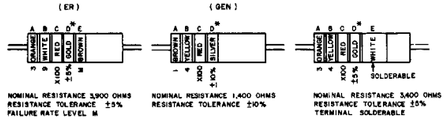
RESISTANCES IDENTIFIED BY NUMBERS AND LETTERS (THESE ARE NOT COLOR CODED)

SOME RESISTORS ARE IDENTIFIED BY THREE OR FOUR DIGIT ALPHA NUMERIC DESIGNATORS. THE LETTER R IS USED IN PLACE OF A DECIMAL POINT WHEN FRACTIONAL VALUES OF AN OHM ARE EXPRESSED. FOR EXAMPLE:

2R7 = 2.7 OHMS 10R0 = 10.0 OHMS

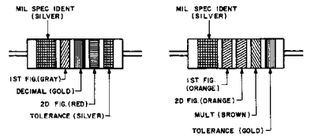
FOR WIRE-WOUND-TYPE RESISTORS COLOR CODING IS NOT USED. IDENTIFICATION MARKING IS SPECIFIED IN EACH OF THE APPLICABLE SPECIFICATIONS.

EXAMPLES OF COLOR CODING



* IF BAND D IS OMITTED, THE RESISTOR TOLERANCE IS ±20% AND THE RESISTOR IS NOT MIL-STD.

A. COLOR CODE MARKING FOR MILITARY STANDARD RESISTORS.



COLOR CODING FOR TUBULAR ENCAPSULATED R.F. CHOKES. AT A, AN EXAMPLE OF OF THE CODING FOR AN 8.2 UH CHOKE IS GIVEN. AT B, THE COLOR BANDS FOR A 330 UH INDUCTOR ARE ILLUSTRATED.

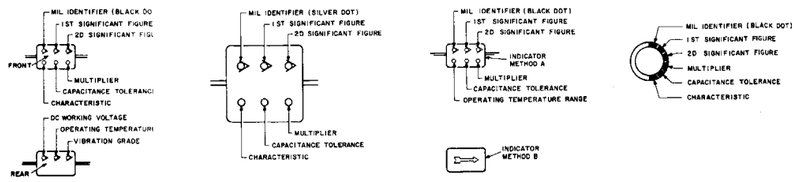
TABLE 2
COLOR CODING FOR TUBULAR ENCAPSULATED R.F. CHOKES.

COLOR	SIGNIFICANT FIGURE	MULTIPLIER	INDUCTANCE TOLERANCE (PERCENT)
BLACK	0	1	
BROWN	1	10	1
RED	2	100	2
ORANGE	3	1,000	3
YELLOW	4		
GREEN	5		
BLUE	6		
VIOLET	7		
GRAY	8		
WHITE	9		
NONE			20
SILVER			10
GOLD	DECIMAL POINT		5

MULTIPLIER IS THE FACTOR BY WHICH THE TWO COLOR FIGURES ARE MULTIPLIED TO OBTAIN THE INDUCTANCE VALUE OF THE CHOKE COIL.

B. COLOR CODE MARKING FOR MILITARY STANDARD INDUCTORS.

CAPACITORS, FIXED, VARIOUS-DIELECTRICS, STYLES CM, CN, CY, AND CB.



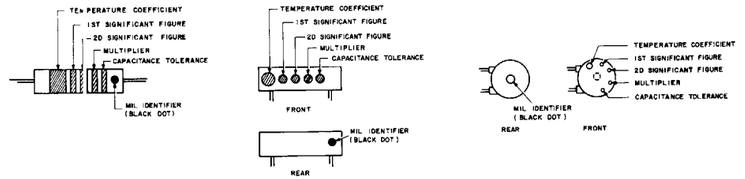


TABLE 3 — FOR USE WITH STYLES CM, CN, CY AND CB.

COLOR	MIL ID	1ST SIG FIG.	2D SIG FIG.	MULTIPLIER	CAPACITANCE TOLERANCE				CHARACTERISTIC			DC WORKING VOLTAGE	OPERATING TEMP. RANGE	VIBRATION GRADE
					CM	CN	CY	CB	CM	CN	CB	CM	CX, CM	CM
BLACK	CM,CY, CB	0	0	1			±20%	±20%	A				-30° TO +70°C	10-55 HZ
BROWN		1	1	10					B	E	B			
RED		2	2	100	±2%		±2%	±2%	C				-55° TO +85°C	
ORANGE		3	3	1,000		±30%			D		D	300		
YELLOW		4	4	10,000					E				-55° TO +125°C	10-2,000HZ
GREEN		5	5		±5%				F			500		
BLUE		6	6										-55° TO +150°C	
PURPLE (VIOLET)		7	7											
GREY		8	8											
WHITE		9	9											
GOLD				0.1			±5%	±5%						
SILVER	CN				±10%	±30%	±10%	±10%						

TABLE 4 — TEMPERATURE COMPENSATING, STYLE CC.

COLOR	TEMPERATURE COEFFICIENT[4]	1ST SIG FIG.	2D SIG FIG.	MULTIPLIER[1]	CAPACITANCE TOLERANCE		MIL ID
					CAPACITANCES OVER 10 UUF	CAPACITANCES 10 UUF OR LESS	
BLACK	0	0	0	1		±2.0 UUF	CC
BROWN	-30	1	1	10	±1%		
RED	-80	2	2	100	±2%	±0.25 UUF	
ORANGE	-150	3	3	1,000			
YELLOW	-220	4	4				
GREEN	-330	5	5		±5%	±0.5 UUF	
BLUE	-470	6	6				
PURPLE (VIOLET)	-750	7	7				
GREY		8	8	0.01			
WHITE		9	9	0.1	±10%		
GOLD	+100					±1.0 UUF	
SILVER							

1. THE MULTIPLIER IS THE NUMBER BY WHICH THE TWO SIGNIFICANT (SIG) FIGURES ARE MULTIPLIED TO OBTAIN THE CAPACITANCE IN UUF.
2. LETTERS INDICATE THE CHARACTERISTICS DESIGNATED IN APPLICABLE SPECIFICATIONS: MIL-C-5, MIL-C-250, MIL-C-11272B, AND MIL-C-10950C RESPECTIVELY.
3. LETTERS INDICATE THE TEMPERATURE RANGE AND VOLTAGE-TEMPERATURE LIMITS DESIGNATED IN MIL-C-11015D.
4. TEMPERATURE COEFFICIENT IN PARTS PER MILLION PER DEGREE CENTIGRADE.

