ARMY
NAVY
AIR FORCE

TM 11-7010-201-40-5
ET821-AA-MMI-050/E154 MTS
T0 31S5-2TSQ73-2-5

TECHNICAL MANUAL

GENERAL SUPPORT MAINTENANCE MANUAL FOR TEST SET, ELECTRONIC CIRCUIT PLUG-IN UNIT TS-3317( )/TSQ-73 (NSN 1430-01-033-1078) INCLUDING OPERATION AND MAINTENANCE MTS TEST AID ASSEMBLY PART NUMBER TE113980

DEPARTMENTS OF THE ARMY, NAVY, AND AIR FORCE
28 MARCH 1983



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

1 **DO NOT TRY TO PULL OR GRAB THE INDIVIDUAL**

2 **IF POSSIBLE, TURN OFF THE ELECTRICAL POWER**

3 **IF YOU CANNOT TURN OFF THE ELECTRICAL POWER, PULL, PUSH, OR LIFT THE PERSON TO SAFETY USING A DRY WOODEN POLE OR A DRY ROPE OR SOME OTHER INSULATING MATERIAL**

4 **SEND FOR HELP AS SOON AS POSSIBLE**

5 **AFTER THE INJURED PERSON IS FREE OF CONTACT WITH THE SOURCE OF ELECTRICAL SHOCK, MOVE THE PERSON A SHORT DISTANCE AWAY AND IMMEDIATELY START ARTIFICIAL RESUSCITATION**

WARNING

DANGEROUS VOLTAGE

is used in the operation of this equipment

DEATH ON CONTACT

may result if personnel fail to observe safety precautions.

Never work on electronic equipment unless there is another person nearby who is familiar with the operation and hazards of the equipment and who is competent in administering first aid. When the technician is aided by operators, he must warn them about dangerous areas. Whenever possible, the power supply to the equipment must be shut off before beginning work on the equipment. Take particular care to ground every capacitor likely to hold a dangerous potential. When working inside the equipment, after the power has been turned off, always ground every part before touching it.

Be careful not to contact high-voltage connections when installing or operating this equipment.

Whenever the nature of the operation permits, keep one hand away from the equipment to reduce the hazard of current flowing through vital organs of the body.

Do not be misled by the term "low voltage." Potentials as low as 50 volts may cause death under adverse conditions.

WARNING

Ensure prime power is off to prevent shock hazard to personnel.

WARNING

USE OF CLEANING SOLVENT

Fumes of TRICHLOROTRIFLUOROETHANE are poisonous. Provide adequate ventilation whenever you use TRICHLOROTRIFLUOROETHANE. Do not use solvent near heat or open flame. TRICHLOROTRIFLUOROETHANE will not burn, but heat changes the gas into poisonous, irritating fumes. DO NOT breathe the fumes or vapors. TRICHLOROTRIFLUOROETHANE dissolves natural skin oils. DO NOT get the solvent on your skin. Use gloves, sleeves and an apron which the solvent cannot penetrate. If the solvent is taken internally, see a, doctor immediately.

TM 11-7010-201-40-5
ET821-AA-MMI-050/E154 MTS
T0 31S5-2TSQ73-2-5

TECHNICAL MANUAL
NO. 11-7010-201-40-5
TECHNICAL MANUAL
ET821-AA-MMI-050/E154 MTS
TECHNICAL ORDER
T0 31S5-2TSQ73-2-5

DEPARTMENTS OF THE ARMY
THE NAVY, AND
THE AIR FORCE

Washington, DC, 28 March 1983

GENERAL SUPPORT
MAINTENANCE MANUAL
FOR
TEST SET, ELECTRONIC CIRCUIT PLUG-IN UNIT
TS-3317( )/TSQ-73
(NSN 1430-01-033-1078)
INCLUDING
OPERATION AND MAINTENANCE
MTS TEST AID ASSEMBLY
PART NUMBER TE113980

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in back of this manual direct to: Commander, US Army Communications-Electronics Command and Fort Monmouth, ATTN: DRSEL-ME-MP, Fort Monmouth, New Jersey 07703.

For Air Force, submit AFTO Form 22 (Technical Order System Publication Improvement Report and Reply) in accordance with paragraph 6-5, Section VI, T.O. 00-5-1. Forward direct to prime ALC/MST.

For Navy, mail comments to the Commander, Naval Electronics Systems Command, ATTN: ELEX 8122, Washington, DC 20360.

In either case, a reply will be furnished direct to you.

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CHAPTER 1
INTRODUCTION

Section I. GENERAL

1-1. Scope. This manual describes the Module Test Set (MTS) Test Aid Assembly, Part Number TE113980 (figure 1-1), hereafter referred to as the MTS test aid. The manual contains instructions for the installation, operation, and functional description. The manual also provides general support maintenance instructions, including troubleshooting, repair and functional test. A complete listing of reference publications is provided in Appendix A. The Maintenance Allocation chart is contained in Appendix B of TM 11-7010-201-12. The Repair Parts and Special Tools List (RPSTL) is contained in TM 11-7010-201-40P.

1-2. Consolidated Index of Army Publications and Blank Forms.

a. *Army*. Refer to the latest issue of DA Pam 310-1 to determine whether there are new editions, changes or additional publications pertaining to the equipment.

b. *Air Force*. Use T.O. 0.1-31 Series Numerical Index and Requirements Table (NIRT).

1-3. Maintenance Forms, Records and Reports.

a. *Reports of Maintenance and Unsatisfactory Equipment.* Department of the Army forms and procedures used for equipment maintenance will be those prescribed by TM 38-750, the Army Maintenance Management System. Air Force personnel will use AFR 66-1 for maintenance reporting and T.O.-OO-35D54 for unsatisfactory equipment reporting. Navy personnel will report maintenance performed utilizing the Maintenance Data Collection Subsystem (MDCS) IAW OPNAVINST 4790.2, Vol 3 and unsatisfactory material/conditions (UR sub- missions) IAW OPNAVINST 4790.2, Vol 2, Chapter 17.

b. Report of Packaging and Handling Deficiencies. Fill out and forward SF 364 (Report of Discrepancy (ROD)) as prescribed in AR 735-11-2/DLAR 4140.55/NAVMATINST 4355.73/ARF 400-54/MCO 4430.3E.

c. *Discrepancy in Shipment Report (DISREP) (SF 361).* Fill out and forward Discrepancy in Shipment Report (DISREP) (SF 361) as prescribed in AR 55-38/NAVSUPINST 4610.33B/AFR 75-18/MCO P4610.19C and DLAR 4500.15.

1-4. Reporting Equipment Improvement Recommendations (EIR).

a. Army. If your MTS Test Aid needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you don't like about your equipment. Let us know why you don't like the design. Put it on an SF 368 (Quality Deficiency Report). Mail it to Commander, US Army Communications-Electronics Command, and Fort Monmouth, ATTN: DRSEL-ME-MP, Fort Monmouth, New Jersey 07703. We'll send you a reply.

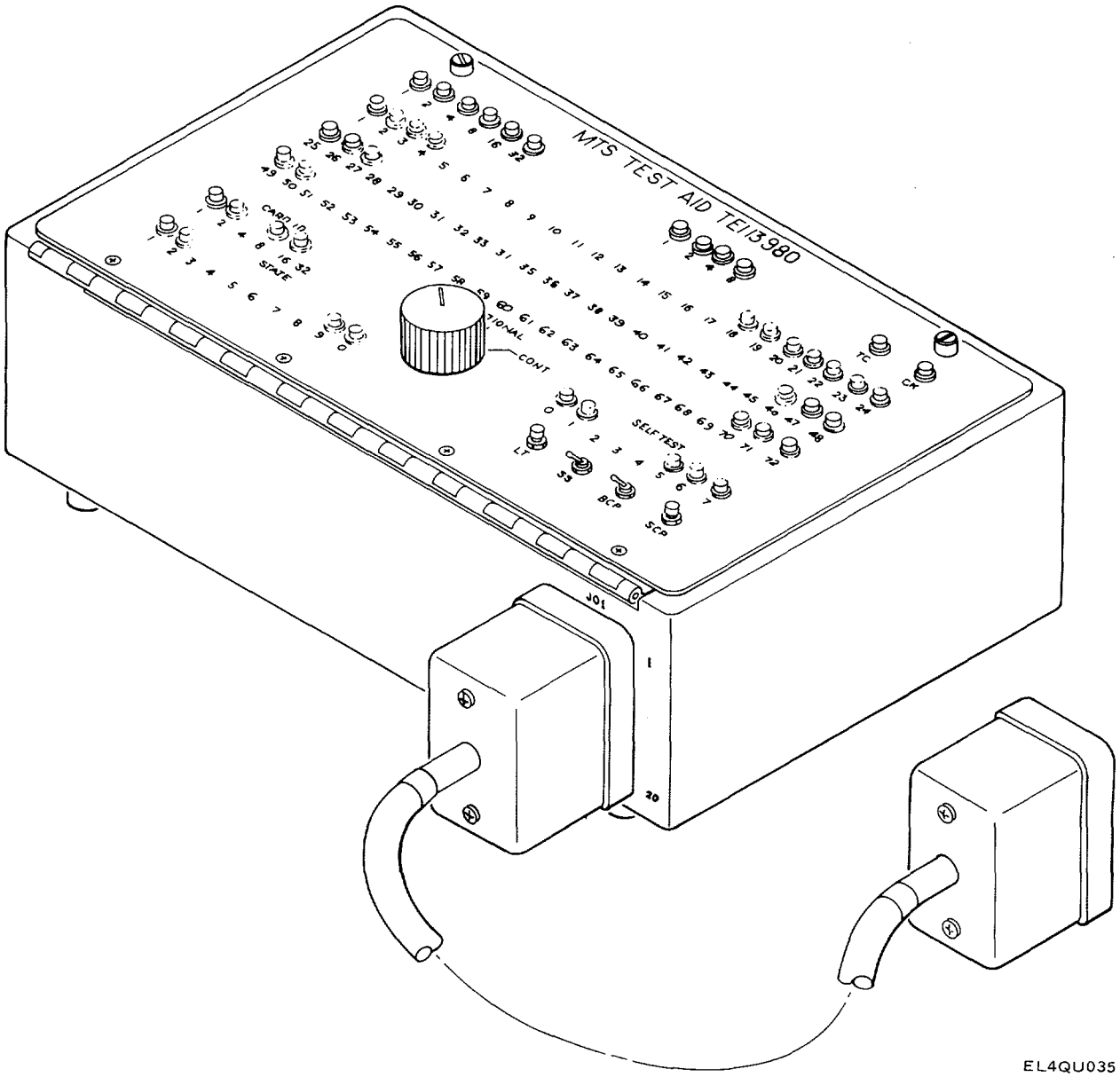


Figure 1-1. MTS Test Aid

b. *Air Force.* Air Force personnel are encouraged to submit EIRs in accordance with AFR 900-4.

c. *Navy*. Navy personnel are encouraged to submit EIRs through their local Beneficial Suggestion Program.

1-5. Administrative Storage. Refer to TM 740-90-1 Administrative Storage, for information covering the administrative storage requirements of this equipment.

1-6. Destruction of Army Electronics Materiel. Destruction of Army electronics materiel to prevent enemy use shall be in accordance with TM 750-244-2.

Section II. DESCRIPTION AND DATA

1-7. Description. The MTS test aid is designed for use with Test Set, Electronic Circuit Plug-In Unit TS-3317( )/ TSQ-73, an item of support equipment for Automatic Message Switching Central AN/TYC-39 and Automatic Telephone Central Office AN/TTC-39. The MTS test aid provides a convenient, simultaneous display of the logic states of signals present at connector J7 of the MTS, and is used as a troubleshooting aid in conjunction with the MTS. (For a complete description of the MTS, refer to TM 11-7010-201-12.)

The MTS test aid consists of a chassis assembly and a cable assembly. The chassis assembly is an aluminum alloy enclosure with a hinged front panel, circuit board assembly, and connector receptacle. The front panel contains switches and indicator lamps used for operation of the MTS test aid. The circuit board assembly is mounted inside the chassis and contains integrated circuits and electrical components that are interconnected with the front panel and connector receptacle. A cover on the bottom of the chassis provides access to the MTS test aid interior for maintenance purposes. Two binding posts mounted on the side of the MTS test aid are provided for connecting an external 5v power supply.

The cable assembly consists of two 260-pin connectors wired pin-to-pin and is used to connect the TMS test aid to the MTS.

The MTS test aid provides a visual display of the status of various counters, decoders, and other logic elements of the MTS. It also simultaneously displays the status of 72 logic lines from the MTS. Three different sets of 72 logic lines each are selectable for display by setting a front panel switch. The information displayed by the MTS test aid indicators provides data for use when troubleshooting the MTS, a circuit card under test, or when isolating wiring problems.

The MTS test aid is powered from the MTS during normal operation. However, for functional testing of the MTS test aid, 5 vdc at 5 amperes is required.

1-8. Technical Characteristics.

a. *Power Requirements.*

(1) Five volts DC is supplied to the test aid by the MTS during normal operation.

(2) When the test aid is being functionally tested, input power from an auxiliary 5-vdc source is required.

b. *Physical Characteristics.*

(1) Test Aid Assembly
Height: 5.5 inches
Width: 15.0 inches
Depth: 10.25 inches
Weight: 5 pounds

(2) Cable Assembly
Length: 2 feet
Weight: 5 pounds

CHAPTER 2
SERVICE UPON RECEIPT AND INSTALLATION

Section I. SERVICE UPON RECEIPT OF MATERIAL

2-1. Unpacking. No special instructions are required for unpacking the test set. Remove the test set from its shipping container and perform the inspection outlined in paragraph 2-2.

2-2. Checking Unpacked Equipment.

a. Inspect equipment for damage incurred during shipment. If equipment has been damaged, report damage (para 1-3b.).

b. Check equipment against component listing on packing slip to see if shipment is complete. Report all discrepancies in accordance with paragraph 1-3c. The equipment should be placed in service even though a minor assembly or part that does not affect proper functioning is missing.

Section II. INSTALLATION INSTRUCTIONS

2-3. Introduction. This section contains the procedure for interconnection of the MTS test aid to the MTS. The unit is ready for installation after unpacking as described in paragraph 2-1. No special tools are required for installation.

2-4. Electrical Interconnection. Connect the MTS test aid to the MTS with the test aid cable assembly as shown in figure 2-1. Perform operating instructions described in Chapter 3.

CAUTION

When attaching cable assembly to MTS and MTS test aid connectors, carefully aline guide pins and sockets of connector jacks and tighten a little at a time to avoid damaging connector pins.

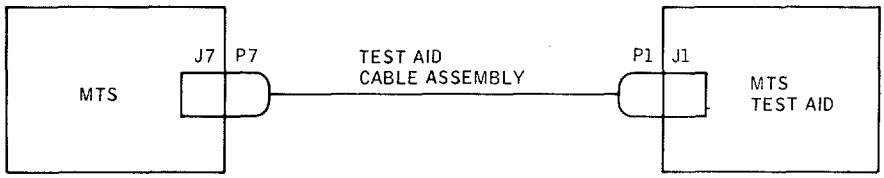


Figure 2-1. MTS Test Aid Test Setup

CHAPTER 3
OPERATING INSTRUCTIONS

Section I. CONTROLS AND INDICATORS

3-1. Introduction. This section contains the operating instructions for the MTS test aid and includes the functions of all operating controls and indicators.

3-2. Controls, Indicators and Connectors. The MTS test aid controls, indicators and connectors are shown in figure 3-1 and functionally described in table 3-1.

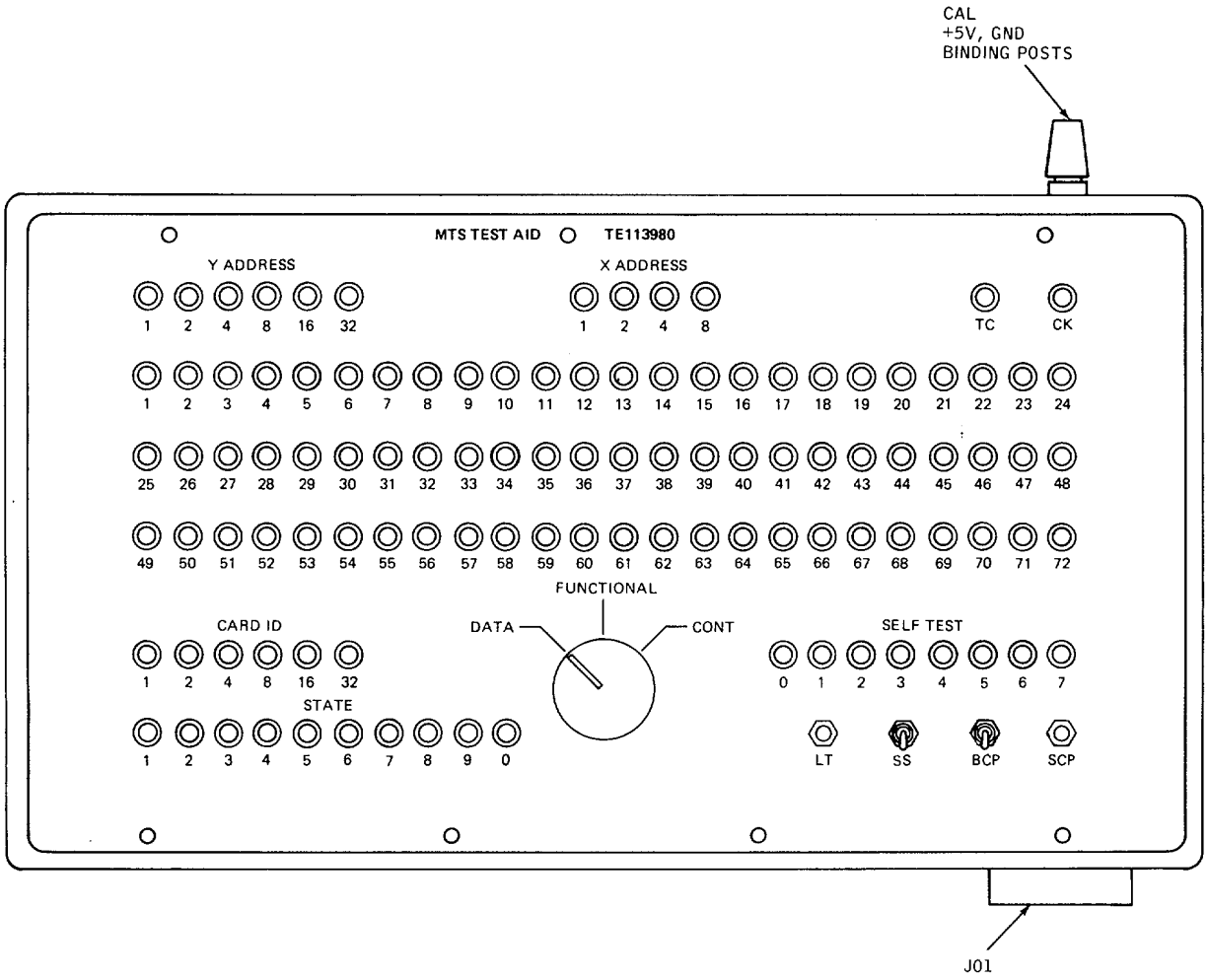


Figure 3-1. MTS Test Aid Controls, Indicators and Connectors

Table 3-1. Controls, Indicators and Connectors

Control/Indicator	Function
Y ADDRESS indicators 1, 2, 4, 8, 16, 32	Displays binary configuration of MTS Y address counter.
X ADDRESS indicators 1, 2, 4, 8	Displays binary configuration of MTS X address counter.
TC indicator	Display status of test clock control logic.
CK indicator	Displays status of clock signals to card under test.
Indicators 1 through 72	Displays status of selected control lines dependent on position of DATA/FUNCTIONAL/CONT selector switch.
CARD ID indicators 1, 2, 4, 8, 16, 32	Display binary code which identifies card under test.
STATE indicators 1, 2, 3, 4, 5, 6, 7, 8, 9, O	Displays status of MTS state counters.
SELF TEST indicators 0, 1, 2, 3, 4, 5, 6, 7	Displays status of self-test data check logic.
LT momentary pushbutton switch	When pressed, lights all front panel indicators for lamp test.
SCP momentary pushbutton switch	When pressed, enables sub-state counter to advance 1 cycle after having been stopped by either the SS or BCP switch.
BCP two-position toggle switch	When set to up position, stops sub-state counter at end of each cycle for single stepping.
SS two-position toggle switch	When set to up position, stops sub-state counter at end of cycle if an error has occurred during that cycle.
DATA/FUNCTIONAL/CONT three-position rotary switch	Enables indicators 1 through 72 to display three different types of data: Switch Position — Displayed Information DATA — Data being strobed onto MTS probe. FUNCTIONAL — Functional errors detected by data comparison logic. CONT — Continuity errors detected by data comparison logic.
JO1 connector receptacle	Test aid cable assembly input.
CAL binding posts Red (+ 5vdc) Black (GND)	Power input (+ 5vdc) for functional test.