Figure 5-1. MIL STD resistor and capacitor color code markings.

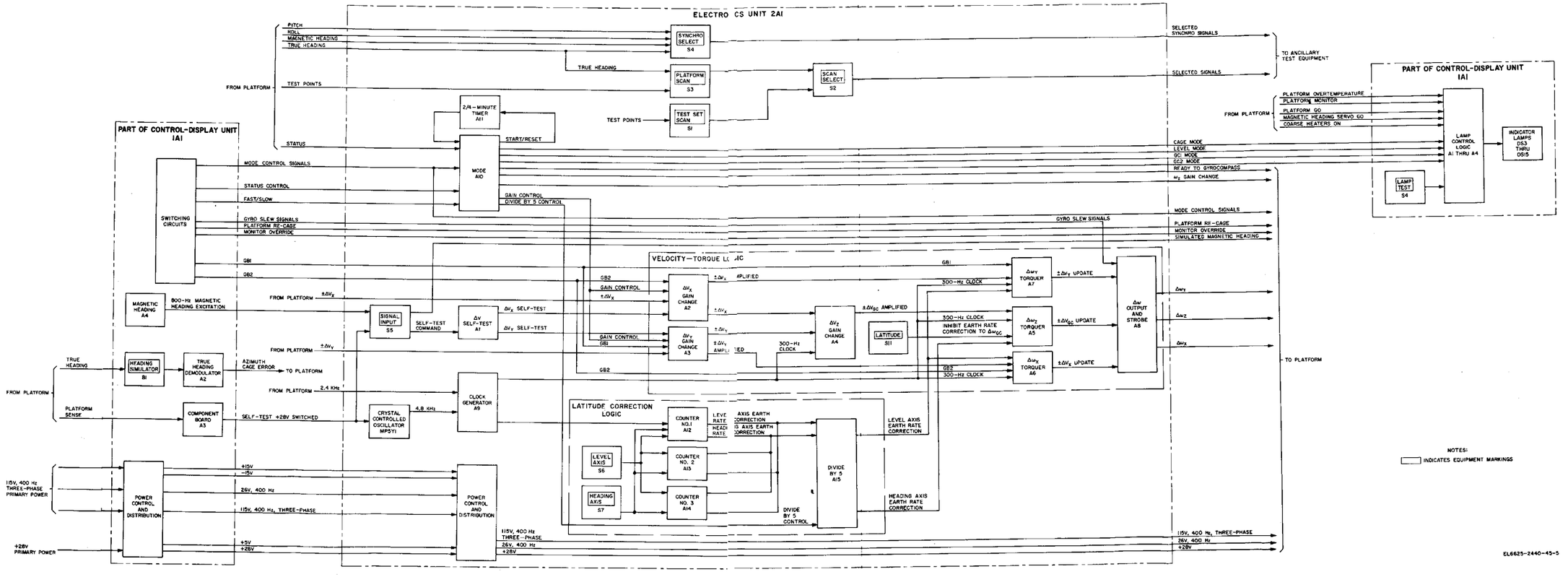


Figure 5-2. Test set, functional block diagram.

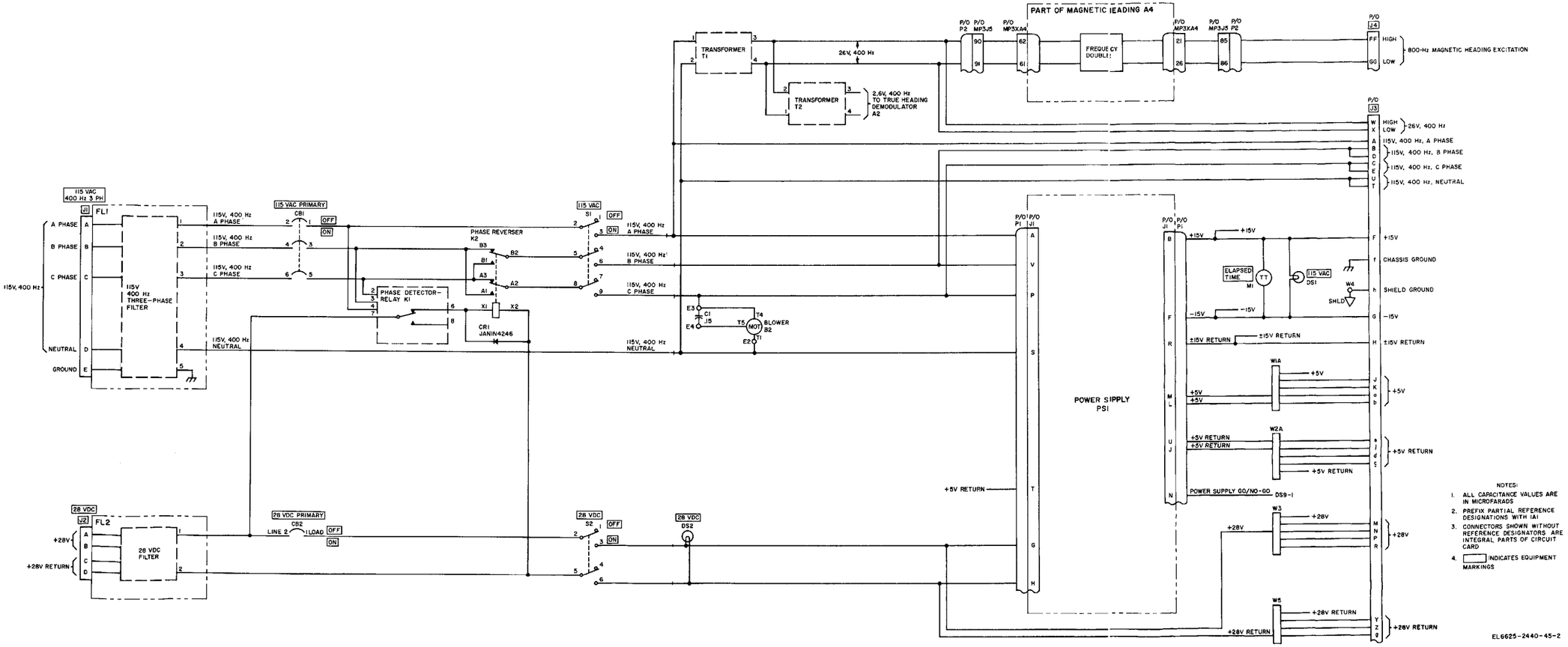


Figure 5-3. Control-display unit, power control and distribution diagram.

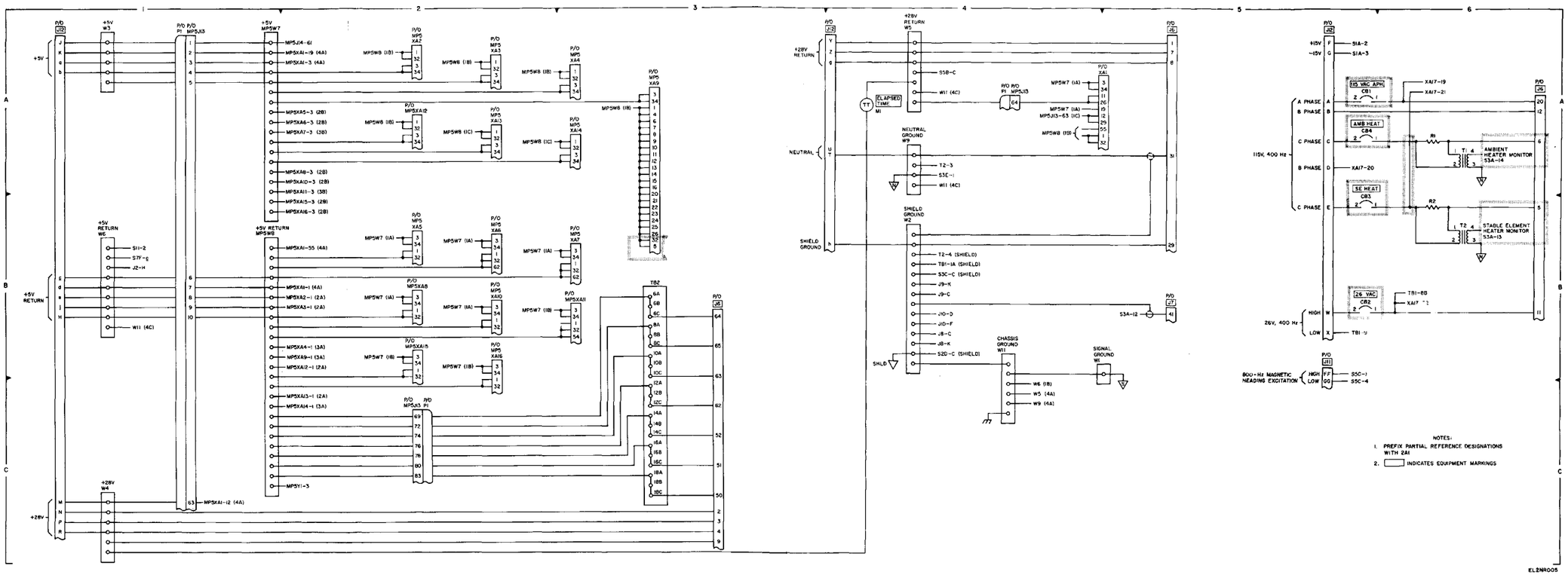


Figure 5-4. Electronics unit, power control and distribution diagram.