Section II. OPERATION

3-3. Introduction. This section provides operating procedures for the MTS test aid. Procedures for operation of the MTS test aid consist of troubleshooting the MTS and troubleshooting wiring.

3-4. Troubleshooting MTS. The MTS test aid may be used during MTS fault isolation as follows:

a. Connect MTS test aid to MTS as described in paragraph 2-4.

b. Set BCP switch down.

c. Set SS switch down.

d. Perform MTS fault isolation procedure (TM 11-7010-201-12) using table 3-2 for correlating MTS J7 connector pin numbers to their respective MTS test aid lamps.

Table 3-2. MTS Connector J7 Pin Numbers and Related Test Aid Lamps

J7 pin number	Test aid lamp	Switch position	J7 pin number	Test aid lamp	Switch position
1	STATE 1		32	SELF TEST 5	
2	STATE 2		33	SELF TEST 6	
3	STATE 3		34	SELF TEST 7	
4	STATE 4		35	1	DATA
5	STATE 5		36	2	DATA
6	STATE 6		37	3	DATA
7	STATE 7		38	4	DATA
8	STATE 8		39	5	DATA
9	STATE 9		40	6	DATA
10	STATE O		41	7	DATA
11	X ADDRESS 1		42	8	DATA
12	X ADDRESS 2		43	9	DATA
13	X ADDRESS 4		44	10	DATA
14	X ADDRESS 8		45	11	DATA
15	CARDID1		46	12	DATA
16	CARD ID 2		47	13	DATA
17	CARD ID 4		48	14	DATA
18	CARD ID 8		49	15	DATA
19	CARD ID 16		50	16	DATA
20	CARD ID 32		51	17	DATA
21	Y ADDRESS 1		52	18	DATA
22	Y ADDRESS 2		53	19	DATA
23	Y ADDRESS 4		54	20	DATA
24	Y ADDRESS 8		55	21	DATA
25	Y ADDRESS 16		56	22	DATA
26	Y ADDRESS 32		57	23	DATA
27	SELF TEST O		58	24	DATA
28	SELF TEST 1		59	25	DATA
29	SELF TEST 2		60	26	DATA
30	SELF TEST 3		61	27	DATA
31	SELF TEST 4		62	28	DATA

Table 3-2. MTS Connector J7 Pin Numbers and Related Test Aid Lamps - Continued

J7 pin number	Test aid lamp	Switch position	J7 pin number	Test aid lamp	Switch position

Table 3-2. MTS Connector J7 Pin Numbers and Related Test Aid Lamps - Continued

J7 pin number	Test aid lamp	Switch position	J7 pin number	Test aid lamp	Switch position
63	29	DATA	94	60	DATA
64	30	DATA	95	61	DATA
65	31	DATA	96	62	DATA
66	32	DATA	97	63	DATA
67	33	DATA	98	64	DATA
68	34	DATA	99	65	DATA
69	35	DATA	100	66	DATA
70	36	DATA	101	67	DATA
71	37	DATA	102	68	DATA
72	38	DATA	103	69	DATA
73	39	DATA	104	70	DATA
74	40	DATA	105	71	DATA
75	41	DATA	106	72	DATA
76	42	DATA			
77	43	DATA			
78	44	DATA			
79	45	DATA	110	TC	
80	46	DATA	111	CK	
81	47	DATA	112	1	FUNCTIONAL
82	48	DATA	113	2	FUNCT1ONAL
83	49	DATA	114	3	FUNCTIONAL
84	50	DATA	115	4	FUNCTIONAL
85	51	DATA	116	5	FUNCTIONAL
86	52	DATA	117	6	FUNCTIONAL
87	53	DATA	118	7	FUNCTIONAL
88	54	DATA	119	8	FUNCTIONAL
89	55	DATA	120	9	FUNCTIONAL
90	56	DATA	121	10	FUNCTIONAL
91	57	DATA	122	11	FUNCTIONAL
92	58	DATA	123	12	FUNCTIONAL
93	59	DATA	124	13	FUNCTIONAL

Table 3-2. MTS Connector J7 Pin Numbers and Related Test Aid Lamps - Continued

J7 pin number	Test aid lamp	Switch position	J7 pin number	Test aid lamp	Switch position
125	14	FUNCTIONAL	156	45	FUNCTIONAL
126	15	FUNCTIONAL	157	46	FUNCTIONAL
127	16	FUNCTIONAL	158	47	FUNCTIONAL
128	17	FUNCTIONAL	159	48	FUNCTIONAL
129	18	FUNCTIONAL	160	49	FUNCTIONAL
130	19	FUNCTIONAL	161	50	FUNCTIONAL
131	20	FUNCTIONAL	162	51	FUNCTIONAL
132	21	FUNCTIONAL	163	52	FUNCTIONAL
133	22	FUNCTIONAL	164	53	FUNCTIONAL
134	23	FUNCTIONAL	165	54	FUNCTIONAL
135	24	FUNCTIONAL	166	55	FUNCTIONAL
136	25	FUNCTIONAL	167	56	FUNCTIONAL
137	26	FUNCTIONAL	168	57	FUNCTIONAL
138	27	FUNCTIONAL	169	58	FUNCTIONAL
139	28	FUNCTIONAL	170	59	FUNCTIONAL
140	29	FUNCTIONAL	171	60	FUNCTIONAL
141	30	FUNCTIONAL	172	61	FUNCTIONAL
142	31	FUNCTIONAL	173	62	FUNCTIONAL
143	32	FUNCTIONAL	174	63	FUNCTIONAL
144	33	FUNCTIONAL	175	64	FUNCTIONAL
145	34	FUNCTIONAL	176	65	FUNCTIONAL
146	35	FUNCTIONAL	177	66	FUNCTIONAL
147	36	FUNCTIONAL	178	67	FUNCTIONAL
148	37	FUNCTIONAL	179	68	FUNCTIONAL
149	38	FUNCTIONAL	180	69	FUNCTIONAL
150	39	FUNCTIONAL	181	70	FUNCTIONAL
151	40	FUNCTIONAL	182	71	FUNCTIONAL
152	41	FUNCTIONAL	183	72	FUNCTIONAL
153	42	FUNCTIONAL	184	1	CONT
154	43	FUNCTIONAL	185	2	CONT
155	44	FUNCTIONAL	186	3	CONT

Table 3-2. MTS Connector J7 Pin Numbers and Related Test Aid Lamps - Continued

J7 pin number	Test aid lamp	Switch position	J7 pin number	Test aid lamp	Switch position
187	4	CONT	218	35	CONT
188	5	CONT	219	36	CONT
189	6	CONT	220	37	CONT
190	7	CONT	221	38	CONT
191	8	CONT	222	39	CONT
192	9	CONT	223	40	CONT
193	10	CONT	224	41	CONT
194	11	CONT	225	42	CONT
195	12	CONT	226	43	CONT
196	13	CONT	227	44	CONT
197	14	CONT	228	45	CONT
198	15	CONT	229	46	CONT
199	16	CONT	230	47	CONT
200	17	CONT	231	48	CONT
201	18	CONT	232	49	CONT
202	19	CONT	233	50	CONT
203	20	CONT	234	51	CONT
204	21	CONT	235	52	CONT
205	22	CONT	236	53	CONT
206	23	CONT	237	54	CONT
207	24	CONT	238	55	CONT
208	25	CONT	239	56	CONT
209	26	CONT	240	57	CONT
210	27	CONT	241	58	CONT
211	28	CONT	242	59	CONT
212	29	CONT	243	60	CONT
213	30	CONT	244	61	CONT
214	31	CONT	245	62	CONT
215	32	CONT	246	63	CONT
216	33	CONT	247	64	CONT
217	34	CONT	248	65	CONT

Table 3-2. MTS Connector J7 Pin Numbers and Related Test Aid Lamps - Continued

J7 pin number	Test aid lamp	Switch position	J7 pin number	Test aid lamp	Switch position
249	66	CONT	253	70	CONT
250	67	CONT	254	71	CONT
251	68	CONT	255	72	CONT
252	69	CONT			

3-5. Troubleshooting Wiring. The need for using the MTS test aid to isolate card cage wiring problems is indicated if, after replacing circuit cards in the system equipment, a continuity error or functional error is still displayed on the MTS. Perform the following procedure to use the MTS test aid for isolating wiring problems.

a. Connect MTS test aid to MTS as described in paragraph 2-4.

b. Set SS switch up.

c. Set BCP switch down.

d. Press LT switch and verify that all front panel indicators light.

e. Perform test with MTS (TM 11-7010-201-12).

f. Using table 3-3, check CARD ID indicators, and verify that binary code configuration (lamp on/off conditions) matches the card type under test.

g. Observe STATE indicators: if an error is detected, STATE 7 indicator will light. 3-9)

Table 3-3. Card Type Identification

CARD ID indicators[1]						Decimal equivalent of binary number	Card type
32	16	8	4	2	1		
0	0	0	0	0	0	0	587102
0	0	0	0	0	1	1	587103
0	0	0	0	1	0	2	587104
0	0	0	1	0	0	4	587108
0	0	0	1	0	1	5	587110
0	0	0	1	1	0	6	587117
0	0	1	0	0	0	8	149513
0	0	1	0	0	1	9	149580, 10281780
0	0	1	1	1	0	14	587106
0	0	1	1	1	1	15	587109
0	1	0	0	0	1	17	587105
0	1	0	0	1	1	19	149512, 10281602
0	1	0	1	0	0	20	149516, 10281606
0	1	0	1	1	0	22	149576

[1] Indicator on = 1, Indicator off = 0

h. Set DATA/FUNCTIONAL/CONT switch to FUNCTIONAL or CONT, depending on error condition observed on MTS display.

NOTE

If both FUNCTIONAL INPUT ERROR and FUNCTIONAL OUTPUT ERROR indicators on the MTS light, there is a short circuit in the input signal line. If only the FUNCTIONAL OUTPUT ERROR indicator lights, the fault is in the output signal line.

i. Check MTS test aid indicators 1 through 72 and note which indicator lights.

j. Using table 3-4, column 1 (MTS test aid lamp number), locate lamp number corresponding to indication noted in step i. On same line of table 3-4, locate pin number corresponding to appropriate circuit card assembly part number.

k. Refer to system maintenance manual to determine applicable wire list number, then to the wire list in Section VI of Chapter 5 of this manual.

Table 3-4. MTS Test Aid Indicators and Related Circuit Card Pins

MTS test aid lamp no.	Circuit card assy TP no.	Circuit card assemblies and I/O pin numbers			
		149512-100, 149513-100, 0281602	149516-100, 149576-100, 149580-100 10281606, 10281780	587102-102 thru 587106-102 587108-102 thru 587110-102	587117-102
1	7A	13	13	10	11
2	6A	14	14	8	13
3	5A	10	10	6	6
4	4A	8	8	4	8
5	3B	5	3	5	5
6	2B	3	1	1	1
7	2A	4	4	3	4
8	3A	6	6	7	3
9	4B	7	5	9	7
10	5B	9	7	11	9
11	6B	11	9	13	10
12	7B	15	11	15	15
13	14A	27	25	26	22
14	13A	26	26	24	24
15	12A	24	24	22	23
16	11A	22	22	20	25
17	10A	20	20	18	20
18	9A	18	18	14	18
19	8B	17	15	17	14
20	9B	19	17	19	17
21	10B	21	19	21	19
22	11B	23	21	23	21
23	12B	25	23	25	26
24	13B	29	27	27	27
25	20A	42	42	42	38
26	19A	40	40	40	40
27	18A	38	38	38	35
28	17A	36	36	36	37
29	16A	33	34	34	36
30	15A	30	30	30	34

Table 3-4. MTS Test Aid Indicators and Related Circuit Card Pins - Continued

		Circuit card assemblies and I/O pin numbers			
MTS test aid lamp no.	Circuit card assy. TP no.	149512-100, 149513-100, 10281602	149516-100, 149576-100, 149580-100, 10281606, 10281780	587102-102 thru 587106-102, 587108-102 thru 587110-102	587117-102
31	14B	31	29	29	30
32	15B	34	31	31	29
33	16B	35	33	33	31
34	17B	37	35	35	33
35	18B	39	37	37	42
36	19B	41	39	39	39
37	26A	54	56	56	52
38	25A	52	54	54	54
39	24A	50	52	52	47
40	23A	47	50	50	49
41	22A	48	48	48	50
42	21A	46	46	46	48
43	22B	43	41	41	46
44	23B	45	43	43	41
45	24B	49	45	45	43
46	25B	51	47	47	45
47	26B	53	49	49	53
48	27B	55	51	51	51
49	33A	68	68	70	64
50	32A	69	66	68	66
51	31A	63	64	66	61
52	30A	64	62	64	63
53	29A	62	60	62	62
54	28A	60	57	60	60
55	28B	56	53	53	56
56	29B	57	55	55	55
57	30B	59	59	57	57
58	31B	61	61	59	59
59	32B	66	63	61	68
60	33B	71	65	63	65

Table 3-4. MTS Test Aid Indicators and Related Circuit Card Pins - Continued

		Circuit card assemblies and I/O pin numbers			
MTS test aid lamp no.	Circuit card assy. TP no.	149512-100, 149513-100, 10281602	149516-100, 149576-100, 149580-100, 10281606, 10281780	587102-102 thru 587106-102, 587108-102 thru 587110-102	587117-102
61	39B	-	79	79	79
62	38B	80	77	77	80
63	37B	79	75	75	73
64	36B	77	73	73	71
65	36A	74	74	71	78
66	34A	70	70	72	72
67	34B	73	69	65	70
68	35B	75	71	74	69
69	35A	72	72	69	74
70	37A	76	76	76	76
71	38A	78	78	78	77
72	39A	-	80	80	75

CHAPTER 4

FUNCTIONAL DESCRIPTION

4-1. Introduction. This chapter provides a functional description of the MTS test aid. The functional description is presented in two levels: an overall functional description and a detailed functional description. The overall description is supported by a functional block diagram, while the detailed description is supported by schematic diagram (figure FO-2) and by wire lists provided in Chapter 5, Section VI.

4-2. Overall Functional Description. The MTS test aid functions as a display medium for the MTS (figure 4-1). The MTS test aid monitors the outputs from J7 of the MTS displayed on the MTS test aid front panel. These signals are input via the MTS test aid cable assembly and enter the MTS test aid at connector J01. During normal operation, the MTS test aid is powered by + 5v from the MTS. While the MTS test aid is being functionally tested, + 5v is provided by an auxiliary source. In either case, + 5v provides drive for the indicators and integrated circuits.

The following signals are routed through connector J01 to the lamp drivers of the circuit board assembly: state, X address, card ID, Y address, self test, data lines, enable TC, and data CK. The outputs of these lamp drivers provide ground paths for the indicators on the MTS test aid front panel. The functional error signals and continuity error signals are inverted in the hex inverters of the circuit board, and applied to the lamp drivers. The outputs of the lamp drivers provide a ground path for the appropriate indicators (data lines). The DATA/FUNCTIONAL/CONT switch selects which lamp drivers have a pull-up voltage applied to their inputs. The LT (lamp test) switch applies ground to the circuit board diode array, which provides a current path for the front panel indicators. The SCP (step clock pulse) switch provides ground to the quadruple 2-input NAND gate (quad two) circuits. The quad two output signals are routed out of the MTS test aid to the MTS. The BCP (single step clock pulse) and SS (stop on error) switches output to ground through connector JO1 to the MTS.