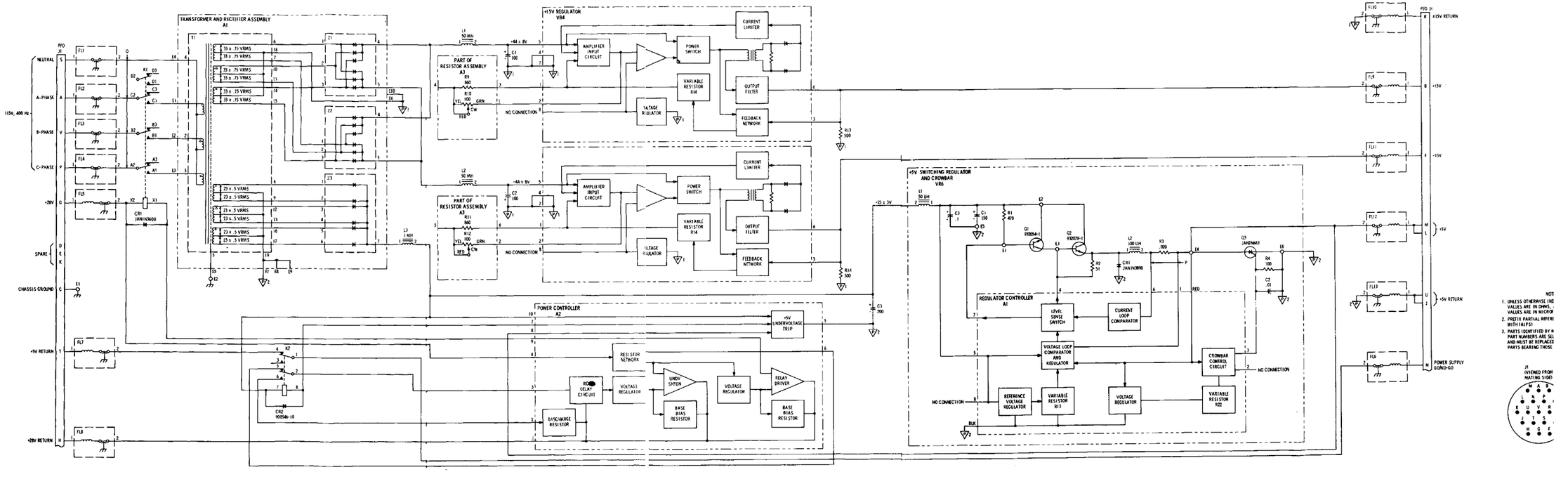
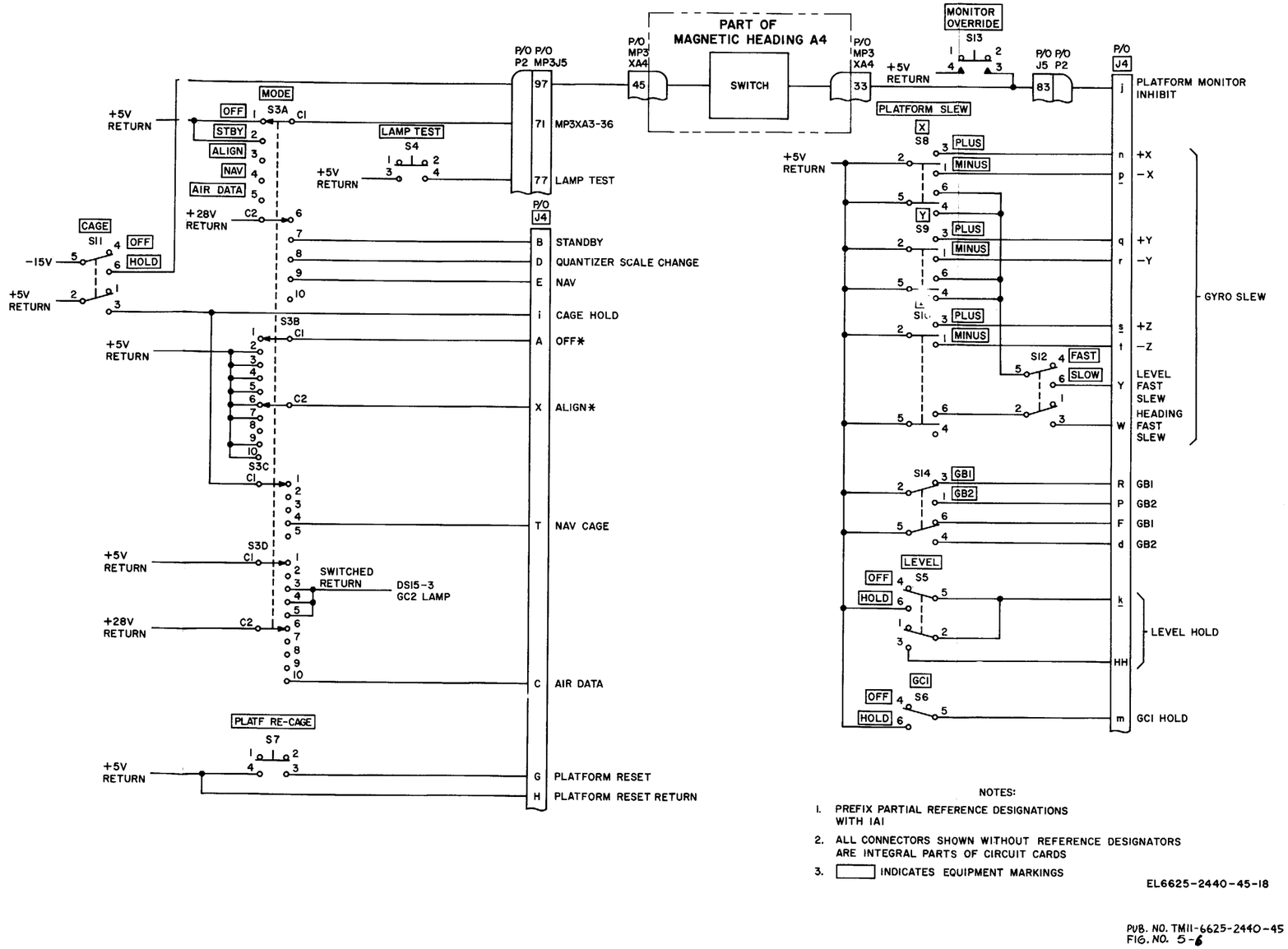


Figure 5-5. Power supply, functional schematic diagram.



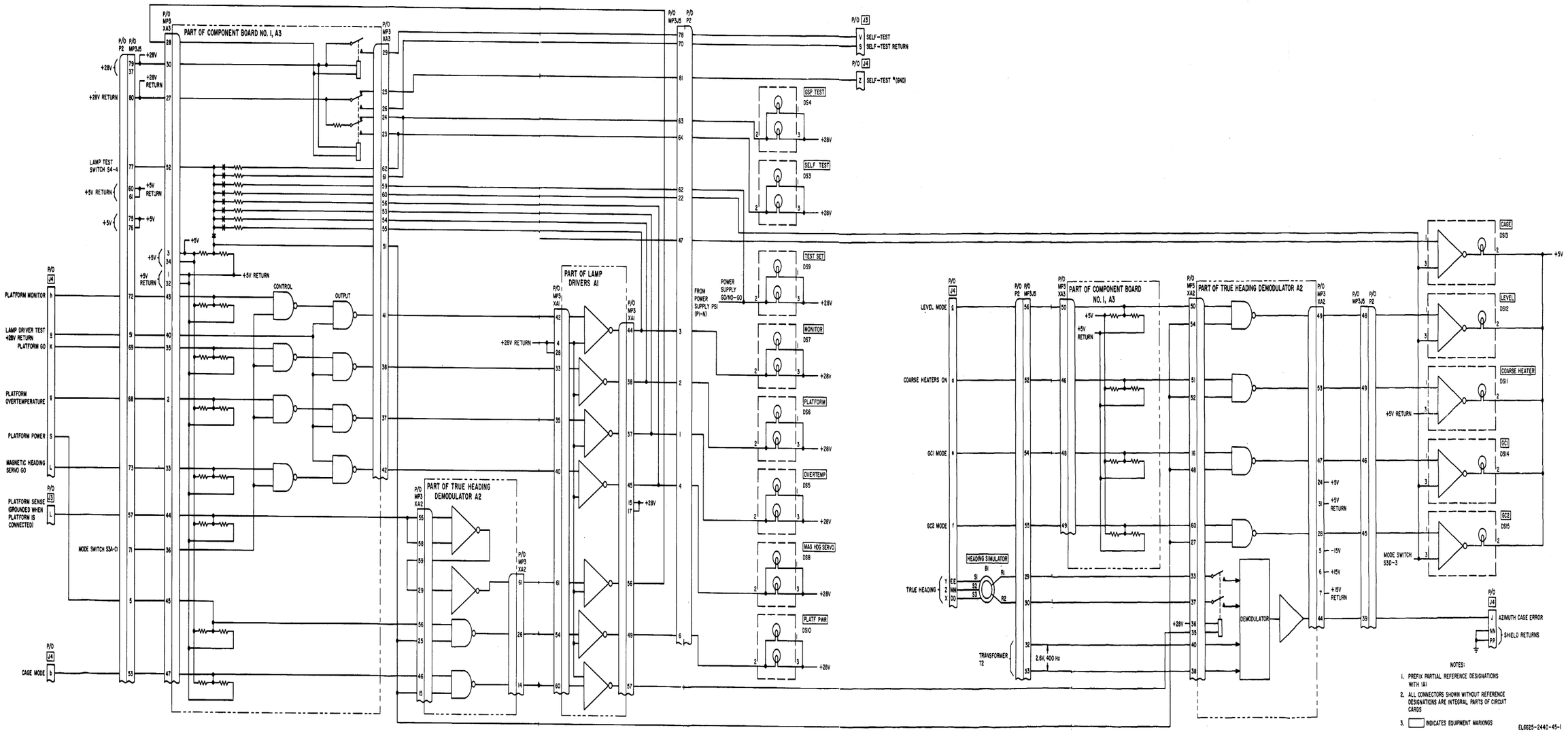
NOTES:

1. PREFIX PARTIAL REFERENCE DESIGNATIONS WITH 1A1
2. ALL CONNECTORS SHOWN WITHOUT REFERENCE DESIGNATORS ARE INTEGRAL PARTS OF CIRCUIT CARDS
3. [ ] INDICATES EQUIPMENT MARKINGS

EL6625-2440-45-18

PUB. NO. TM11-6625-2440-45
FIG. NO. 5-6

Figure 5-6. Control-display unit switching circuits, functional schematic diagram.



hematic diagram.

Figure 5-7. Lamp control circuits functional schematic diagram

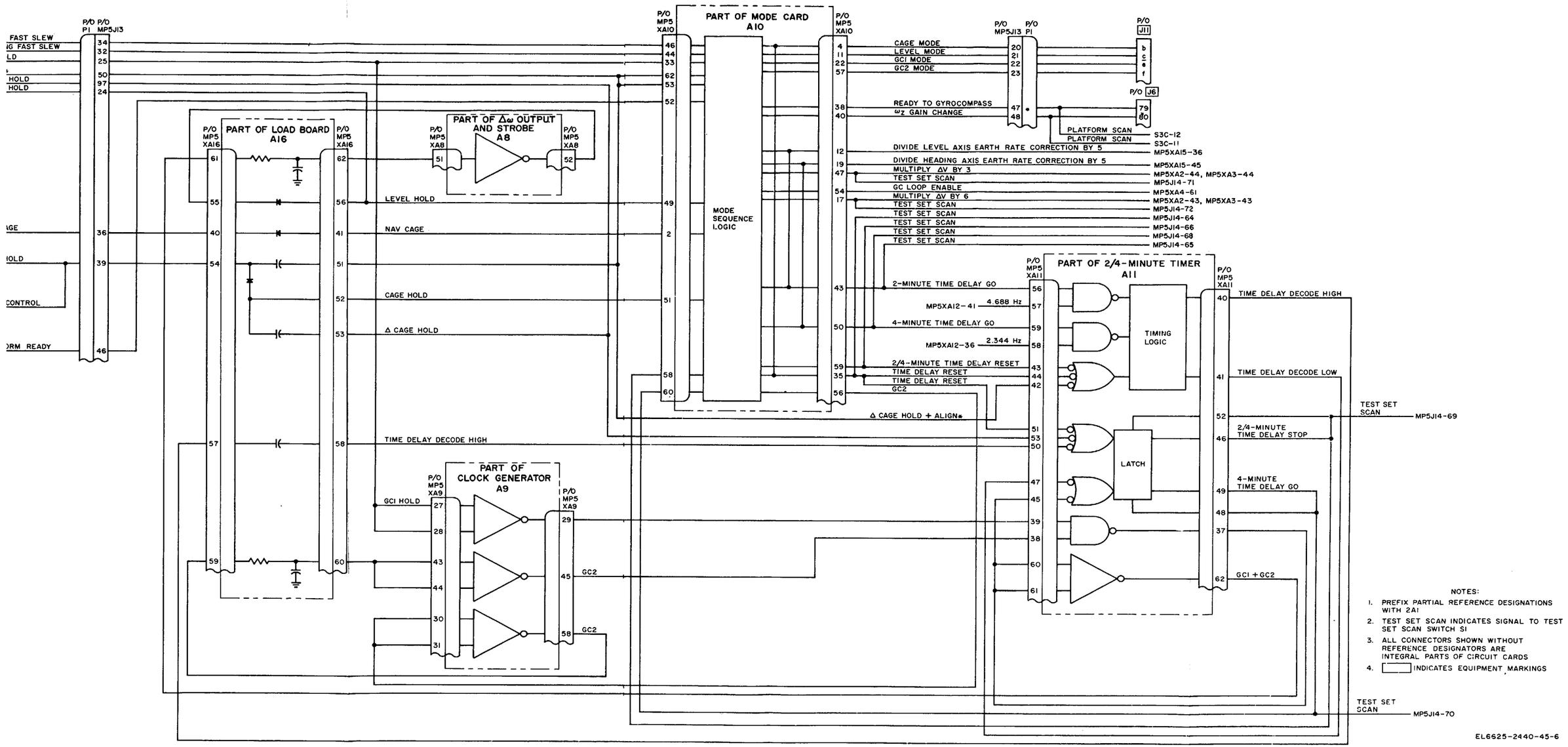


Figure 5-8 Mode control logic, functional schematic diagram.