4-3. Detailed Functional Description. Input power (+ 5v) and ground are provided through connector JOI during normal operation on pins 256 and 258, and 257 and 259, respectively (figure FO-2 and wire lists in Chapter 5 Section VI). When the MTS test aid is being functionally tested, input power from an auxiliary + 5v source is brought in through the CAL + 5v and GND binding posts (red and black). In either case, the voltage is applied to the circuit board (AO1) power plane, which is located on the front of the circuit board. The input ground is connected to the circuit board ground plane, located on the rear of the circuit board. The + 5v and GND are available any may be picked up at the V or G pins at each of the integrated circuit socket groups. The power plane and ground plane supply the drive necessary to operate the indicators on the MTS test aid front panel. The indicators are wired so that + 5v is always on pin 2. Therefore, a logic low is required at pin 1 to enable them. Two conditions will cause the indicators to light, activating the LT (lamp test) switch, or applying a logic low from a lamp driver. When the LT switch is pressed, a ground path is provided through each diode of the nine diode arrays to pin 1 of each indicator. This lights all 108 indicators on the MTS test aid front panel. If a logic low is applied from a lamp driver, only the indicator associated with that particular driver will light. The

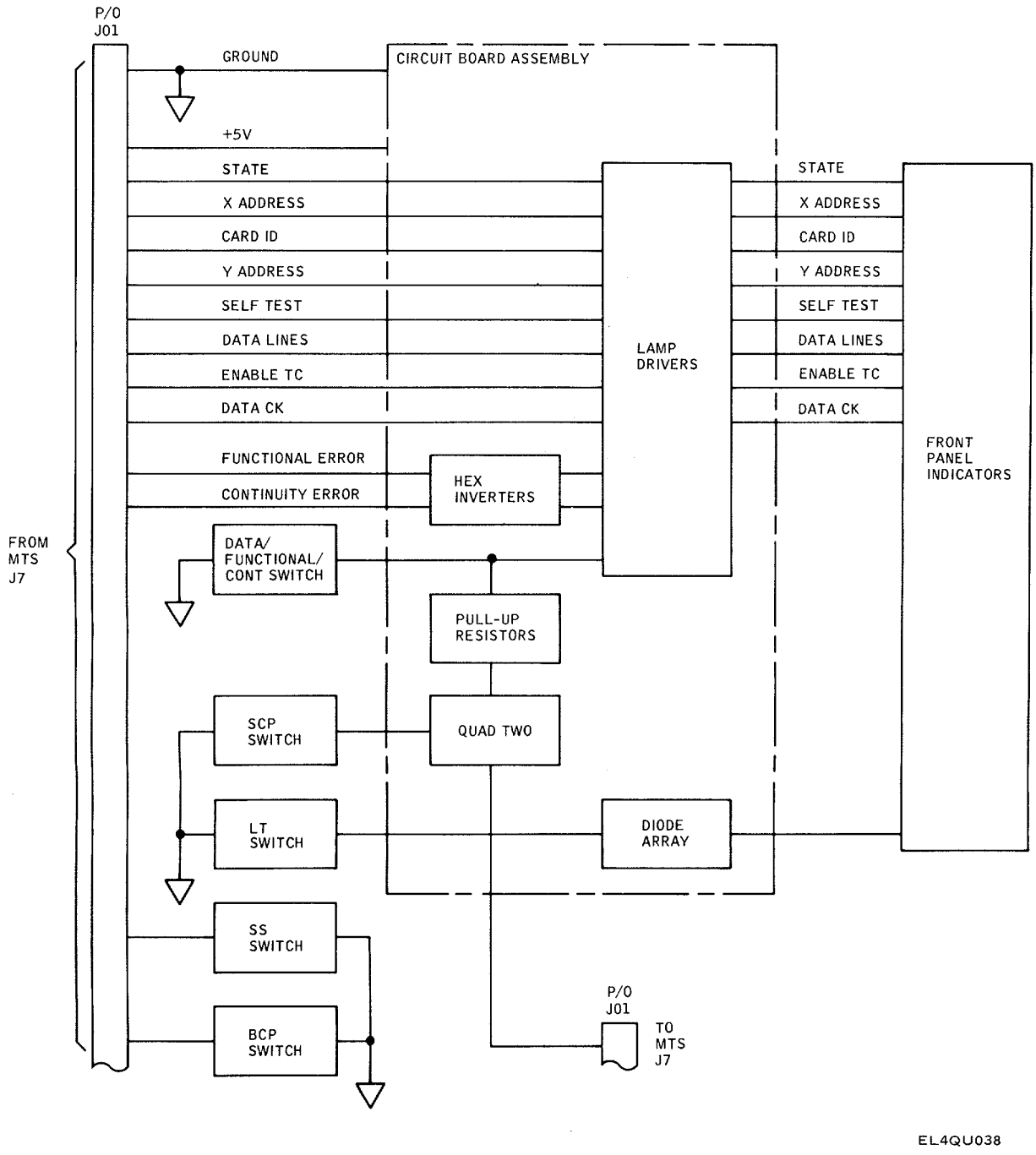


Figure 4-1. MTS Test Aid Functional Block Diagram

eight self-test signals, six card ID signals, ten state signals, six Y address signals, four X address signals, the enable TC signal, and the data CK signal all enter the MTS test aid through connector J01. Each signal is used as an input to individual lamp drivers. These lamp drivers (located on circuit board A01) are NAND gates with one active input. The other input to each of the lamp drivers is floating, and is a logic high. in the driver. Since there is only one variable signal entering these lamp drivers; the NAND gates are actually used as inverters. When the variable signal entering the gate (from J01) is a logic high, the signal leaving the gate is a logic low. The output from each of the lamp drivers is applied to pin 1 of the individual indicators. When pin 1 is a logic low, the indicator will light, as previously described.

There are 72 identical circuits on the circuit board that are controlled by the DATA/FUNCTIONAL/CONT switch (SO1). These circuits activate the 72 indicators (numbered 1 through 72) on the MTS test aid front panel. To simplify this discussion, only one of the circuits will be described in detail.

Each circuit is composed of two inverters and three lamp drivers. Three input signals from connector JO1 are used by the circuit. Two of these signals, continuity in error (J01-184) and functional in error (J01-112) are inverted. The inverted signals are used as one of the two inputs to their respective lamp drivers. The third input signal, data bit (J01-35), is not inverted but is sent directly to a lamp driver as one of its two inputs. The other input to these three lamp drivers is controlled by the DATA/FUNCTIONAL/CONT switch. This switch shorts two of its three terminals to ground. The third terminal is allowed to float, and therefore applies a pull-up voltage to the appropriate lamp driver input. This pull-up voltage is felt as a logic high by the lamp driver. Since the two pull-ups associated with the other two switch terminals are shorted to ground, a logic low is felt on the input to the applicable lamp drivers. The output of the three lamp drivers are ORed together and tied to an indicator. To light the indicator, any of the three lamp driver outputs must be a logic low. To accomplish this, the lamp driver receiving a logic high signal from the DATA/FUNCTIONAL/CONT switch must also receive a logic high on its other input terminal (from J01).

The circuit board also contains a quad 2-input NAND circuit which functions as a flip-flop. The flip-flop is controlled by the action of SCP switch S05 (step clock pulse) and is a set-reset device. The output of the flip-flop is routed out of the MTS test aid through J01-108.

SS toggle switch S03 (stop on error) provides a ground to J01-107 when in the up position. BCP toggle switch S04 (single step clock pulse) provides a ground to J01-109 when in the up position.

CHAPTER 5

GENERAL SUPPORT MAINTENANCE INSTRUCTIONS

Section I. INTRODUCTION

5-1. General. Maintenance of the MTS test aid is performed at three levels: Organizational, General Support, and Depot. This chapter provides instructions for general support maintenance. The maintenance instructions include troubleshooting, repair and functional test procedure. A schematic diagram is contained in figure FO-2 and wire lists are provided in Section VI to aid maintenance personnel during functional testing and troubleshooting.

5-2. Scope. General support maintenance consists of fault isolation and detailed troubleshooting of electrical and mechanical items and their removal and repair. Included in general support maintenance are wire lists and performance verification procedures for the proper functioning of the MTS test aid.

Section II. TOOLS AND EQUIPMENT

5-3. Tools and Test Equipment. Tools and test equipment required to perform the maintenance procedures given in this chapter are listed in the Maintenance Allocation Chart (MAC) in Appendix B of TM 11-7010-201-12.

5-4. Repair Parts. Repair parts authorized for use by general support maintenance personnel for the MTS test aid are listed in the Repair Parts and Special Tools List (RPSTL),. TM 11-7010-201-40P.

Section III. TROUBLESHOOTING

5-5. Introduction. This section provides the fault isolation and detailed troubleshooting procedures required to identify and correct a malfunction in the MTS Test Aid.

5-6. Troubleshooting Procedures. Troubleshooting procedures are contained in table 5-1. The troubleshooting procedures follow fault indications that may be observed while performing the functional test procedure given in Section V.

Table 5-1. MTS Test Aid Troubleshooting

Fault indication	Probable cause	Corrective action
Ohmmeter Checks Ohmmeter checks do not give proper resistance readings.	Open or short in wiring, or SS or BCP switch is not operating properly.	Troubleshooting, repair wiring, and/or replace appropriate switch.
Main Tests When power is applied, not all the X and Y address, TC, CK, card ID, state, and self-test indicators light.	Wiring, lamp driver IC or indicator is faulty.	Perform lamp test and replace indicator if necessary; or troubleshoot, repair *wiring,* and/or replace lamp driver IC
+ 5 ± 0.5v is not present at JO1-256 and J01-258.	Faulty wiring between red binding post and J01-256 or JO1- Binding post broken.	Troubleshoot and repair wiring. Repair/replace binding post.
+ 3.25 ± 1.75v is not present at JO1-108. When SCP switch is pressed or released, there is a bounce in the voltage.	Faulty wiring or quad two IC. Quad two IC or SCP switch is faulty.	Troubleshoot, replace wiring, and/ or replace quad two IC. Replace SCP switch or quad two IC.
All indicators on front panel do not light when LT switch is pressed. One indicator on front panel does not light when LT switch is pressed.	Faulty wiring or LT switch is not working. Faulty wiring and/or bad indicator or diode array.	Troubleshoot, repair wiring, and/or replace LT switch. Troubleshoot, repair wiring, and/or replace indicator or diode array.
All indicators on front panel do not light when DATA/FUNCTIONAL/ CONT switch SO1 is set to DATA. Any of the indicators tested by the procedure of table 5-2 do not go off.	Faulty wiring, inverter IC, lamp driver IC, switch SO1, or resistor. Faulty wiring or lamp driver IC.	Troubleshoot, repair wiring, and/or replace inverter IC, lamp driver IC, switch, or resistor. Troubleshoot, repair wiring, and/or replace lamp driver IC.
Indicators 1 through 72 do not go off when DATA/FUNCTIONAL/ CONT switch SO1 is set to FUNCTIONAL.	Faulty wiring, switch SO1, or lamp driver IC.	Troubleshoot, repair wiring, and/or replace switch SO1 or lamp driver IC.
Tested indicator does not light when inverter input is jump wired to J01-259.	Faulty wiring, inverter IC, or lamp driver IC.	Troubleshoot, repair wiring, and/or replace inverter IC or lamp driver IC.

Table 5-1. MTS Test Aid Troubleshooting - Continued

Fault indication	Probable cause	Corrective action
Indicators 1 through 72 do not go off when DATA/FUNCTIONAL/ CONT switch SO1 is set to CONT.	Faulty wiring, switch SO1, or lamp driver IC.	Troubleshoot, repair wiring, and/or replace switch SO1 or lamp driver IC.
Tested indicator does not light when inverter input is jump wired to J01-259.	Faulty wiring, inverter IC, or lamp driver IC.	Troubleshoot, repair wiring, and/or replace inverter IC or lamp driver IC.

Section IV. REPAIR

5-7. Introduction. This section describes the repair instructions for the MTS test aid which consists of removal and replacement procedures for electrical and mechanical items. Repair procedures are divided into four areas: front panel repair, circuit board repair, chassis component repair, and cable assembly repair. Visual aids for the repair procedures are provided in the form of parts location diagrams. Within the repair procedures, the index number (in parentheses) of each item is included. These index numbers correspond to the index numbers on the parts location diagrams.

CAUTION

Before performing any removal or replacement procedures, ensure there are no external connections made to the MTS test aid.

5-8. Front Panel Repair. Front panel repair consists of removal and replacement procedures for the indicators, rotary switch, pushbuttons, and toggle switches. The following paragraphs describe the removal and replacement procedures for these items. Index numbers below refer to figure 5-1.

NOTE

The front panel may be removed and replaced by first removing all front panel components (paragraphs 5-9 through 5-12). With all front panel components removed, the panel may be removed by loosening and removing four screws (18) and washers (19), and loosening three knurled captive screws.

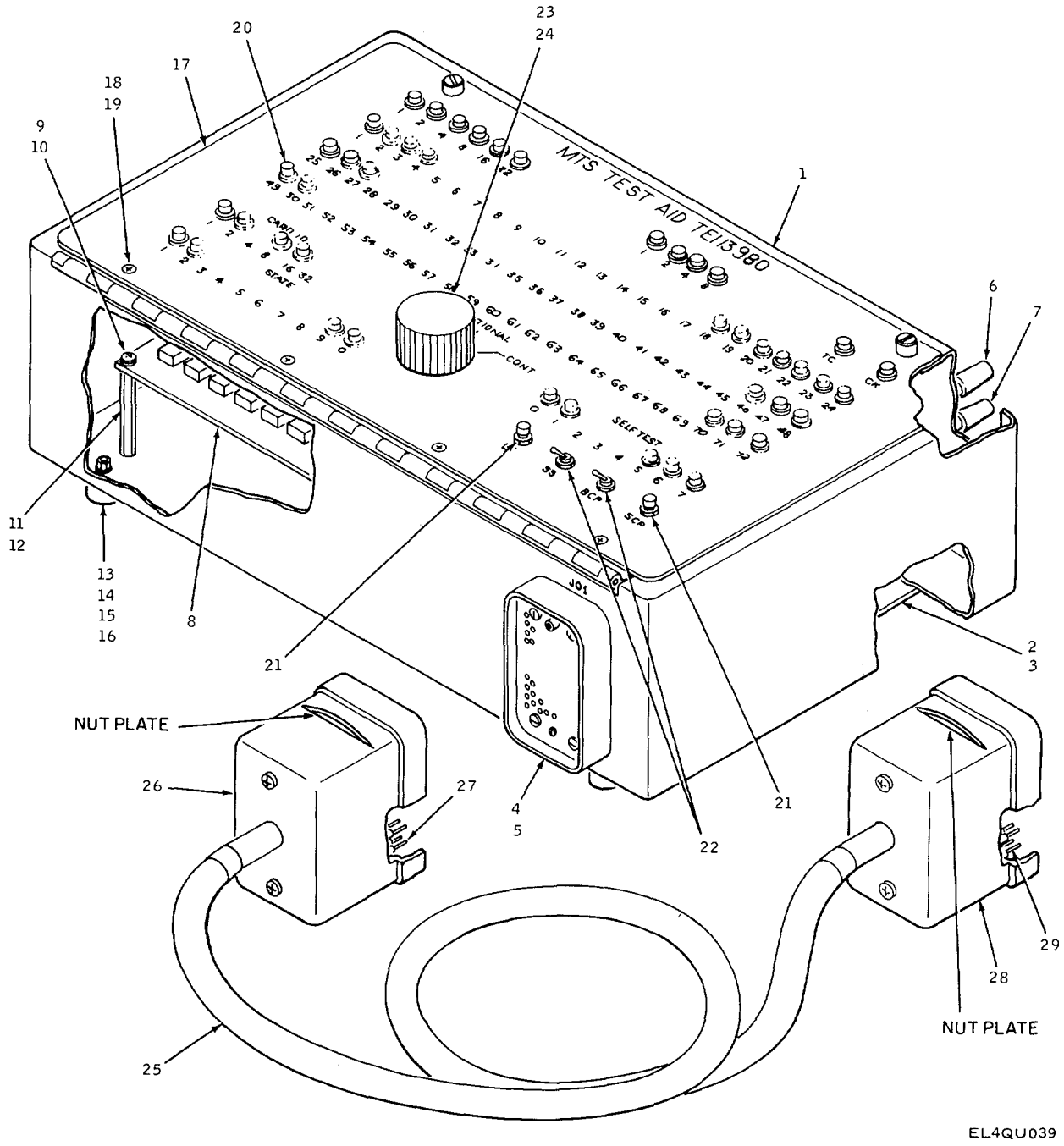


Figure 5-1. MTS Test Aid Assembly Parts Location

5-9. Indicator Removal and Replacement. (See figure 5-1.) Any of the 108 indicators (20) located on the MTS test aid front panel (17) may be removed and replaced by performing the following procedures.

a. *Removal.* Perform the following procedure to remove an indicator (20).

(1) Loosen three knurled captive screws securing front panel (17) to chassis (1); open front panel (17).

(2) Tag wires to be removed. Using unwrapping tool (Gardner-Denver Model 515666-30 or equivalent), unwrap and remove three wires from indicator (20).

(3) Remove nut and lockwasher securing indicator (20) to rear of front panel (17); remove indicator (20).

b. *Replacement.* Perform the following procedure to replace an indicator (20).

(1) Observing pin orientation, insert indicator (20) into front panel, and secure with nut and lockwasher.

NOTE

That portion of a wire termination that has been unwrapped shall not be used again. If there is sufficient unused wire, as from a service loop, the wire may be cut, re-stripped and a new wrap termination made. If not, replace the wire.

(2) Using wire wrap tool (Gardner-Denver Models 14B1, 14R, or equivalent, with bit number 507573 and sleeve number 507100 or equivalent), wrap three wires on the appropriate indicator pins as tagged.

(3) Close front panel (17) and secure to chassis (1) with three knurled captive screws.

5-10. Rotary Switch Removal and Replacement. (See figure 5-1.) Rotary switch (23) located on the MTS test aid front panel (17) may be removed and replaced by performing the following procedures.

a. *Removal*. Perform the following procedure to remove rotary switch (23).

(1) Loosen two set screws securing rotary switch knob (24) to rotary switch (23), and remove knob (24).

(2) Loosen three knurled captive screws securing front panel (17) to chassis (1), and open front panel (17).

(3) Tag, unsolder, and remove four wires attached to rotary switch (23).

(4) Remove nut and lockwasher securing rotary switch (23) to front panel (17), and remove rotary switch (23).

b. *Replacement.* Perform the following procedure to replace rotary switch (23).

(1) Install rotary switch (23) in front panel (17) and secure with nut and lockwasher. Ensure rotary switch guide pin fits in front panel hole.

(2) Install and solder four wires as tagged.

(3) Close front panel (17) and secure to chassis (1) with three knurled captive screws.

(4) Install knob (24) on rotary switch (23), and secure with two set screws.

5-11. Pushbutton Switch Removal and Replacement. (See figure 5-1.) Either pushbutton switch (21) located on the MTS test aid front panel (17), may be removed and replaced by performing the following procedures.

a. *Removal*. Perform the following procedure to remove either of two pushbutton switches (21).

(1) Loosen three knurled captive screws securing front panel (17) to chassis (1) and open front panel (17).

(2) Tag, unsolder, and remove wires attached to pushbutton switch (21).

(3) Remove nut securing pushbutton switch (21) to front panel (17) and remove pushbutton switch (21).

b. *Replacement*. Perform the following procedure to replace either of the two pushbutton switches (21).

(1) Install pushbutton switch (21) and lockwasher in front panel (17), and secure with nut.

(2) Install and solder wires as tagged.

(3) Close front panel (17) and secure to chassis (1) with three knurled captive screws.

5-12. Toggle Switch Removal and Replacement. (See figure 5-1.) Either toggle switch (22) located on the MTS test aid front panel (17) may be removed and replaced by performing the following procedure.

a. *Removal*. Perform the following procedure to remove either of two toggle switches (22).

(1) Loosen three knurled captive screws securing front panel (17) to chassis (1) and open front panel (17).

(2) Tag, unsolder, and remove two wires attached to toggle switch (22).

(3) Remove nut securing toggle switch (22) to front panel (17) and remove toggle switch (22).

b. *Replacement.* Perform the following procedure to replace either of two toggle switches (22).

(1) Install toggle switch (22) and lockwasher in front panel (17), and secure with nut.

(2) Install and solder two wires as tagged.

(3) Close front panel (17) and secure to chassis (1) with three knurled captive screws.