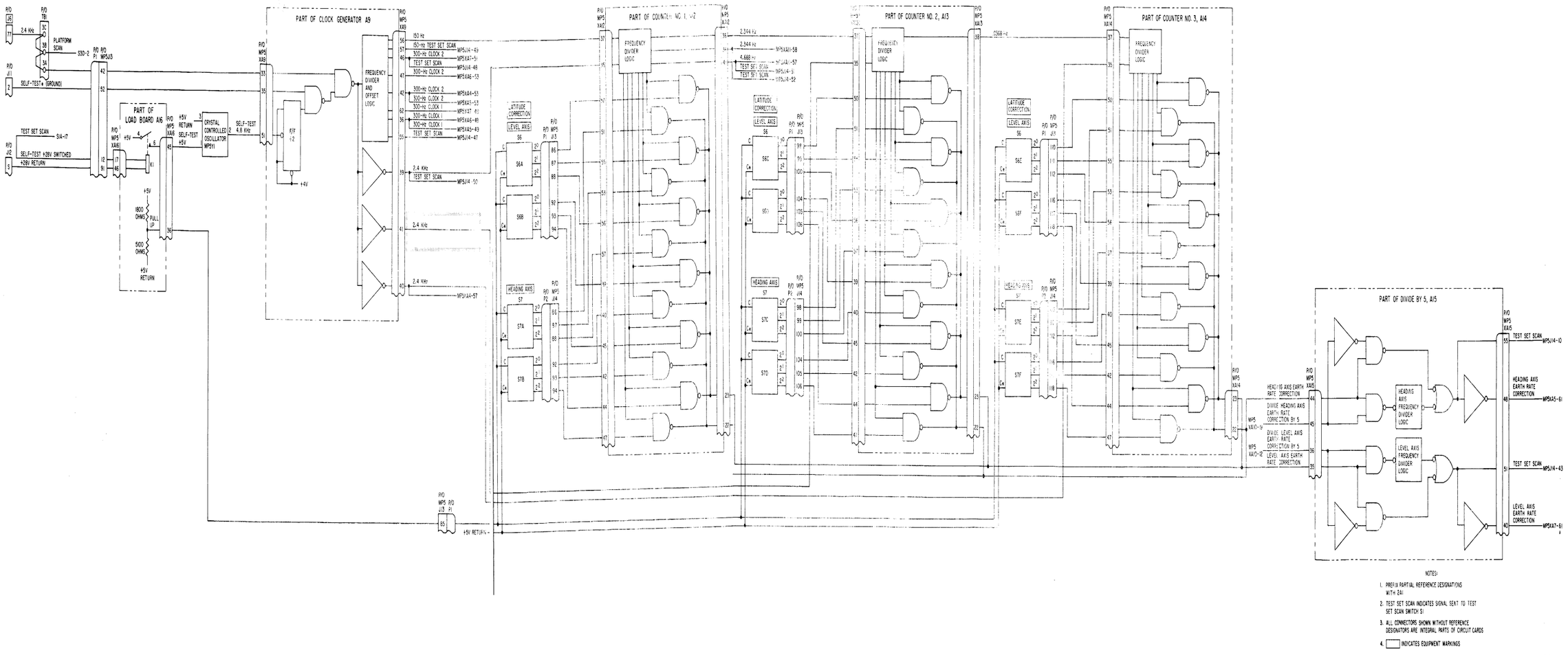


Figure 5-9. Clock generator and latitude correction, functional schematic diagram

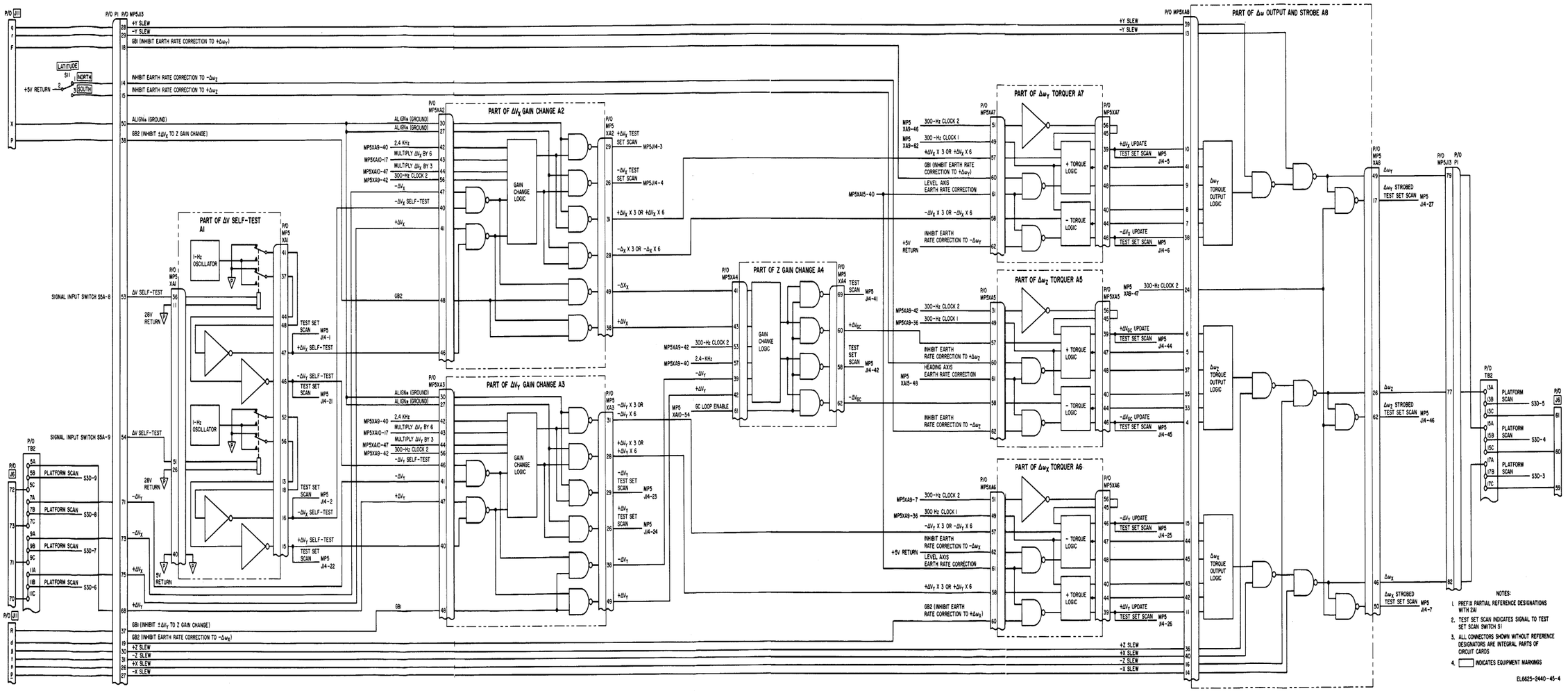


Figure 5-10. Velocity torque logic, functional schematic diagram.

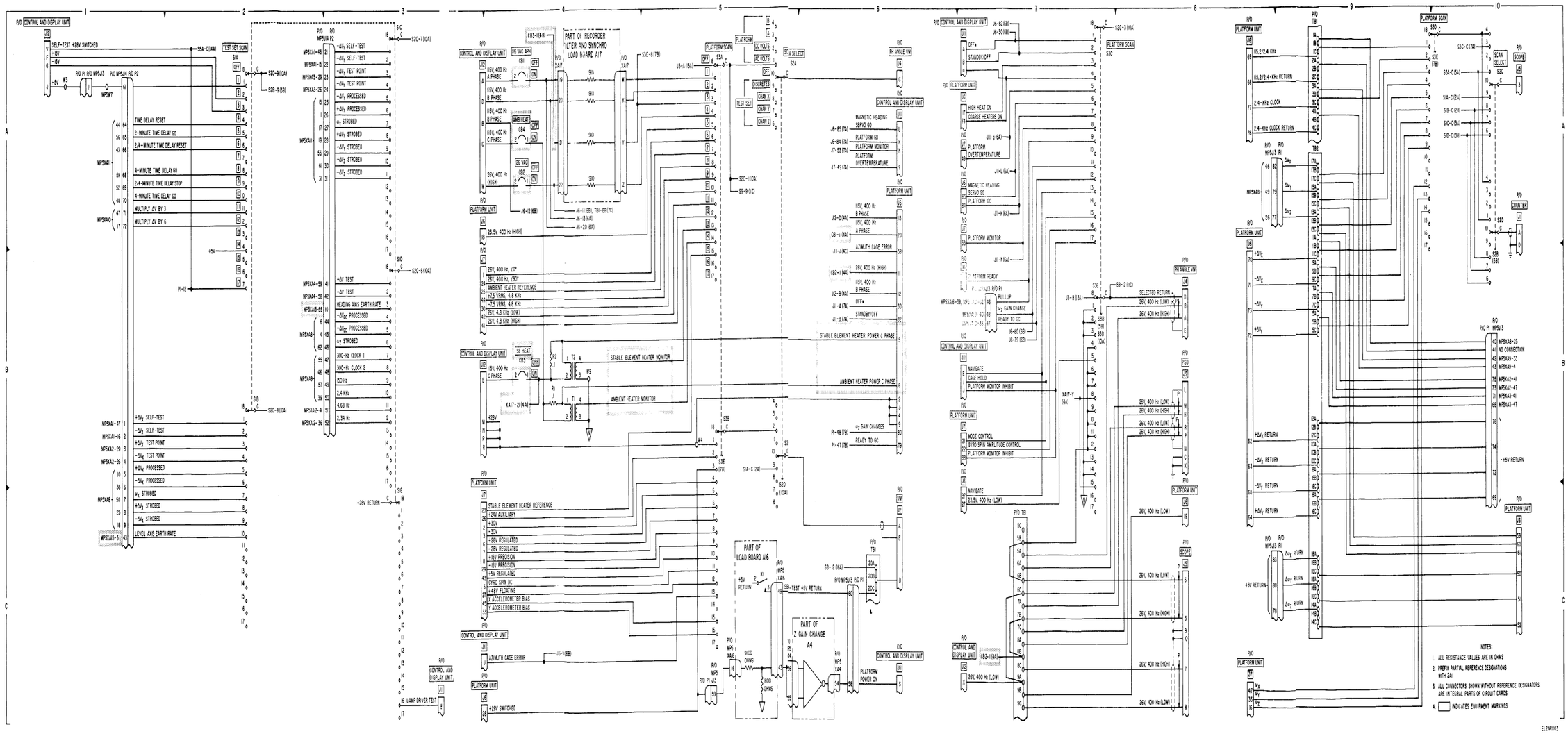


Figure 5-11 (1) Electronic unit switching circuits, functional schematic diagram (sheet 1 of 2)