5-13. Circuit Board Repair. Circuit board repair consists of removal and replacement procedures for the circuit board and components installed on the board. The components covered are integrated circuits and the resistor adapter plug. The following paragraphs describe the removal and replacement procedures for these items. Index numbers below refer to figure 5-1, and figure 5-2.

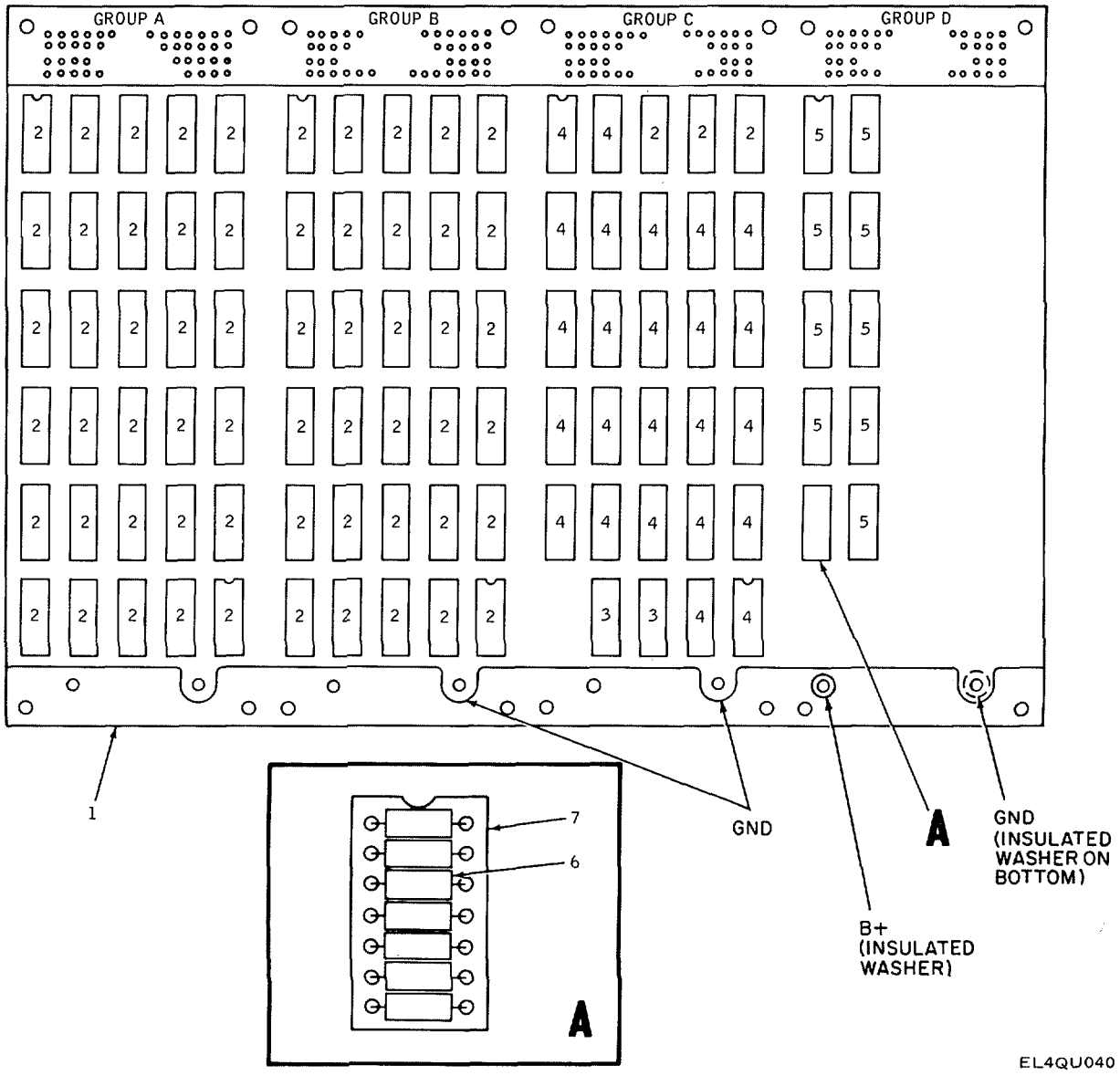


Figure 5-2. Circuit Board Assembly Parts Location

5-14. Circuit Board Removal and Replacement. (See figure 5-1.) The circuit board (8) may be removed and replaced by performing the following procedures.

a. *Removal*. Perform the following procedure to remove the circuit board (8).

(1) Remove six screws (3) securing access cover (2) to chassis (1) and remove access cover (2).

NOTE

Some external wiring connections to pins of circuit board (8) are terminated by connectors or wire wrap. The connectors slide off the circuit board pins and do not require a special removal tool. Wire wrap connections must be unwrapped using Gardner/Denver unwrapping tool model 515665-26 or equivalent.

(2) Tag and remove connecting wires from circuit board (8).

(3) Loosen three knurled captive screws securing front panel (17) to chassis (1) and open front panel (17).

(4) Tag, unsolder, and remove wires from VCC lug and three ground lugs on circuit board (8).

(5) Loosen and remove four screws (9) and washers (10) securing circuit board (8) to top of hexagonal spacers (11).

(6) Remove circuit board (8).

b. *Replacement.* Perform the following procedure to replace the circuit board (8).

(1) Install circuit board (8) to top of hexagonal spacers (11), and secure with four screws (9) and washers (10).

(2) Install and solder wires to VCC lug and three ground lugs, as tagged, on circuit board (8).

NOTE

Installation of wire wrap connectors does not require a special tool. Wire wrap connections must be wrapped using Gardner-Denver wire wrap tool models 14B1 or 14R, or equivalent, with bit number 506445 and sleeve number 507100 or equivalent. That portion of a wire that has been unwrapped shall not be used again. If there is sufficient unused wire, as from a service loop, the wire may be cut, restripped, and a new wrap termination made. If necessary, replace wire.

(3) Install wires, as tagged, to circuit board (8).

(4) Close front panel (17), and secure to chassis (1) with three knurled captive screws.

(5) Install access cover (2) on chassis (1), and secure with six screws (3).

5-15. Integrated Circuit Removal and Replacement. (See figure 5-2.) Any of the 63 lamp drivers (2), two quad two's (3), 24 hex inverters (4), or nine diode arrays (5) may be removed and replaced by performing the following procedures.

a. *Removal*. Perform the following procedure to remove any of the integrated circuits (2, 3, 4 and 5).

CAUTION

Ensure that power is removed from the MTS test aid before removing integrated circuits.

(1) Loosen three knurled captive screws securing front panel (17, figure 5-1) to chassis and open front panel.

(2) Using Augat IC extraction tool T114-1 or equivalent, remove appropriate integrated circuit (2, 3, 4, or 5), from circuit board (1).

b. *Replacement*. Perform the following procedure to replace any of the integrated circuits (2, 3, 4, and 5, figure 5-2).

(1) Using Augat IC insertion tool T8136-2 or equivalent, insert integrated circuit (2, 3, 4, or 5, figure 5-2) into circuit board (7, figure 5-2) ensuring proper integrated circuit orientation.

(2) Close front panel (17, figure 5-1), and secure with three knurled captive screws.

5-16. Resistor Adapter Plug Removal and Replacement. The resistor adapter plug (7, figure 5-2) may be removed and replaced by performing the following procedures.

a. *Removal.* Perform the following procedure to remove the resistor adapter plug (7).

CAUTION

Ensure that power is removed from the MTS test aid before removing the resistor adapter plug.

(1) Loosen three knurled captive screws securing front panel (17, figure 5-1) to chassis (1) and open front panel (17).

(2) Using Augat IC extraction tool T114-1 or equivalent, remove resistor adapter plug (7).

NOTE

If it is necessary to remove a resistor (6) from resistor adapter plug (7), the resistor must be unsoldered.

b. *Replacement.* Perform the following procedure to replace the resistor adapter plug (7).

(1) Using Augat IC insertion tool T8136-2 or equivalent, insert adapter plug (7) into circuit board (1).

NOTE

If it is necessary to replace a resistor (6) in resistor adapter plug (7), the resistor (6) must be soldered to adapter plug (7).

(2) Close front panel (17, figure 5-1), and secure with three knurled captive screws.

5-17. Chassis Component Repair. Chassis component repair consists of removal and replacement procedures for all chassis-mounted components. The components covered are the binding posts, connector receptacle pins, connector receptacle, hexagonal spacers, and rubber bumpers. The following paragraphs describe the removal and replacement procedures for these items. Index numbers below refer to figure 5-1.

5-18. Binding Post Removal and Replacement. (See figure 5-1.) Either of two binding posts (6, 7) may be removed and replaced by performing the following procedures.

a. *Removal*. Perform the following procedure to remove either of the binding posts (6, 7).

(1) Loosen three knurled captive screws securing front panel (17) to chassis (1), and open front panel (17).

(2) Tag, unsolder, and remove two wires from appropriate binding post (6, 7).

(3) Remove nut securing binding post (6, 7) to chassis, and remove binding posts.

b. *Replacement.* Perform the following procedure to replace either of the binding posts (6, 7).

(1) Install binding post (6, 7) into chassis (1), and secure with nut.

(2) Install and solder two wires as tagged.

(3) Close front panel (17), and secure with three knurled captive screws.

5-19. Connector Receptacle Pin Removal and Replacement. (See figure 5-1.) The connector receptacle pins (5) may be removed and replaced by performing the following procedures.

a. *Removal.* Perform the following procedure to remove any of the connector receptacle pins (5).

NOTE

Insert extraction tool from mating side of connector receptacle. While inserting extraction tool, rotate it in a circular pattern.

(1) Insert extraction tool (Winchester No. 107-1012 or equivalent) into the appropriate connector pin (5) cavity.

(2) Remove connector pin (5) and attached wire from the wire side of connector receptacle (4).

NOTE

If it is necessary to remove wire from connector pin (5), cut off wire as close to pin end as possible.

b. *Replacement.* Perform the following procedure to replace any or all of the connector receptacle pins (5).

NOTE

If old connector pin has been removed, strip just enough insulation from wire to allow it to bottom out in the connector pin barrel. Insert wire into connector pin barrel until it bottoms out. Using crimp tool (Daniels AFM8, M22520/2-01 or equivalent) and positioner (Daniels K1-6-8SM or equivalent), insert pin (5) and wire into crimp tool until it bottoms out in the well of crimp tool. Squeeze handles of crimp tool until completely closed to crimp wire and pin (5).

(1) From wire side of connector receptacle, insert wire and pin (5) into appropriate connector receptacle cavity, using insertion tool (Winchester No. 107-1011 or equivalent).

NOTE

Ensure that connector pin (5) is fully seated into connector receptacle (4).

(2) Close front panel (17), and secure with three knurled captive screws.

5-20. Connector Receptacle Removal and Replacement. (See figure 5-1.) Connector receptacle (4) may be removed and replaced by performing the following procedures.

a. *Removal.* Perform the following procedure to remove connector receptacle (4).

(1) Perform connector receptacle pin (5) removal procedure (para 5-17) for each of the connector pins (5).

(2) Remove four self-locking nuts and screws from connector receptacle (4) and remove receptacle.

b. *Replacement.* Perform the following procedure to replace connector receptacle (4).

(1) Perform connector receptacle pin (5) replacement procedure (para 5-17) for each of the connector pins.

(2) Install connector receptacle (4) into chassis (1), and secure with four self-locking nuts and screws.

(3) Close front panel (17), and secure with three knurled captive screws.

5-21. Hexagonal Spacer Removal and Replacement. (See figure 5-1.) Any of the four hexagonal spacers (11) may be removed and replaced by performing the following procedures.

a. *Removal*. Perform the following procedure to remove a hexagonal spacer (11).

(1) Loosen three knurled captive screws securing front panel (17) to chassis (1), and open front panel (17).

(2) Loosen and remove six screws (3) securing access cover (2) to bottom of chassis (1) and remove access cover (2).

(3) Loosen and remove screws (9) and washer (10) securing circuit board (8) to top of appropriate hexagonal spacer (11).

(4) Loosen and remove flat-head screw (12) securing appropriate hexagonal spacer (11) to chassis (1) and remove spacer.

b. *Replacement.* Perform the following procedure to replace a hexagonal spacer (11).

(1) Using flat-head screw (12), secure hexagonal spacer to chassis (1).

(2) Secure circuit board (8) to top of appropriate hexagonal spacer (11), and secure with screw (9) and washer (10).

(3) Install and secure access cover (2) to bottom of chassis (1) with six screws (3).

(4) Close front panel (17), and secure with three knurled captive screws.

5-22. Rubber Bumper Removal and Replacement. (See figure 5-1.) Any of the four rubber bumpers (13) may be removed and replaced by performing the following procedures.

a. *Removal*. Perform the following procedure to remove a rubber bumper (13).

(1) Loosen three knurled captive screws securing front panel (17) to chassis (1), and open front panel (17).

(2) Loosen and remove screw (14), washer (15) and nut (16) securing rubber bumper (13) to chassis (1), and remove rubber bumper.

b. *Replacement.* Perform the following procedure to replace a rubber bumper (13).

(1) Install rubber bumper (13), and secure to chassis (1) with screw (14), washer (15) and nut (16).

(2) Close front panel (17), and secure with three knurled captive screws.

5-23. Cable Assembly Repair. Cable assembly repair consists of removal and replacement procedures for the connector plug electrical contact pins and sockets, and the connector plugs themselves. The following paragraphs

describe the removal and replacement procedures for these items. Index numbers below refer to figure 5-1.

5-24. Connector Plug Electrical Contact Pin and Socket Removal and Replacement. (See figure 5-1.) The connector plug electrical contact pins (29) and sockets (27) may be removed from cable assembly (25) and replaced by performing the following procedures.

a. *Removal*. Perform the following procedure to remove any of the pins (29) or sockets (27) from either connector plug (26 or 28).

(1) Loosen and remove four screws and two nut plates securing appropriate connector plug (26 or 28) to metal shell and hood. Also remove pins from two knurled knobs, and remove knobs from locking screw shafts.

(2) Loosen two screws of cable clamp.

(3) Slide metal shell and hood up cable (25) away from connector plug (26 or 28).

NOTE

Insert extractor tool from mating side of connector plug. While inserting extraction tool, rotate it in a circular pattern.

(4) Insert extraction tool (Winchester No. 107-1012 or equivalent) into appropriate pin (29) or socket (27) cavity.

(5) Remove pin (29) or socket (27) and attached wire from cable side of connector plug (26 or 28).

(6) To disconnect pin (29) or socket (27) from its wire, cut off wire as close to pin (29) or socket (27) as possible.

b. *Replacement*. Perform the following procedure to replace any of the connector plug electrical contact pins (29) or sockets (27).

NOTE

If old pin (29) or socket (27) has been removed, strip just enough insulation from wire to allow it to bottom out in barrel of pin (29) or socket (27). Insert wire into barrel of pin (29) or socket (27) until it bottoms out. Using crimp tool (Daniels AFM8, M22520/2-01 or equivalent) and positioner (Daniels K1-6-8SM or equivalent), insert pin (29) or socket (27) into crimp tool until it bottoms out in well of crimp tool. Squeeze handles of crimp tool until completely closed to crimp wire and pin (29) or socket (27).

(1) From wiring side of the connector plug (26 or 28), insert wire and pin (29) or socket (27) into appropriate connector plug (26 or 28) cavity, using insertion tool (Winchester No. 107-1011 or equivalent).

NOTE

Ensure that wire and pin (29) or socket (27) is fully seated into connector plug (26 or 28).

(2) Slide metal shell and hood down cable (25) until it mates with connector plug (26 or 28).

(3) Secure metal shell and hood to connector plug (26 or 28) with four screws and two nut plates.

(4) Insert two locking screw shafts into connector, and install knurled knobs using pins removed in paragraph 5-24a, step (1).

(5) Tighten two screws of cable clamp until wires are held securely.

5-25. Connector Plug Removal and Replacement. Either connector plug (26 or 28) may be removed and replaced by following the connector plug electrical contact pin (29) and socket (27) removal and replacement procedures (paragraphs 5-24a and 5-24b) for all connector plug electrical contact pins (29) or sockets (27) of appropriate connector plug (26 or 28).

Section V. PERFORMANCE VERIFICATION

5-26. Introduction. The procedure outlined in this section should be followed to ensure that the MTS test aid is functioning properly.

5-27. Functional Test Procedure. The functional test procedure includes required test equipment, initial conditions, ohmmeter checks, and main test.

a. *Required Test Equipment.*

(1) Oscilloscope OS-261/U (NSN 6625-00-127-0079)

(2) Power Supply HP 6268B (NSN 6130-00-249-2748) or equivalent: 5v at 5amps.

(3) Digital Voltmeter AN/USM-451 (NSN 6625-00-168-0585) or equivalent.

NOTE

The HP 6268B power supply requires an operating voltage of 115v + 10%, 60 Hz, single phase.

b. *Initial Conditions.*

(1) Turn DATA/FUNCTIONAL/CONT switch to FUNCTIONAL.

(2) Set SS switch to up position.

(3) Set BCP switch to up position.

(4) Turn power supply on.

(5) Adjust power supply to + 5.50 $\pm$ 0.25v (no-load condition).

(6) Turn power supply off.

(7) Connect power supply to MTS test aid binding posts (CAL + 5V and GND).

c. *Ohmmeter Checks.*

(1) Measure resistance between J01-107 and GND (black binding post); resistance should be less than one ohm.

(2) Set SS switch to down position.

(3) Measure resistance between J01-107 and GND; an open reading should be indicated.

(4) Measure resistance between J0J-109 and GND; resistance should be less than one ohm.

(5) Set BCP switch to down position.

(6) Measure resistance between J0J-109 and GND; an open reading should be indicated.

(7) Measure resistance between J01-257 and GND; resistance should be less than one ohm.

(8) Measure resistance between J01-259 and GND; resistance should be less than one ohm.

d. *Main Test.*

(1) Turn power supply on and check that Y ADDRESS, X ADDRESS, TC, CK, SELF TEST, CARD ID, and STATE indicators light.

NOTE

Use GND binding post as ground reference for the following steps.

(2) Measure voltage at J01-256; voltage should be + 5 ± 0.5v.

(3) Measure voltage at J01-258; voltage should be + 5 ± 0.5v.

(4) Using oscilloscope, measure voltage at J01-108 for + 3.25 ± 1.75v. Press and hold SCP switch and check that J01-108 goes to 0 ± 0.5v without any bounce. Release SCP switch and check that J01-108 goes back to + 3.25 ± 1.75v without any bounce.

(5) Press LT switch and check that all front panel indicators light.

(6) Turn DATA/FUNCTIONAL/CONT switch to DATA.

(7) Check that all front panel indicators light.

(8) Perform the following test for each pin listed in table 5-2:

(a) Jumper J01-259 to J01-1, and check that all indicators except STATE 1 light.

(b) Press LT switch and check that STATE 1 indicator lights.

(9) Turn DATA/FUNCTIONAL/CONT switch to FUNCTIONAL.

(10) Check that indicators 1 through 72 do not light and all other indicators light.

(11) Perform the tests shown in table 5-3 for each pin listed.

(12) Turn DATA/FUNCTIONAL/CONT switch to OFF.

(13) Check that indicators 1 through 72 do not light and all other indicators light.

(14) Perform the tests shown in table 5-4 for each pin listed.

(15) Turn off power supply.

(16) Disconnect power supply from MTS test aid.

Table 5-2. DATA Tests

Jumper pin 259 to pin	All indicators light except	Jumper pin 259 to pin	All indicators light except
1	STATE 1	32	SELF TEST 5
2	STATE 2	33	SELF TEST 6
3	STATE 3	34	SELF TEST 7
4	STATE 4	35	1
5	STATE 5	36	2
6	STATE 6	37	3
7	STATE 7	38	4
8	STATE 8	39	5
9	STATE 9	40	6
10	STATE 0	41	7
11	X ADDRESS 1	42	8
12	X ADDRESS 2	43	9
13	X ADDRESS 4	44	10
14	X ADDRESS 8	45	11
15	CARD ID 1	46	12
16	CARD ID 2	47	13
17	CARD ID 4	48	14
18	CARD ID 8	49	15
19	CARD ID 16	50	16
20	CARD ID 32	51	17
21	Y ADDRESS 1	52	18
22	Y ADDRESS 2	53	19
23	Y ADDRESS 4	54	20
24	Y ADDRESS 8	55	21
25	Y ADDRESS 16	56	22
26	Y ADDRESS 32	57	23
27	SELF TEST 0	58	24
28	SELF TEST 1	59	25
29	SELF TEST 2	60	26
30	SELF TEST 3	61	27
31	SELF TEST 4	62	28

Table 5-2. DATA Tests - Continued

Jumper pin 259 to pin	All indicators light except	Jumper pin 259 to pin	All indicators light except
63	29	86	52
64	30	87	53
65	31	88	54
66	32	89	55
67	33	90	56
68	34	91	57
69	35	92	58
70	36	93	59
71	37	94	60
72	38	95	61
73	39	96	62
74	40	97	63
75	41	98	64
76	42	99	65
77	43	100	66
78	44	101	67
79	45	102	68
80	46	103	69
81	47	104	70
82	48	105	71
83	49	106	72
84	50	110	TC
85	51	1111	CK

Table 5-3. FUNCTIONAL Tests

Jumper pin 259 to pin	Lights indicator	Jumper pin 259 to pin	Lights indicator
112	1	143	32
113	2	144	33
114	3	145	34
115	4	146	35
116	5	147	36
117	6	148	37
118	7	149	38
119	8	150	39
120	9	151	40
121	10	152	41
122	11	153	42
123	12	154	43
124	13	155	44
125	14	156	45
126	15	157	46
127	16	158	47
128	17	159	48
129	18	160	49
130	19	161	50
131	20	162	51
132	21	163	52
133	22	164	53
134	23	165	54
135	24	166	55
136	25	167	56
137	26	168	57
138	27	169	58
139	28	170	59
140	29	171	60
141	30	172	61
142	31	173	62

Table 5-3. FUNCTIONAL Tests - Continued

Jumper pin 259 to pin	Lights indicator	Jumper pin 259 to pin	Lights indicator
174	63	179	68
175	64	180	69
176	65	181	70
177	66	182	71
178	67	183	72

Table 5-4. CONT Tests

Jumper pin 259 to pin	Lights Indicator	Jumper pin 259 to pin	Lights indicator
184	1	215	32
185	2	216	33
186	3	217	34
187	4	218	35
188	5	219	36
189	6	220	37
190	7	221	38
191	8	222	39
192	9	223	40
193	10	224	41
194	11	225	42
195	12	226	43
196	13	227	44
197	14	228	45
198	15	229	46
199	16	230	47
200	17	231	48
201	18	232	49
202	19	233	50
203	20	234	51
204	21	235	52
205	22	236	53
206	23	237	54
207	24	238	55
208	25	239	56
209	26	240	57
210	27	241	58
211	28	242	59
212	29	243	60
213	30	244	61
214	31	245	62

Table 5-4. CONT Tests - Continued

Jumper pin 259 to pin	Lights indicator	Jumper pin 259 to pin	Lights indicator
246	63	251	68
247	64	252	69
248	65	253	70
249	66	254	71
250	67	255	72

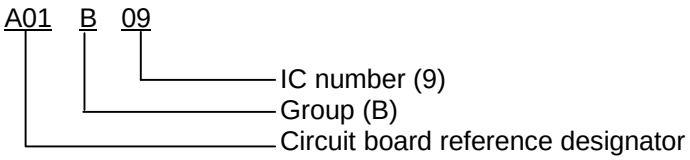
Section VI. WIRE LISTS

5-28. Introduction. This section contains wire lists for the MTS test aid. Two wire lists are provided; the MTS test aid assembly wire list and the MTS test aid circuit board assembly wire list. The MTS test aid assembly wire list (table 5-5) contains interconnecting wiring data between the connector, front panel (figure 5-3), and circuit board assembly, and is arranged in the order of connector and pin number sequence. The MTS test aid circuit board assembly wire list (table 5-6) contains pin-to-pin wiring for the circuit board assembly, and is arranged in the order of signal designations which are given in alphanumeric sequence. Wire list entries are explained in paragraph 5-29.

5-29. Wire List Column Identification. Entries for each column of the wire lists are explained in the following paragraphs.

a. *PREFIX*. Not used.

b. *CONNECTOR*. Any type of terminating point, plug, receptacle, or component. Entries in table 5-6 indicate the integrated circuit on the circuit board assembly. For example,



c. *PIN*. Exact terminating point of the respective connector.

d. *SH-FIG*. Not used.

e. *WIRE MULTIGROUP.* Not used.

f. *WIRE CODE*. Three-digit code for wire type and gauge.

g. *WIRE COLOR.* Standard RETMA color code.

h. *WIRE IDENT.* Not used.

i. *SLEEVE.* Not used.

j. *SPC INST*. Not used.

k. *SIGNAL*. Alphanumeric signal name or mnemonic which identifies each specific function.

l. *STRING SEQ. NO*. Not used.

m. *SIGNAL DESCRIPTION.* Description or name of a signal voltage.

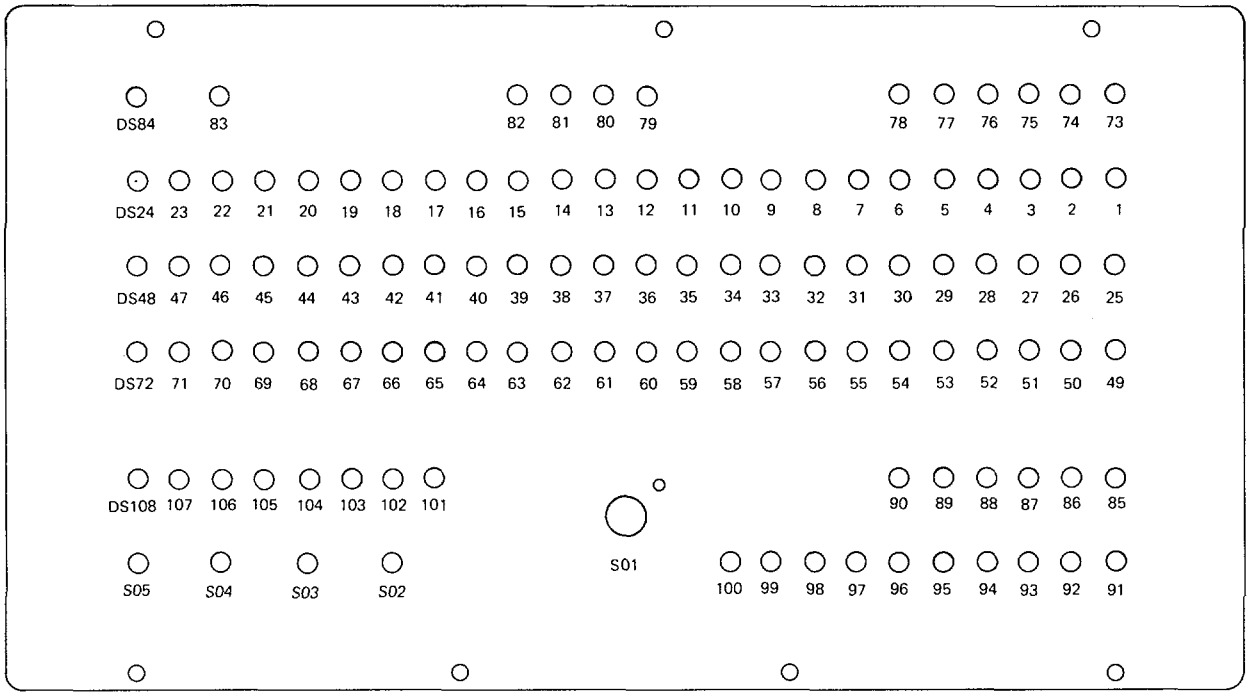


Figure 5-3. MTS Test Aid Front Panel Rear View

Table 5-5. MTS Test Aid Assembly Wire List

FROM				TO				WIRE								
PREFIX	CONNECTOR	PIN	SH FIG	PREFIX	CONNECTOR	PIN	SH FIG	MULTI GROUP	CODE	COLOR	IDENT	SLEEVE	SPC	INST	SIGNAL	STRING SEQ. NO.	SIGNAL DESCRIPTION
	J01	001			B28	08			14E	7					HBST10V		STATE 1 INPUTS
	J01	002			B28	12			14E	7					HBST20V		STATE 2 INPUTS
	J01	003			B29	01			14E	7					HBST30V		STATE 3 INPUTS
	J01	004			B29	05			14E	7					HBST40V		STATE 4 INPUTS
	J01	005			B29	08			14E	7					HBST50V		STATE 5 INPUTS
	J01	006			B29	12			14E	7					HBST60V		STATE 6 INPUTS
	J01	007			B30	01			14E	7					HBST70V		STATE 7 INPUTS
	J01	008			B30	05			14E	7					HBST80V		STATE 8 INPUTS
	J01	009			B30	08			14E	7					HBST90V		STATE 9 INPUTS
	J01	010			B30	12			14E	7					HBST00V		STATE 10 INPUTS
	J01	011			C02	08			14E	7					HBKB11V1		XADR-1 INPUTS
	J01	012			C02	12			14E	7					HBKB12V1		XADR-2 INPUTS
	J01	013			C03	01			14E	7					HBKB13V1		XADR-4 INPUTS
	J01	014			C03	05			14E	7					HBKB14V1		XADR-8 INPUTS
	J01	015			B27	01			14E	7					HAHA00V		ID-1 INPUTS
	J01	016			B27	05			14E	7					HAHA10V		ID-2 INPUTS
	J01	017			B27	08			14E	7					HAHA20V		ID-4 INPUTS
	J01	018			B27	12			14E	7					HAHA30V		ID-8 INPUTS
	J01	019			B28	01			14E	7					HAHA40V		ID-16 INPUTS
	J01	020			B28	05			14E	7					HAHA50V		ID-32 INPUTS
	J01	021			C01	01			14E	7					HBYA10V		YADR-1 INPUTS
	J01	022			C01	05			14E	7					HBYA20V		YADR-2 INPUTS
	J01	023			C01	08			14E	7					HBYA30V		YADR-4 INPUTS
	J01	024			C01	12			14E	7					HBYA40V		YADR-8 INPUTS
	J01	025			C02	01			14E	7					HBYA50V		YADR-16 INPUTS
	J01	026			C02	05			14E	7					HBYA60V		YADR-32 INPUTS
	J01	027			B25	01			14E	7					HBT190E		SELF TEST B0 INPUT
	J01	028			B25	05			14E	7					HBT191E		SELF TEST B1 INPUT
	J01	029			B25	08			14E	7					HBT192E		SELF TEST B2 INPUT
	J01	030			B25	12			14E	7					HBT193E		SELF TEST B3 INPUT
	J01	031			B26	01			14E	7					HBT200E		SELF TEST B4 INPUT
	J01	032			B26	05			14E	7					HBT201E		SELF TEST B5 INPUT
	J01	033			B26	08			14E	7					HBT202E		SELF TEST B6 INPUT
	J01	034			B26	12			14E	7					HBT203E		SELF TEST B7 INPUT
	J01	035			A01	01			14E	7					HADAAO		INPUT FROM MTS 1
	J01	036			A01	05			14E	7					HADABO		INPUT FROM MTS 2
	J01	037			A01	08			14E	7					HADACO		INPUT FROM MTS 3
	J01	038			A01	12			14E	7					HADADO		INPUT FROM MTS 4
	J01	039			A02	01			14E	7					HADAEO		INPUT FROM MTS 5
	J01	040			A02	05			14E	7					HADAFO		INPUT FROM MTS 6
	J01	041			A02	08			14E	7					HADAGO		INPUT FROM MTS 7
	J01	042			A02	12			14E	7					HADAHO		INPUT FROM MTS 8
	J01	043			A03	01			14E	7					HADAIO		INPUT FROM MTS 9
	J01	044			A03	05			14E	7					HADAJO		INPUT FROM MTS 10
	J01	045			A03	08			14E	7					HADAKO		INPUT FROM MTS 11
	J01	046			A03	12			14E	7					HADALO		INPUT FROM MTS 12
	J01	047			A04	01			14E	7					HADAMO		INPUT FROM MTS 13
	J01	048			A04	05			14E	7					HADANO		INPUT FROM MTS 14
	J01	049			A04	08			14E	7					HADAPO		INPUT FROM MTS 15
	J01	050			A04	12			14E	7					HADAQO		INPUT FROM MTS 16
	J01	051			A05	01			14E	7					HADARO		INPUT FROM MTS 17
	J01	052			A05	05			14E	7					HADASO		INPUT FROM MTS 18
	J01	053			A05	08			14E	7					HADATO		INPUT FROM MTS 19
	J01	054			A05	12			14E	7					HADAUO		INPUT FROM MTS 20
	J01	055			A06	01			14E	7					HADBAO		INPUT FROM MTS 21
	J01	056			A06	05			14E	7					HADBBO		INPUT FROM MTS 22
	J01	057			A06	08			14E	7					HADBCO		INPUT FROM MTS 23
	J01	058			A06	12			14E	7					HADBDO		INPUT FROM MTS 24
	J01	059			A07	01			14E	7					HADBEO		INPUT FROM MTS 25
	J01	060			A07	05			14E	7					HADBFO		INPUT FROM MTS 26
	J01	061			A07	08			14E	7					HADBGO		INPUT FROM MTS 27
	J01	062			A07	12			14E	7					HADBHO		INPUT FROM MTS 28
	J01	063			A08	01			14E	7					HADBIO		INPUT FROM MTS 29

Table 5-5. MTS Test Aid Assembly Wire List - Continued

FROM				TO				WIRE				SLEEVE	SPC	INST	SIGNAL	STRING SEQ. NO.	SIGNAL DESCRIPTION
PREFIX	CONNECTOR	PIN	SH FIG	PREFIX	CONNECTOR	PIN	SH FIG	MULTI GROUP	CODE	COLOR	IDENT						
	J01	064			A08	05			14E	7					HADBJO		INPUT FROM MTS 30
	J01	065			A08	08			14E	7					HADBKO		INPUT FROM MTS 31
	J01	066			A08	12			14E	7					HADBLO		INPUT FROM MTS 32
	J01	067			A09	01			14E	7					HADBMO		INPUT FROM MTS 33
	J01	068			A09	05			14E	7					HADBNO		INPUT FROM MTS 34
	J01	069			A09	08			14E	7					HADBPO		INPUT FROM MTS 35
	J01	070			A09	12			14E	7					HADBQO		INPUT FROM MTS 36
	J01	071			A10	01			14E	7					HADBRO		INPUT FROM MTS 37
	J01	072			A10	05			14E	7					HADBSO		INPUT FROM MTS 38
	J01	073			A10	08			14E	7					HADBTO		INPUT FROM MTS 39
	J01	074			A10	12			14E	7					HADBUO		INPUT FROM MTS 40
	J01	075			A11	01			14E	7					HADBVO		INPUT FROM MTS 41
	J01	076			A11	05			14E	7					HADBWO		INPUT FROM MTS 42
	J01	077			A11	08			14E	7					HADCAO		INPUT FROM MTS 43
	J01	078			A11	12			14E	7					HADCBO		INPUT FROM MTS 44
	J01	079			A12	01			14E	7					HADCCO		INPUT FROM MTS 45
	J01	080			A12	05			14E	7					HADCDO		INPUT FROM MTS 46
	J01	081			A12	08			14E	7					HADCEO		INPUT FROM MTS 47
	J01	082			A12	12			14E	7					HADCFO		INPUT FROM MTS 48
	J01	083			A13	01			14E	7					HADCGO		INPUT FROM MTS 49
	J01	084			A13	05			14E	7					HADCHO		INPUT FROM MTS 50
	J01	085			A13	08			14E	7					HADCIO		INPUT FROM MTS 51
	J01	086			A13	12			14E	7					HADCJO		INPUT FROM MTS 52
	J01	087			A14	01			14E	7					HADCKO		INPUT FROM MTS 53
	J01	088			A14	05			14E	7					HADCLO		INPUT FROM MTS 54
	J01	089			A14	08			14E	7					HADCMO		INPUT FROM MTS 55
	J01	090			A14	12			14E	7					HADCNO		INPUT FROM MTS 56
	J01	091			A15	01			14E	7					HADCPO		INPUT FROM MTS 57
	J01	092			A15	05			14E	7					HADCQO		INPUT FROM MTS 58
	J01	093			A15	08			14E	7					HADCRO		INPUT FROM MTS 59
	J01	094			A15	12			14E	7					HADCSO		INPUT FROM MTS 60
	J01	095			A16	01			14E	7					HADCTO		INPUT FROM MTS 61
	J01	096			A16	05			14E	7					HADCUO		INPUT FROM MTS 62
	J01	097			A16	08			14E	7					HADCVO		INPUT FROM MTS 63
	J01	098			A16	12			14E	7					HADCWO		INPUT FROM MTS 64
	J01	099			A17	01			14E	7					HADCXO		INPUT FROM MTS 65
	J01	100			A17	05			14E	7					HADCYO		INPUT FROM MTS 66
	J01	101			A17	08			14E	7					HADCZO		INPUT FROM MTS 67
	J01	102			A17	12			14E	7					HADDAO		INPUT FROM MTS 68
	J01	103			A18	01			14E	7					HADDBO		INPUT FROM MTS 69
	J01	104			A18	05			14E	7					HADDCO		INPUT FROM MTS 70
	J01	105			A18	08			14E	7					HADDDO		INPUT FROM MTS 71
	J01	106			A18	12			14E	7					HADDEO		INPUT FROM MTS 72
	J01	107			S03	ON (UP)			14E	7					WTSSSA1		SINGLE STEP CP
	J01	108			C28	05			14E	7					WTSSCA1		STEP CP
	J01	109			S04	ON (UP)			14E	7					WTSBCA1		BURST STEP CP
	J01	110			C03	08			14E	7					HBLAKOV		TEST CP REQD
	J01	111			C03	12			14E	7					HBLAFO		OK TO CK FOR ER
	J01	112			C04	14			14E	7					HCF01A		FUNCTIONAL IN ERROR
	J01	113			C04	03			14E	7					HCF02A		FUNCTIONAL IN ERROR
	J01	114			C04	05			14E	7					HCF03A		FUNCTIONAL IN ERROR
	J01	115			C04	08			14E	7					HCF04A		FUNCTIONAL IN ERROR
	J01	116			C04	11			14E	7					HCF05A		FUNCTIONAL IN ERROR
	J01	117			C04	12			14E	7					HCF06A		FUNCTIONAL IN ERROR
	J01	118			C05	14			14E	7					HCF07A		FUNCTIONAL IN ERROR
	J01	119			C05	03			14E	7					HCF08A		FUNCTIONAL IN ERROR
	J01	120			C05	05			14E	7					HCF09A		FUNCTIONAL IN ERROR
	J01	121			C05	08			14E	7					HCF10A		FUNCTIONAL IN ERROR
	J01	122			C05	11			14E	7					HCF11A		FUNCTIONAL IN ERROR
	J01	123			C05	12			14E	7					HCF12A		FUNCTIONAL IN ERROR
	J01	124			C06	14			14E	7					HCF13A		FUNCTIONAL IN ERROR
	J01	125			C06	03			14E	7					HCF14A		FUNCTIONAL IN ERROR
	J01	126			C06	05			14E	7					HCF15A		FUNCTIONAL IN ERROR