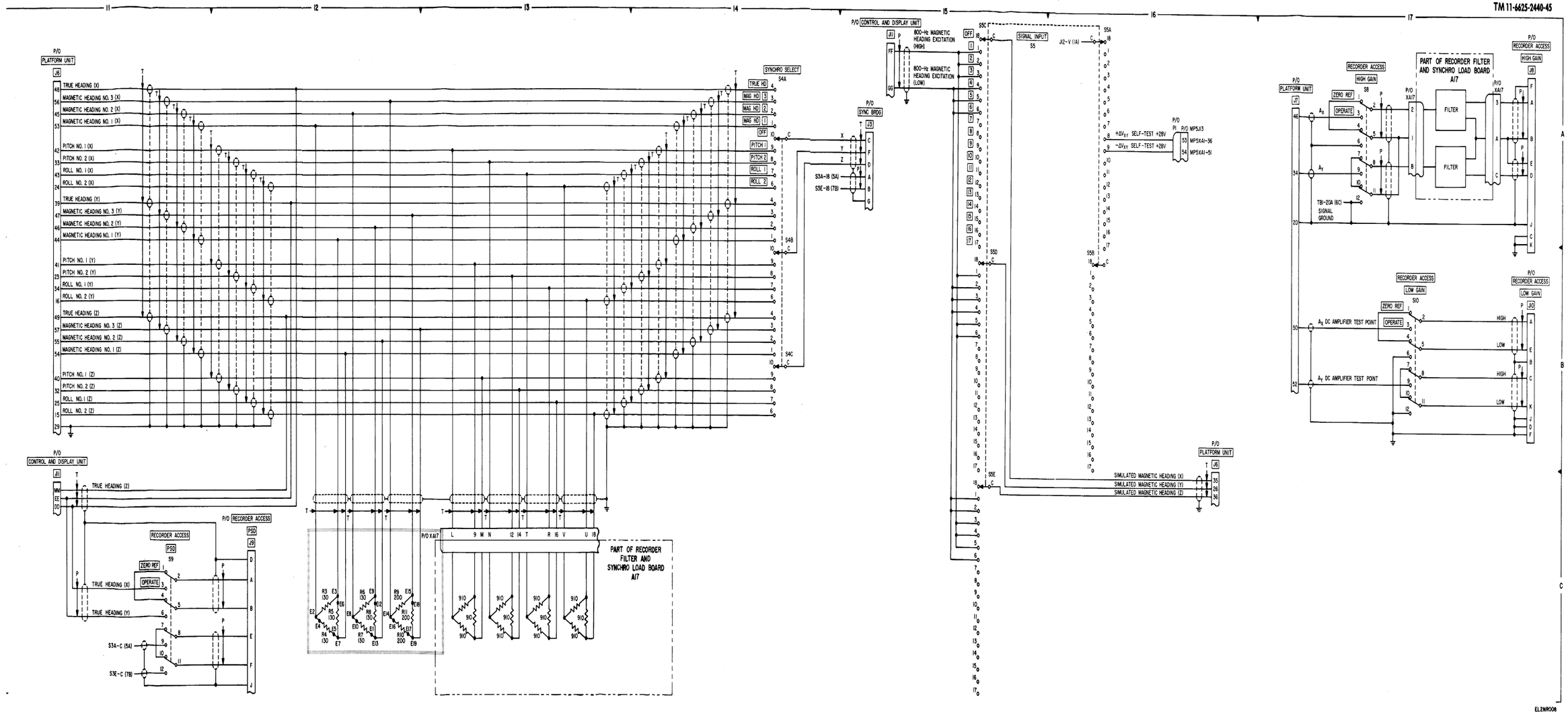


Figure 5-11 (2) Electronic unit switching circuits functional schematic diagram (sheet 2 of 2)

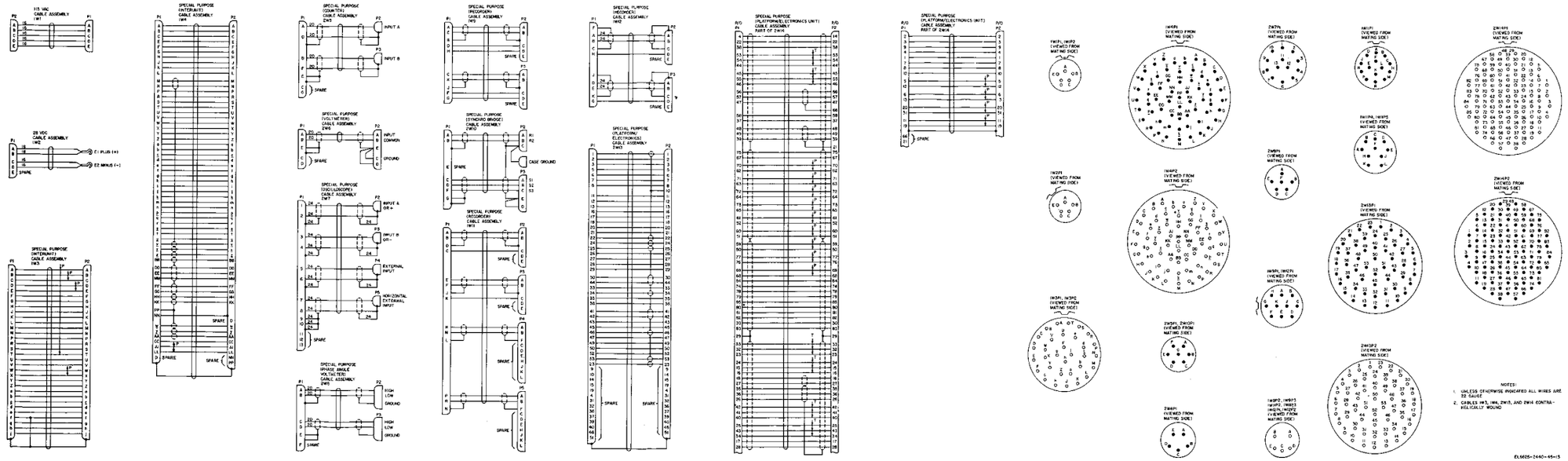


Figure 5-12. Special purpose electrical cable assembly schematics.

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