Table 5-5. MTS Test Aid Assembly Wire List - Continued

FROM				TO				WIRE								
PREFIX	CONNECTOR	PIN	SH FIG	PREFIX	CONNECTOR	PIN	SH FIG	MULTI GROUP	CODE	COLOR	IDENT	SLEEVE	SPC	INST	SIGNAL	STRING SEQ. NO.	SIGNAL DESCRIPTION
	J01	127			C06	08			14E	7					HCF16A		FUNCTIONAL IN ERROR
	J01	128			C06	11			14E	7					HCF17A		FUNCTIONAL IN ERROR
	J01	129			C06	12			14E	7					HCF18A		FUNCTIONAL IN ERROR
	J01	130			C07	14			14E	7					HCF19A		FUNCTIONAL IN ERROR
	J01	131			C07	03			14E	7					HCF20A		FUNCTIONAL IN ERROR
	J01	132			C07	05			14E	7					HCF21A		FUNCTIONAL IN ERROR
	J01	133			C07	08			14E	7					HCF22A		FUNCTIONAL IN ERROR
	J01	134			C07	11			14E	7					HCF23A		FUNCTIONAL IN ERROR
	J01	135			C07	12			14E	7					HCF24A		FUNCTIONAL IN ERROR
	J01	136			C08	14			14E	7					HCF25A		FUNCTIONAL IN ERROR
	J01	137			C08	03			14E	7					HCF26A		FUNCTIONAL IN ERROR
	J01	138			C08	05			14E	7					HCF27A		FUNCTIONAL IN ERROR
	J01	139			C08	08			14E	7					HCF28A		FUNCTIONAL IN ERROR
	J01	140			C08	11			14E	7					HCF29A		FUNCTIONAL IN ERROR
	J01	141			C08	12			14E	7					HCF30A		FUNCTIONAL IN ERROR
	J01	142			C09	14			14E	7					HCF31A		FUNCTIONAL IN ERROR
	J01	143			C09	03			14E	7					HCF32A		FUNCTIONAL IN ERROR
	J01	144			C09	05			14E	7					HCF33A		FUNCTIONAL IN ERROR
	J01	145			C09	08			14E	7					HCF34A		FUNCTIONAL IN ERROR
	J01	146			C09	11			14E	7					HCF35A		FUNCTIONAL IN ERROR
	J01	147			C09	12			14E	7					HCF36A		FUNCTIONAL IN ERROR
	J01	148			C10	14			14E	7					HCF37A		FUNCTIONAL IN ERROR
	J01	149			C10	03			14E	7					HCF38A		FUNCTIONAL IN ERROR
	J01	150			C10	05			14E	7					HCF39A		FUNCTIONAL IN ERROR
	J01	151			C10	08			14E	7					HCF40A		FUNCTIONAL IN ERROR
	J01	152			C10	11			14E	7					HCF41A		FUNCTIONAL IN ERROR
	J01	153			C10	12			14E	7					HCF42A		FUNCTIONAL IN ERROR
	J01	154			C11	14			14E	7					HCF43A		FUNCTIONAL IN ERROR
	J01	155			C11	03			14E	7					HCF44A		FUNCTIONAL IN ERROR
	J01	156			C11	05			14E	7					HCF45A		FUNCTIONAL IN ERROR
	J01	157			C11	08			14E	7					HCF46A		FUNCTIONAL IN ERROR
	J01	158			C11	11			14E	7					HCF47A		FUNCTIONAL IN ERROR
	J01	159			C11	12			14E	7					HCF48A		FUNCTIONAL IN ERROR
	J01	160			C12	14			14E	7					HCF49A		FUNCTIONAL IN ERROR
	J01	161			C12	03			14E	7					HCF50A		FUNCTIONAL IN ERROR
	J01	162			C12	05			14E	7					HCF51A		FUNCTIONAL IN ERROR
	J01	163			C12	08			14E	7					HCF52A		FUNCTIONAL IN ERROR
	J01	164			C12	11			14E	7					HCF53A		FUNCTIONAL IN ERROR
	J01	165			C12	12			14E	7					HCF54A		FUNCTIONAL IN ERROR
	J01	166			C13	14			14E	7					HCF55A		FUNCTIONAL IN ERROR
	J01	167			C13	03			14E	7					HCF56A		FUNCTIONAL IN ERROR
	J01	168			C13	05			14E	7					HCF57A		FUNCTIONAL IN ERROR
	J01	169			C13	08			14E	7					HCF58A		FUNCTIONAL IN ERROR
	J01	170			C13	11			14E	7					HCF59A		FUNCTIONAL IN ERROR
	J01	171			C13	12			14E	7					HCF60A		FUNCTIONAL IN ERROR
	J01	172			C14	14			14E	7					HCF61A		FUNCTIONAL IN ERROR
	J01	173			C14	03			14E	7					HCF62A		FUNCTIONAL IN ERROR
	J01	174			C14	05			14E	7					HCF63A		FUNCTIONAL IN ERROR
	J01	175			C14	08			14E	7					HCF64A		FUNCTIONAL IN ERROR
	J01	176			C14	11			14E	7					HCF65A		FUNCTIONAL IN ERROR
	J01	177			C14	12			14E	7					HCF66A		FUNCTIONAL IN ERROR
	J01	178			C15	14			14E	7					HCF67A		FUNCTIONAL IN ERROR
	J01	179			C15	03			14E	7					HCF68A		FUNCTIONAL IN ERROR
	J01	180			C15	05			14E	7					HCF69A		FUNCTIONAL IN ERROR
	J01	181			C15	08			14E	7					HCF70A		FUNCTIONAL IN ERROR
	J01	182			C15	11			14E	7					HCF71A		FUNCTIONAL IN ERROR
	J01	183			C15	12			14E	7					HCF72A		FUNCTIONAL IN ERROR
	J01	184			C16	14			14E	7					HCC01A		CONTINUITY IN ERROR
	J01	185			C16	03			14E	7					HCC02A		CONTINUITY IN ERROR
	J01	186			C16	05			14E	7					HCC03A		CONTINUITY IN ERROR
	J01	187			C16	08			14E	7					HCC04A		CONTINUITY IN ERROR
	J01	188			C16	11			14E	7					HCC05A		CONTINUITY IN ERROR
	J01	189			C16	12			14E	7					HCC06A		CONTINUITY IN ERROR

Table 5-5. MTS Test Aid Assembly Wire List - Continued

FROM				TO				WIRE								
PREFIX	CONNECTOR	PIN	SH FIG	PREFIX	CONNECTOR	PIN	SH FIG	MULTI GROUP	CODE	COLOR	IDENT	SLEEVE	SPC	INST	SIGNAL	STRING SEQ. NO.	SIGNAL DESCRIPTION
	J01	190			C17	14			14E	7					HCC07A		CONTINUITY IN ERROR
	J01	191			C17	03			14E	7					HCC08A		CONTINUITY IN ERROR
	J01	192			C17	05			14E	7					HCC09A		CONTINUITY IN ERROR
	J01	193			C17	08			14E	7					HCC10A		CONTINUITY IN ERROR
	J01	194			C17	11			14E	7					HCC11A		CONTINUITY IN ERROR
	J01	195			C17	12			14E	7					HCC12A		CONTINUITY IN ERROR
	J01	196			C18	14			14E	7					HCC13A		CONTINUITY IN ERROR
	J01	197			C18	03			14E	7					HCC14A		CONTINUITY IN ERROR
	J01	198			C18	05			14E	7					HCC15A		CONTINUITY IN ERROR
	J01	199			C18	08			14E	7					HCC16A		CONTINUITY IN ERROR
	J01	200			C18	11			14E	7					HCC17A		CONTINUITY IN ERROR
	J01	201			C18	12			14E	7					HCC18A		CONTINUITY IN ERROR
	J01	202			C19	14			14E	7					HCC19A		CONTINUITY IN ERROR
	J01	203			C19	03			14E	7					HCC20A		CONTINUITY IN ERROR
	J01	204			C19	05			14E	7					HCC21A		CONTINUITY IN ERROR
	J01	205			C19	08			14E	7					HCC22A		CONTINUITY IN ERROR
	J01	206			C19	11			14E	7					HCC23A		CONTINUITY IN ERROR
	J01	207			C19	12			14E	7					HCC24A		CONTINUITY IN ERROR
	J01	208			C20	14			14E	7					HCC25A		CONTINUITY IN ERROR
	J01	209			C20	03			14E	7					HCC26A		CONTINUITY IN ERROR
	J01	210			C20	05			14E	7					HCC27A		CONTINUITY IN ERROR
	J01	211			C20	08			14E	7					HCC28A		CONTINUITY IN ERROR
	J01	212			C20	11			14E	7					HCC29A		CONTINUITY IN ERROR
	J01	213			C20	12			14E	7					HCC30A		CONTINUITY IN ERROR
	J01	214			C21	14			14E	7					HCC31A		CONTINUITY IN ERROR
	J01	215			C21	03			14E	7					HCC32A		CONTINUITY IN ERROR
	J01	216			C21	05			14E	7					HCC33A		CONTINUITY IN ERROR
	J01	217			C21	08			14E	7					HCC34A		CONTINUITY IN ERROR
	J01	218			C21	11			14E	7					HCC35A		CONTINUITY IN ERROR
	J01	219			C21	12			14E	7					HCC36A		CONTINUITY IN ERROR
	J01	220			C22	14			14E	7					HCC37A		CONTINUITY IN ERROR
	J01	221			C22	03			14E	7					HCC38A		CONTINUITY IN ERROR
	J01	222			C22	05			14E	7					HCC39A		CONTINUITY IN ERROR
	J01	223			C22	08			14E	7					HCC40A		CONTINUITY IN ERROR
	J01	224			C22	11			14E	7					HCC41A		CONTINUITY IN ERROR
	J01	225			C22	12			14E	7					HCC42A		CONTINUITY IN ERROR
	J01	226			C23	14			14E	7					HCC43A		CONTINUITY IN ERROR
	J01	227			C23	03			14E	7					HCC44A		CONTINUITY IN ERROR
	J01	228			C23	05			14E	7					HCC45A		CONTINUITY IN ERROR
	J01	229			C23	08			14E	7					HCC46A		CONTINUITY IN ERROR
	J01	230			C23	11			14E	7					HCC47A		CONTINUITY IN ERROR
	J01	231			C23	12			14E	7					HCC48A		CONTINUITY IN ERROR
	J01	232			C24	14			14E	7					HCC49A		CONTINUITY IN ERROR
	J01	233			C24	03			14E	7					HCC50A		CONTINUITY IN ERROR
	J01	234			C24	05			14E	7					HCC51A		CONTINUITY IN ERROR
	J01	235			C24	08			14E	7					HCC52A		CONTINUITY IN ERROR
	J01	236			C24	11			14E	7					HCC53A		CONTINUITY IN ERROR
	J01	237			C24	12			14E	7					HCC54A		CONTINUITY IN ERROR
	J01	238			C25	14			14E	7					HCC55A		CONTINUITY IN ERROR
	J01	239			C25	03			14E	7					HCC56A		CONTINUITY IN ERROR
	J01	240			C25	05			14E	7					HCC57A		CONTINUITY IN ERROR
	J01	241			C25	08			14E	7					HCC58A		CONTINUITY IN ERROR
	J01	242			C25	11			14E	7					HCC59A		CONTINUITY IN ERROR
	J01	243			C25	12			14E	7					HCC60A		CONTINUITY IN ERROR
	J01	244			C26	14			14E	7					HCC61A		CONTINUITY IN ERROR
	J01	245			C26	03			14E	7					HCC62A		CONTINUITY IN ERROR
	J01	246			C26	05			14E	7					HCC63A		CONTINUITY IN ERROR
	J01	247			C26	08			14E	7					HCC64A		CONTINUITY IN ERROR
	J01	248			C26	11			14E	7					HCC65A		CONTINUITY IN ERROR
	J01	249			C26	12			14E	7					HCC66A		CONTINUITY IN ERROR
	J01	250			C27	14			14E	7					HCC67A		CONTINUITY IN ERROR
	J01	251			C27	03			14E	7					HCC68A		CONTINUITY IN ERROR
	J01	252			C27	05			14E	7					HCC69A		CONTINUITY IN ERROR

Table 5-5. MTS Test Aid Assembly Wire List - Continued

FROM				TO				WIRE				SLEEVE	SPEC	INST	SIGNAL	STRING SEQ. NO.	SIGNAL DESCRIPTION
PREFIX	CONNECTOR	PIN	SH FIG	PREFIX	CONNECTOR	PIN	SH FIG	MULTI	GROUP	CODE	COLOR	IDENT					
	J01	253			C27	08				14E	7				HCC70A		CONTINUITY IN ERROR
	J01	254			C27	11				14E	7				HCC71A		CONTINUITY IN ERROR
	J01	255			C27	12				14E	7				HCC72A		CONTINUITY IN ERROR
	J01	256			POWER	PLANE				14E	7				+5VH4		
	J01	257			GROUND	PLANE				14E	7				GND04		
	J01	258			POWER	PLANE				14E	7				+5VH5		
	J01	259			GROUND	PLANE				14E	7				GND05		
	J01	260								14E	7				SPP		
	S01	POS-01			A18	13				14E	6				TDIN1A		DATA ENABLE
	S01	POS-02			B06	13				14E	6				TFIN2A		FUNCTIONAL ENABLE
	S01	POS-03			B24	13				14E	6				TCIN3A		CONTINUITY ENABLE
	S01	ARM			GROUND					14E	0				GROUND		
	S02	1A-C			GROUND					14E	0				GROUND		LAMP TEST (GROUND)
	S02	NO			D24	07				14E	6				DLPTSW		LAMP TEST
	S03	C			GROUND					14E	0				GROUND		
	S03	ON (UP)			J01	107				14E	6				WTSSSA1		SINGLE STEP CP
	S04	C			GROUND					14E	0				GROUND		
	S04	ON (UP)			J01	109				14E	6				WTSBCA1		BURST STEP CP
	S05	1A-C			GROUND					14E	0				GROUND		
	S05	NC			D25	01				14E	6				SCP000		STEP CLOCK PULSE
	S05	NO			D25	02				14E	6				SCP00A		STEP CLOCK PULSE
	DS01	01			D04	01				16B	4				DFC01B		DATA BIT 01 OUT
	DS02	01			D04	02				16B	4				DFC02B		DATA BIT 02 OUT
	DS03	01			D04	03				16B	4				DFC03B		DATA BIT 03 OUT
	DS04	01			D04	04				16B	4				DFC04B		DATA BIT 04 OUT
	DS05	01			D04	05				16B	4				DFC05B		DATA BIT 05 OUT
	DS06	01			D04	06				16B	4				DFC06B		DATA BIT 06 OUT
	DS07	01			D24	04				16B	4				DFC07B		DATA BIT 07 OUT
	DS08	01			D04	08				16B	4				DFC08B		DATA BIT 08 OUT
	DS09	01			D04	09				16B	4				DFC09B		DATA BIT 09 OUT
	DS10	01			D04	10				16B	4				DFC10B		DATA BIT 10 OUT
	DS11	01			D04	11				16B	4				DFC11B		DATA BIT 11 OUT
	DS12	01			D04	12				16B	4				DFC12B		DATA BIT 12 OUT
	DS13	01			D04	13				16B	4				DFC13B		DATA BIT 13 OUT
	DS14	01			D04	14				16B	4				DFC14B		DATA BIT 14 OUT
	DS15	01			D05	01				16B	4				DFC15B		DATA BIT 15 OUT
	DS16	01			D05	02				16B	4				DFC16B		DATA BIT 16 OUT
	DS17	01			D05	03				16B	4				DFC17B		DATA BIT 17 OUT
	DS18	01			D05	04				16B	4				DFC18B		DATA BIT 18 OUT
	DS19	01			D05	05				16B	4				DFC19B		DATA BIT 19 OUT
	DS20	01			D05	06				16B	4				DFC20B		DATA BIT 20 OUT
	DS21	01			D05	08				16B	4				DFC21B		DATA BIT 21 OUT
	DS22	01			D05	09				16B	4				DFC22B		DATA BIT 22 OUT
	DS23	01			D05	10				16B	4				DFC23B		DATA BIT 23 OUT
	DS24	01			D05	11				16B	4				DFC24B		DATA BIT 24 OUT
	DS25	01			D05	12				16B	4				DFC25B		DATA BIT 25 OUT
	DS26	01			D05	13				16B	4				DFC26B		DATA BIT 26 OUT
	DS27	01			D05	14				16B	4				DFC27B		DATA BIT 27 OUT
	DS28	01			D09	01				16B	4				DFC28B		DATA BIT 28 OUT
	DS29	01			D09	02				16B	4				DFC29B		DATA BIT 29 OUT
	DS30	01			D09	03				16B	4				DFC30B		DATA BIT 30 OUT
	DS31	01			D09	04				16B	4				DFC31B		DATA BIT 31 OUT
	DS32	01			D09	05				16B	4				DFC32B		DATA BIT 32 OUT
	DS33	01			D09	06				16B	4				DFC33B		DATA BIT 33 OUT
	DS34	01			D09	08				16B	4				DFC34B		DATA BIT 34 OUT
	DS35	01			D09	09				16B	4				DFC35B		DATA BIT 35 OUT
	DS36	01			D09	10				16B	4				DFC36B		DATA BIT 36 OUT
	DS37	01			D09	11				16B	4				DFC37B		DATA BIT 37 OUT
	DS38	01			D09	12				16B	4				DFC38B		DATA BIT 38 OUT

Table 5-5. MTS Test Aid Assembly Wire List - Continued

FROM				TO				WIRE								
PREFIX	CONNECTOR	PIN	SH FIG	PREFIX	CONNECTOR	PIN	SH FIG	MULTI GROUP	CODE	COLOR	IDENT	SLEEVE	SPC INST	SIGNAL	STRING SEQ. NO.	SIGNAL DESCRIPTION
	DS39	01			D09	13			16B	4				DFC39B		DATA BIT 39 OUT
	DS40	01			D09	14			16B	4				DFC40B		DATA BIT 40 OUT
	DS41	01			D10	01			16B	4				DFC41B		DATA BIT 41 OUT
	DS42	01			D10	02			16B	4				DFC42B		DATA BIT 42 OUT
	DS43	01			D10	03			16B	4				DFC43B		DATA BIT 43 OUT
	DS44	01			D10	04			16B	4				DFC44B		DATA BIT 44 OUT
	DS45	01			D10	05			16B	4				DFC45B		DATA BIT 45 OUT
	DS46	01			D10	06			16B	4				DFC46B		DATA BIT 46 OUT
	DS47	01			D10	08			16B	4				DFC47B		DATA BIT 47 OUT
	DS48	01			D10	09			16B	4				DFC48B		DATA BIT 48 OUT
	DS49	01			D10	10			16B	4				DFC49B		DATA BIT 49 OUT
	DS50	01			D10	11			16B	4				DFC50B		DATA BIT 50 OUT
	DS51	01			D10	12			16B	4				DFC51B		DATA BIT 51 OUT
	DS52	01			D10	13			16B	4				DFC52B		DATA BIT 52 OUT
	DS53	01			D10	14			16B	4				DFC53B		DATA BIT 53 OUT
	DS54	01			D14	01			16B	4				DFC54B		DATA BIT 54 OUT
	DS55	01			D14	02			16B	4				DFC55B		DATA BIT 55 OUT
	DS56	01			D14	03			16B	4				DFC56B		DATA BIT 56 OUT
	DS57	01			D14	04			16B	4				DFC57B		DATA BIT 57 OUT
	DS58	01			D14	05			16B	4				DFC58B		DATA BIT 58 OUT
	DS59	01			D14	06			16B	4				DFC59B		DATA BIT 59 OUT
	DS60	01			D14	08			16B	4				DFC60B		DATA BIT 60 OUT
	DS61	01			D14	09			16B	4				DFC61B		DATA BIT 61 OUT
	DS62	01			D14	10			16B	4				DFC62B		DATA BIT 62 OUT
	DS63	01			D14	11			16B	4				DFC63B		DATA BIT 63 OUT
	DS64	01			D14	12			16B	4				DFC64B		DATA BIT 64 OUT
	DS65	01			D14	13			16B	4				DFC65B		DATA BIT 65 OUT
	DS66	01			D14	14			16B	4				DFC66B		DATA BIT 66 OUT
	DS67	01			D15	01			16B	4				DFC67B		DATA BIT 67 OUT
	DS68	01			D15	02			16B	4				DFC68B		DATA BIT 68 OUT
	DS69	01			D15	03			16B	4				DFC69B		DATA BIT 69 OUT
	DS70	01			D15	04			16B	4				DFC70B		DATA BIT 70 OUT
	DS71	01			D15	05			16B	4				DFC71B		DATA BIT 71 OUT
	DS72	01			D15	06			16B	4				DFC72B		DATA BIT 72 OUT
	DS73	01			D15	08			16B	4				DYAD01		Y ADDRESS 1 OUT
	DS74	01			D15	09			16B	4				DYAD02		Y ADDRESS 2 OUT
	DS75	01			D15	10			16B	4				DYAD04		Y ADDRESS 4 OUT
	DS76	01			D15	11			16B	4				DYAD08		Y ADDRESS 8 OUT
	DS77	01			D15	12			16B	4				DYAD16		Y ADDRESS 16 OUT
	DS78	01			D15	13			16B	4				DYAD32		Y ADDRESS 32 OUT
	DS79	01			D15	14			16B	4				DXAD01		X ADDRESS 1 OUT
	DS80	01			D19	01			16B	4				DXAD02		X ADDRESS 2 OUT
	DS81	01			D19	02			16B	4				DXAD04		X ADDRESS 4 OUT
	DS82	01			D19	03			16B	4				DXAD08		X ADDRESS 8 OUT
	DS83	01			D19	04			16B	4						ENABLE TC
	DS84	01			D19	05			16B	4						DATA CLOCK
	DS85	01			D19	06			16B	4				DCID01		CARD ID 1 OUT
	DS86	01			D19	08			16B	4				DCID02		CARD ID 2 OUT
	DS87	01			D19	09			16B	4				DCID04		CARD ID 4 OUT
	DS88	01			D19	10			16B	4				DCID08		CARD ID 8 OUT
	DS89	01			D19	11			16B	4				DCID16		CARD ID 16 OUT
	DS90	01			D19	12			16B	4				DCID32		CARD ID 32 OUT
	DS91	01			D19	13			16B	4				DSTA01		STATE 1 OUT
	DS92	01			D19	14			16B	4				DSTA02		STATE 2 OUT
	DS93	01			D20	01			16B	4				DSTA03		STATE 3 OUT
	DS94	01			D20	02			16B	4				DSTA04		STATE 4 OUT
	DS95	01			D20	03			16B	4				DSTA05		STATE 5 OUT
	DS96	01			D20	04			16B	4				DSTA06		STATE 6 OUT
	DS97	01			D20	05			16B	4				DSTA07		STATE 7 OUT
	DS98	01			D20	06			16B	4				DSTA08		STATE 8 OUT
	DS99	01			D20	08			16B	4				DSTA09		STATE 9 OUT
	DS100	01			D20	09			16B	4				DSTA10		STATE 10 OUT
	DS101	01			D20	10			16B	4				DSLT00		SELF TEST B0 OUT

Table 5-5. MTS Test Aid Assembly Wire List - Continued

FROM				TO				WIRE				SLEEVE	SPEC	INST	SIGNAL	STRING SEQ. NO.	SIGNAL DESCRIPTION
PREFIX	CONNECTOR	PIN	SH FIG	PREFIX	CONNECTOR	PIN	SH FIG	MULTI GROUP	CODE	COLOR	IDENT						
	DS102	01			D20	11			16B	4					DSLT01		SELF TEST B1 OUT
	DS103	01			D20	12			16B	4					DSLT02		SELF TEST B2 OUT
	DS104	01			D20	13			16B	4					DSLT03		SELF TEST B3 OUT
	DS105	01			D20	14			16B	4					DSLT04		SELF TEST B4 OUT
	DS106	01			D24	01			16B	4					DSLT05		SELF TEST B5 OUT
	DS107	01			D24	02			16B	4					DSLT06		SELF TEST B6 OUT
	DS108	01			D24	03			16B	4					DSLT07		SELF TEST B7 OUT
	DS01	02			DS02	02			14E	2					+5V1		+5V
	DS01	02			DS73	02			14E	2					+5V1		+5V
	DS02	02			DS03	02			14E	2					+5V1		+5V
	DS03	02			DS04	02			14E	2					+5V1		+5V
	DS04	02			DS05	02			14E	2					+5V1		+5V
	DS05	02			DS06	02			14E	2					+5V1		+5V
	DS06	02			DS07	02			14E	2					+5V1		+5V
	DS07	02			DS08	02			14E	2					+5V1		+5V
	DS08	02			DS09	02			14E	2					+5V1		+5V
	DS09	02			DS10	02			14E	2					+5V1		+5V
	DS10	02			DS11	02			14E	2					+5V1		+5V
	DS11	02			DS12	02			14E	2					+5V1		+5V
	DS12	02			DS13	02			14E	2					+5V1		+5V
	DS13	02			DS14	02			14E	2					+5V1		+5V
	DS14	02			DS15	02			14E	2					+5V1		+5V
	DS15	02			DS16	02			14E	2					+5V1		+5V
	DS16	02			DS17	02			14E	2					+5V1		+5V
	DS17	02			DS18	02			14E	2					+5V1		+5V
	DS18	02			DS19	02			14E	2					+5V1		+5V
	DS19	02			DS20	02			14E	2					+5V1		+5V
	DS20	02			DS21	02			14E	2					+5V1		+5V
	DS21	02			DS22	02			14E	2					+5V1		+5V
	DS22	02			DS23	02			14E	2					+5V1		+5V
	DS23	02			DS24	02			14E	2					+5V1		+5V
	DS24	02			DS48	02			14E	2					+5V1		+5V
	DS25	02			DS26	02			14E	2					+5V1		+5V
	DS25	02			DS49	02			14E	2					+5V1		+5V
	DS26	02			DS27	02			14E	2					+5V1		+5V
	DS27	02			DS28	02			14E	2					+5V1		+5V
	DS28	02			DS29	02			14E	2					+5V1		+5V
	DS29	02			DS30	02			14E	2					+5V1		+5V
	DS30	02			DS31	02			14E	2					+5V1		+5V
	DS31	02			DS32	02			14E	2					+5V1		+5V
	DS32	02			DS33	02			14E	2					+5V1		+5V
	DS33	02			DS34	02			14E	2					+5V1		+5V
	DS34	02			DS35	02			14E	2					+5V1		+5V
	DS35	02			DS36	02			14E	2					+5V1		+5V
	DS36	02			DS37	02			14E	2					+5V1		+5V
	DS37	02			DS38	02			14E	2					+5V1		+5V
	DS38	02			DS39	02			14E	2					+5V1		+5V
	DS39	02			DS40	02			14E	2					+5V1		+5V
	DS40	02			DS41	02			14E	2					+5V1		+5V
	DS41	02			DS42	02			14E	2					+5V1		+5V
	DS42	02			DS43	02			14E	2					+5V1		+5V
	DS43	02			DS44	02			14E	2					+5V1		+5V
	DS44	02			DS45	02			14E	2					+5V1		+5V
	DS45	02			DS46	02			14E	2					+5V1		+5V
	DS46	02			DS47	02			14E	2					+5V1		+5V
	DS47	02			DS48	02			14E	2					+5V1		+5V
	DS48	02			DS24	02			14E	2					+5V1		+5V
	DS49	02			DS50	02			14E	2					+5V1		+5V
	DS49	02			DS25	02			14E	2					+5V1		+5V
	DS50	02			DS51	02			14E	2					+5V1		+5V
	DS51	02			DS52	02			14E	2					+5V1		+5V
	DS52	02			DS53	02			14E	2					+5V1		+5V
	DS53	02			DS54	02			14E	2					+5V1		+5V

Table 5-5. MTS Test Aid Assembly Wire List - Continued

FROM				TO				WIRE				SLEEVE	SPEC INST	SIGNAL	STRING SEQ. NO.	SIGNAL DESCRIPTION
PREFIX	CONNECTOR	PIN	SH FIG	PREFIX	CONNECTOR	PIN	SH FIG	MULTI GROUP	CODE	COLOR	IDENT					
	DS54	02			DS55	02			14E	2				+5V1		+5V
	DS55	02			DS56	02			14E	2				+5V1		+5V
	DS56	02			DS57	02			14E	2				+5V1		+5V
	DS57	02			DS58	02			14E	2				+5V1		+5V
	DS58	02			DS59	02			14E	2				+5V1		+5V
	DS59	02			DS60	02			14E	2				+5V1		+5V
	DS60	02			DS61	02			14E	2				+5V1		+5V
	DS61	02			DS62	02			14E	2				+5V1		+5V
	DS62	02			DS63	02			14E	2				+5V1		+5V
	DS63	02			DS64	02			14E	2				+5V1		+5V
	DS64	02			DS65	02			14E	2				+5V1		+5V
	DS65	02			DS66	02			14E	2				+5V1		+5V
	DS66	02			DS67	02			14E	2				+5V1		+5V
	DS66	02			DS67	02			14E	2				+5V1		+5V
	DS67	02			DS68	02			14E	2				+5V1		+5V
	DS68	02			DS69	02			14E	2				+5V1		+5V
	DS69	02			DS70	02			14E	2				+5V1		+5V
	DS70	02			DS71	02			14E	2				+5V1		+5V
	DS71	02			DS72	02			14E	2				+5V1		+5V
	DS72	02			DS108	02			14E	2				+5V1		+5V
	DS73	02			DS74	02			14E	2				+5V1		+5V
	DS73	02			DS01	02			14E	2				+5V1		+5V
	DS74	02			DS75	02			14E	2				+5V1		+5V
	DS75	02			DS76	02			14E	2				+5V1		+5V
	DS76	02			DS77	02			14E	2				+5V1		+5V
	DS77	02			DS78	02			14E	2				+5V1		+5V
	DS78	02			DS79	02			14E	2				+5V1		+5V
	DS79	02			DS80	02			14E	2				+5V1		+5V
	DS80	02			DS81	02			14E	2				+5V1		+5V
	DS81	02			DS82	02			14E	2				+5V1		+5V
	DS82	02			DS83	02			14E	2				+5V1		+5V
	DS83	02			DS84	02			14E	2				+5V1		+5V
	DS84	02												+5V1		+5V
	DS85	02			DS86	02			14E	2				+5V1		+5V
	DS85	02			DS91	02			14E	2				+5V1		+5V
	DS86	02			DS87	02			14E	2				+5V1		+5V
	DS87	02			DS88	02			14E	2				+5V1		+5V
	DS88	02			DS89	02			14E	2				+5V1		+5V
	DS89	02			DS90	02			14E	2				+5V1		+5V
	DS90	02			DS101	02			14E	2				+5V1		+5V
	DS91	02			DS92	02			14E	2				+5V1		+5V
	DS91	02			DS85	02			14E	2				+5V1		+5V
	DS92	02			DS93	02			14E	2				+5V1		+5V
	DS93	02			DS94	02			14E	2				+5V1		+5V
	DS94	02			DS95	02			14E	2				+5V1		+5V
	DS95	02			DS96	02			14E	2				+5V1		+5V
	DS96	02			DS97	02			14E	2				+5V1		+5V
	DS97	02			DS98	02			14E	2				+5V1		+5V
	DS98	02			DS99	02			14E	2				+5V1		+5V
	DS99	02			DS100	02			14E	2				+5V1		+5V
	DS100	02			CAL	111-102			14E	2				+5V CAL		+5V CAL
	DS101	02			DS102	02			14E	2				+5V1		+5V
	DS101	02			DS90	02			14E	2				+5V1		+5V
	DS102	02			DS103	02			14E	2				+5V1		+5V
	DS103	02			DS104	02			14E	2				+5V1		+5V
	DS104	02			DS105	02			14E	2				+5V1		+5V
	DS105	02			DS106	02			14E	2				+5V1		+5V
	DS106	02			DS107	02			14E	2				+5V1		+5V
	DS107	02			DS108	02			14E	2				+5V1		+5V
	DS108	02			DS72	02			14E	2				+5V1		+5V
	D26	V			DS101	02			14E	2				+5V2		+5V2
	D27	V			DS63	02			14E	2				+5V3		+5V3

Table 5-5. MTS Test Aid Assembly Wire List - Continued

FROM				TO				WIRE									
PREFIX	CONNECTOR	PIN	SH FIG	PREFIX	CONNECTOR	PIN	SH FIG	MULTI	GROUP	CODE	COLOR	IDENT	SLEEVE	SPC	INST	SIGNAL	STRING SEQ. NO.	SIGNAL DESCRIPTION
	D28	V			DS39	02				14E	2					+5V4		+5V4
	D21	V			DS15	02				14E	2					+5V5		+5V5
	D22	V			DS62	02				14E	2					+5V6		+5V6
	D23	V			DS38	02				14E	2					+5V7		+5V7
	CAL	111-102			DS100	02				14E	2					+5V CAL		+5V CAL
	CAL	111-102			D1	V				14E	2					+5V CAL		+5V CAL
	CAL	111-103			GND	GND PLANE				14E	0					GND CAL		GND CAL
	CAL	111-103			D1	G				14E	0					GND CAL		GND CAL

Table 5-6. MTS Test Aid Circuit Board Assembly Wire List

FROM				TO				WIRE								
PREFIX	CONNECTOR	PIN	SH FIG	PREFIX	CONNECTOR	PIN	SH FIG	MULTI GROUP	CODE	COLOR	IDENT	SLEEVE	SPEC INST	SIGNAL	STRING SEQ. NO.	SIGNAL DESCRIPTION
	A01D25	08			A01D25	09			16B	9				+5VPRB	01	PULL-UP RESISTORS
	A01D25	09			A01D25	10			16B	9				+5VPRB	02	PULL-UP RESISTORS
	A01D25	10			A01D25	11			16B	9				+5VPRB	03	PULL-UP RESISTORS
	A01D25	11			A01D25	12			16B	9				+5VPRB	04	PULL-UP RESISTORS
	A01D25	12			A01D25	13			16B	9				+5VPRB	05	PULL-UP RESISTORS
	A01D25	13			A01D25	14			16B	9				+5VPRB	06	PULL-UP RESISTORS
	A01D25	14			A01D25	V			16B	9				+5VPRB	07	PULL-UP RESISTORS
	A01D25	V												+5VPRB	08	PULL-UP RESISTORS
	A01A01	V			A01A01	04			16B	9				+5V01A01	01	
	A01A01	04												+5V01A01	02	
	A01A02	V			A01A02	04			16B	9				+5V01A02	01	
	A01A02	04												+5V01A02	02	
	A01A03	V			A01A03	04			16B	9				+5V01A03	01	
	A01A03	04												+5V01A03	02	
	A01A04	V			A01A04	04			16B	9				+5V01A04	01	
	A01A04	04												+5V01A04	02	
	A01A05	V			A01A05	04			16B	9				+5V01A05	01	
	A01A05	04												+5V01A05	02	
	A01A06	V			A01A06	04			16B	9				+5V01A06	01	
	A01A06	04												+5V01A06	02	
	A01A07	V			A01A07	04			16B	9				+5V01A07	01	
	A01A07	04												+5V01A07	02	
	A01A08	V			A01A08	04			16B	9				+5V01A08	01	
	A01A08	04												+5V01A08	02	
	A01A09	V			A01A09	04			16B	9				+5V01A09	01	
	A01A09	04												+5V01A09	02	
	A01A10	V			A01A10	04			16B	9				+5V01A10	01	
	A01A10	04												+5V01A10	02	
	A01A11	V			A01A11	04			16B	9				+5V01A11	01	
	A01A11	04												+5V01A11	02	
	A01A12	V			A01A12	04			16B	9				+5V01A12	01	
	A01A12	04												+5V01A12	02	
	A01A13	V			A01A13	04			16B	9				+5V01A13	01	
	A01A13	04												+5V01A13	02	
	A01A14	V			A01A14	04			16B	9				+5V01A14	01	

Table 5-6. MTS Test Aid Circuit Board Assembly Wire List - Continued

FROM				TO				WIRE								
PREFIX	CONNECTOR	PIN	SH FIG	PREFIX	CONNECTOR	PIN	SH FIG	MULTI GROUP	CODE	COLOR	IDENT	SLEEVE	SPC	INST	SIGNAL	STRING SEQ. NO.	SIGNAL DESCRIPTION
	A01A14	04													+5V01A14	02	
	A01A15	V			A01A15	04			16B	9					+5V01A15	01	
	A01A15	04													+5V01A15	02	
	A01A16	V			A01A16	04			16B	9					+5V01A16	01	
	A01A16	04													+5V01A16	02	
	A01A17	V			A01A17	04			16B	9					+5V01A17	01	
	A01A17	04													+5V01A17	02	
	A01A18	V			A01A18	04			16B	9					+5V01A18	01	
	A01A18	04													+5V01A18	02	
	A01A19	V			A01A19	04			16B	9					+5V01A19	01	
	A01A19	04													+5V01A19	02	
	A01A20	V			A01A20	04			16B	9					+5V01A20	01	
	A01A20	04													+5V01A20	02	
	A01A21	V			A01A21	04			16B	9					+5V01A21	01	
	A01A21	04													+5V01A21	02	
	A01A22	V			A01A22	04			16B	9					+5V01A22	01	
	A01A22	04													+5V01A22	02	
	A01A23	V			A01A23	04			16B	9					+5V01A23	01	
	A01A23	04													+5V01A23	02	
	A01A24	V			A01A24	04			16B	9					+5V01A24	01	
	A01A24	04													+5V01A24	02	
	A01A25	V			A01A25	04			16B	9					+5V01A25	01	
	A01A25	04													+5V01A25	02	
	A01A26	V			A01A26	04			16B	9					+5V01A26	01	
	A01A26	04													+5V01A26	02	
	A01A27	V			A01A27	04			16B	9					+5V01A27	01	
	A01A27	04													+5V01A27	02	
	A01A28	V			A01A28	04			16B	9					+5V01A28	01	
	A01A28	04													+5V01A28	02	
	A01A29	V			A01A29	04			16B	9					+5V01A29	01	
	A01A29	04													+5V01A29	02	

Table 5-6. MTS Test Aid Circuit Board Assembly Wire List - Continued

FROM				TO				WIRE								
PREFIX	CONNECTOR	PIN	SH FIG	PREFIX	CONNECTOR	PIN	SH FIG	MULTI GROUP	CODE	COLOR	IDENT	SLEEVE	SPC	INST	SIGNAL	STRING SEQ. NO.	SIGNAL DESCRIPTION
	A01A30	V			A01A30	04			16B	9					+5V01A30	01	
	A01A30	04													+5V01A30	02	
	A01B01	V			A01B01	04			16B	9					+5V01B01	01	
	A01B01	04													+5V01B01	02	
	A01B02	V			A01B02	04			16B	9					+5V01B02	01	
	A01B02	04													+5V01B02	02	
	A01B03	V			A01B03	04			16B	9					+5V01B03	01	
	A01B03	04													+5V01B03	02	
	A01B04	V			A01B04	04			16B	9					+5V01B04	01	
	A01B04	04													+5V01B04	02	
	A01B05	V			A01B05	04			16B	9					+5V01B05	01	
	A01B05	04													+5V01B05	02	
	A01B06	V			A01B06	04			16B	9					+5V01B06	01	
	A01B06	04													+5V01B06	02	
	A01B07	V			A01B07	04			16B	9					+5V01B07	01	
	A01B07	04													+5V01B07	02	
	A01B08	V			A01B08	04			16B	9					+5V01B08	01	
	A01B08	04													+5V01B08	02	
	A01B09	V			A01B09	04			16B	9					+5V01B09	01	
	A01B09	04													+5V01B09	02	
	A01B10	V			A01B10	04			16B	9					+5V01B10	01	
	A01B10	04													+5V01B10	02	
	A01B11	V			A01B11	04			16B	9					+5V01B11	01	
	A01B11	04													+5V01B11	02	
	A01B12	V			A01B12	04			16B	9					+5V01B12	01	
	A01B12	04													+5V01B12	02	
	A01B13	V			A01B13	04			16B	9					+5V01B13	01	
	A01B13	04													+5V01B13	02	
	A01B14	V			A01B14	04			16B	9					+5V01B14	01	
	A01B14	04													+5V01B14	02	
	A01B15	V			A01B15	04			16B	9					+5V01B15	01	
	A01B15	04													+5V01B15	02	

Table 5-6. MTS Test Aid Circuit Board Assembly Wire List - Continued

FROM				TO				WIRE				SLEEVE	SPC	INST	SIGNAL	STRING SEQ. NO.	SIGNAL DESCRIPTION
PREFIX	CONNECTOR	PIN	SH FIG	PREFIX	CONNECTOR	PIN	SH FIG	MULTI GROUP	CODE	COLOR	IDENT						
	A01B16	V			A01B16	04			16B	9					+5V01B16	01	
	A01B16	04													+5V01B16	02	
	A01B17	V			A01B17	04			16B	9					+5V01B17	01	
	A01B17	04													+5V01B17	02	
	A01B18	V			A01B18	04			16B	9					+5V01B18	01	
	A01B18	04													+5V01B18	02	
	A01B19	V			A01B19	04			16B	9					+5V01B19	01	
	A01B19	04													+5V01B19	02	
	A01B20	V			A01B20	04			16B	9					+5V01B20	01	
	A01B20	04													+5V01B20	02	
	A01B21	V			A01B21	04			16B	9					+5V01B21	01	
	A01B21	04													+5V01B21	02	
	A01B22	V			A01B22	04			16B	9					+5V01B22	01	
	A01B22	04													+5V01B22	02	
	A01B23	V			A01B23	04			16B	9					+5V01B23	01	
	A01B23	04													+5V01B23	02	
	A01B24	V			A01B24	04			16B	9					+5V01B24	01	
	A01B24	04													+5V01B24	02	
	A01B25	V			A01B25	04			16B	9					+5V01B25	01	
	A01B25	04													+5V01B25	02	
	A01B26	V			A01B26	04			16B	9					+5V01B26	01	
	A01B26	04													+5V01B26	02	
	A01B27	V			A01B27	04			16B	9					+5V01B27	01	
	A01B27	04													+5V01B27	02	
	A01B28	V			A01B28	04			16B	9					+5V01B28	01	
	A01B28	04													+5V01B28	02	
	A01B29	V			A01B29	04			16B	9					+5V01B29	01	
	A01B29	04													+5V01B29	02	
	A01B30	V			A01B30	04			16B	9					+5V01B30	01	
	A01B30	04													+5V01B30	02	
	A01C01	V			A01C01	04			16B	9					+5V01C01	01	
	A01C01	04													+5V01C01	02	

Table 5-6. MTS Test Aid Circuit Board Assembly Wire List - Continued

FROM				TO				WIRE								
PREFIX	CONNECTOR	PIN	SH FIG	PREFIX	CONNECTOR	PIN	SH FIG	MULTI GROUP	CODE	COLOR	IDENT	SLEEVE	SPC	INST	SIGNAL	STRING SEQ. NO.	SIGNAL DESCRIPTION
	A01C02	V			A01C02	04			16B	9					+5V01C02	01	
	A01C02	04													+5V01C02	02	
	A01C03	V			A01C03	04			16B	9					+5V01C03	01	
	A01C03	04													+5V01C03	02	
	A01C04	V			A01C04	04			16B	9					+5V01C04	01	
	A01C04	04													+5V01C04	02	
	A01C05	V			A01C05	04			16B	9					+5V01C05	01	
	A01C05	04													+5V01C05	02	
	A01C06	V			A01C06	04			16B	9					+5V01C06	01	
	A01C06	04													+5V01C06	02	
	A01C07	V			A01C07	04			16B	9					+5V01C07	01	
	A01C07	04													+5V01C07	02	
	A01C08	V			A01C08	04			16B	9					+5V01C08	01	
	A01C08	04													+5V01C08	02	
	A01C09	V			A01C09	04			16B	9					+5V01C09	01	
	A01C09	04													+5V01C09	02	
	A01C10	V			A01C10	04			16B	9					+5V01C10	01	
	A01C10	04													+5V01C10	02	
	A01C11	V			A01C11	04			16B	9					+5V01C11	01	
	A01C11	04													+5V01C11	02	
	A01C12	V			A01C12	04			16B	9					+5V01C12	01	
	A01C12	04													+5V01C12	02	
	A01C13	V			A01C13	04			16B	9					+5V01C13	01	
	A01C13	04													+5V01C13	02	
	A01C14	V			A01C14	04			16B	9					+5V01C14	01	
	A01C14	04													+5V01C14	02	
	A01C15	V			A01C15	04			16B	9					+5V01C15	01	
	A01C15	04													+5V01C15	02	
	A01C16	V			A01C16	04			16B	9					+5V01C16	01	
	A01C16	04													+5V01C16	02	
	A01C17	V			A01C17	04			16B	9					+5V01C17	01	
	A01C17	04													+5V01C17	02	

Table 5-6. MTS Test Aid Circuit Board Assembly Wire List - Continued

FROM				TO				WIRE								
PREFIX	CONNECTOR	PIN	SH FIG	PREFIX	CONNECTOR	PIN	SH FIG	MULTI	GROUP	CODE	COLOR	IDENT	SLEEVE	SPEC INST	SIGNAL	STRING SEQ. NO.	SIGNAL DESCRIPTION
	A01C18	V			A01C18	04				16B	9				+5V01C18	01	
	A01C18	04													+5V01C18	02	
	A01C19	V			A01C19	04				16B	9				+5V01C19	01	
	A01C19	04													+5V01C19	02	
	A01C20	V			A01C20	04				16B	9				+5V01C20	01	
	A01C20	04													+5V01C20	02	
	A01C21	V			A01C21	04				16B	9				+5V01C21	01	
	A01C21	04													+5V01C21	02	
	A01C22	V			A01C22	04				16B	9				+5V01C22	01	
	A01C22	04													+5V01C22	02	
	A01C23	V			A01C23	04				16B	9				+5V01C23	01	
	A01C23	04													+5V01C23	02	
	A01C24	V			A01C24	04				16B	9				+5V01C24	01	
	A01C24	04													+5V01C24	02	
	A01C25	V			A01C25	04				16B	9				+5V01C25	01	
	A01C25	04													+5V01C25	02	
	A01C26	V			A01C26	04				16B	9				+5V01C26	01	
	A01C26	04													+5V01C26	02	
	A01C27	V			A01C27	04				16B	9				+5V01C27	01	
	A01C27	04													+5V01C27	02	
	A01C28	V			A01C28	04				16B	9				+5V01C28	01	
	A01C28	04													+5V01C28	02	
	A01C29	V			A01C29	04				16B	9				+5V01C29	01	
	A01C29	04													+5V01C29	02	
	A01C30	V			A01C30	04				16B	9				+5V01C30	01	
	A01C30	04													+5V01C30	02	
	A01B07	01			A01C16	01				16B	9				CHID01	01	INVERTER,CONT.
	A01C16	01													CHID01	02	INVERTER,CONT.
	A01B07	05			A01C16	02				16B	9				CHID02		INVERTER,CONT.
	A01C16	02													CHID02	02	INVERTER,CONT.
	A01B07	08			A01C16	06				16B	9				CHID03	01	INVERTER,CONT.
	A01C16	06													CHID03	02	INVERTER,CONT.

Table 5-6. MTS Test Aid Circuit Board Assembly Wire List - Continued

FROM				TO				WIRE								
PREFIX	CONNECTOR	PIN	SH FIG	PREFIX	CONNECTOR	PIN	SH FIG	MULTI	GROUP	CODE	COLOR	IDENT	SLEEVE	SPC	INST	SIGNAL	STRING SEQ. NO.	SIGNAL DESCRIPTION
	A01B07	12			A01C16	07				16B	9					CHID04	01	INVERTER,CONT.
	A01C16	07														CHID04	02	INVERTER,CONT.
	A01B08	01			A01C16	09				16B	9					CHID05	01	INVERTER,CONT.
	A01C16	09														CHID05	02	INVERTER,CONT.
	A01B08	05			A01C16	13				16B	9					CHID06		INVERTER,CONT.
	A01C16	13														CHID06	02	INVERTER,CONT.
	A01B08	08			A01C17	01				16B	9					CHID07	01	INVERTER,CONT.
	A01C17	01														CHID07	02	INVERTER,CONT.
	A01B08	12			A01C17	02				16B	9					CHID08	01	INVERTER,CONT.
	A01C17	02														CHID08	02	INVERTER,CONT.
	A01B09	01			A01C17	06				16B	9					CHID09	01	INVERTER,CONT.
	A01C17	06														CHID09	02	INVERTER,CONT.
	A01B09	05			A01C17	07				16B	9					CHID10	01	INVERTER,CONT.
	A01C17	07														CHID10	02	INVERTER,CONT.
	A01B09	08			A01C17	09				16B	9					CHID11	01	INVERTER,CONT.
	A01C17	09														CHID11	02	INVERTER,CONT.
	A01B09	12			A01C17	13				16B	9					CHID12	01	INVERTER,CONT.
	A01C17	13														CHID12	02	INVERTER,CONT.
	A01B10	01			A01C18	01				16B	9					CHID13	01	INVERTER,CONT.
	A01C18	01														CHID13	02	INVERTER,CONT.
	A01B10	05			A01C18	02				16B	9					CHID14	01	INVERTER,CONT.
	A01C18	02														CHID14	02	INVERTER,CONT.
	A01B10	08			A01C18	06				16B	9					CHID15	01	INVERTER,CONT.
	A01C18	06														CHID15	02	INVERTER,CONT.
	A01B10	12			A01C18	07				16B	9					CHID16	01	INVERTER,CONT.
	A01C18	07														CHID16	02	INVERTER,CONT.
	A01B11	01			A01C18	09				16B	9					CHID17	01	INVERTER,CONT.
	A01C18	09														CHID17	02	INVERTER,CONT.
	A01B11	05			A01C18	13				16B	9					CHID18	01	INVERTER,CONT.
	A01C18	13														CHID18	02	INVERTER,CONT.
	A01B11	08			A01C19	01				16B	9					CHID19	01	INVERTER,CONT.
	A01C19	01														CHID19	02	INVERTER,CONT.

Table 5-6. MTS Test Aid Circuit Board Assembly Wire List - Continued

FROM				TO				WIRE								
PREFIX	CONNECTOR	PIN	SH FIG	PREFIX	CONNECTOR	PIN	SH FIG	MULTI	GROUP	CODE	COLOR	IDENT	SLEEVE	SPC	INST	SIGNAL	STRING SEQ. NO.	SIGNAL DESCRIPTION
	A01B11	12			A01C19	02				16B	9					CHID20	01	INVERTER,CONT.
	A01C19	02														CHID20	02	INVERTER,CONT.
	A01B12	01			A01C19	06				16B	9					CHID21	01	INVERTER,CONT.
	A01C19	06														CHID21	02	INVERTER,CONT.
	A01B12	05			A01C19	07				16B	9					CHID22	01	INVERTER,CONT.
	A01C19	07														CHID22	02	INVERTER,CONT.
	A01B12	08			A01C19	09				16B	9					CHID23	01	INVERTER,CONT.
	A01C19	09														CHID23	02	INVERTER,CONT.
	A01B12	12			A01C19	13				16B	9					CHID24	01	INVERTER,CONT.
	A01C19	13														CHID24	02	INVERTER,CONT.
	A01B13	01			A01C20	01				16B	9					CHID25	01	INVERTER,CONT.
	A01C20	01														CHID25	02	INVERTER,CONT.
	A01B13	05			A01C20	02				16B	9					CHID26	01	INVERTER,CONT.
	A01C20	02														CHID26	02	INVERTER,CONT.
	A01B13	08			A01C20	06				16B	9					CHID27	01	INVERTER,CONT.
	A01C20	06														CHID27	02	INVERTER,CONT.
	A01B13	12			A01C20	07				16B	9					CHID28	01	INVERTER,CONT.
	A01C20	07														CHID28	02	INVERTER,CONT.
	A01B14	01			A01C20	09				16B	9					CHID29	01	INVERTER,CONT.
	A01C20	09														CHID29	02	INVERTER,CONT.
	A01B14	05			A01C20	13				16B	9					CHID30	01	INVERTER,CONT.
	A01C20	13														CHID30	02	INVERTER,CONT.
	A01B14	08			A01C21	01				16B	9					CHID31	01	INVERTER,CONT.
	A01C21	01														CHID31	02	INVERTER,CONT.
	A01B14	12			A01C21	02				16B	9					CHID32	01	INVERTER,CONT.
	A01C21	02														CHID32	02	INVERTER,CONT.
	A01B15	01			A01C21	06				16B	9					CHID33	01	INVERTER,CONT.
	A01C21	06														CHID33	02	INVERTER,CONT.
	A01B15	05			A01C21	07				16B	9					CHID34	01	INVERTER,CONT.
	A01C21	07														CHID34	02	INVERTER,CONT.
	A01B15	08			A01C21	09				16B	9					CHID35	01	INVERTER,CONT.
	A01C21	09														CHID35	02	INVERTER,CONT.

Table 5-6. MTS Test Aid Circuit Board Assembly Wire List - Continued

FROM				TO				WIRE								
PREFIX	CONNECTOR	PIN	SH FIG	PREFIX	CONNECTOR	PIN	SH FIG	MULTI	GROUP	CODE	COLOR	IDENT	SLEEVE	SPC	INST	SIGNAL	STRING SEQ. NO.	SIGNAL DESCRIPTION
	A01B15	12			A01C21	13				16B	9					CHID36	01	INVERTER,CONT.
	A01C21	13														CHID36	02	INVERTER,CONT.
	A01B16	01			A01C22	01				16B	9					CHID37	01	INVERTER,CONT.
	A01C22	01														CHID37	02	INVERTER,CONT.
	A01B16	05			A01C22	02				16B	9					CHID38	01	INVERTER,CONT.
	A01C22	02														CHID38	02	INVERTER,CONT.
	A01B16	08			A01C22	06				16B	9					CHID39	01	INVERTER,CONT.
	A01C22	06														CHID39	02	INVERTER,CONT.
	A01B16	12			A01C22	07				16B	9					CHID40	01	INVERTER,CONT.
	A01C22	07														CHID40	02	INVERTER,CONT.
	A01B17	01			A01C22	09				16B	9					CHID41	01	INVERTER,CONT.
	A01C22	09														CHID41	02	INVERTER,CONT.
	A01B17	05			A01C22	13				16B	9					CHID42	01	INVERTER,CONT.
	A01C22	13														CHID42	02	INVERTER,CONT.
	A01B17	08			A01C23	01				16B	9					CHID43	01	INVERTER,CONT.
	A01C23	01														CHID43	02	INVERTER,CONT.
	A01B17	12			A01C23	02				16B	9					CHID44	01	INVERTER,CONT.
	A01C23	02														CHID44	02	INVERTER,CONT.
	A01B18	01			A01C23	06				16B	9					CHID45	01	INVERTER,CONT.
	A01C23	06														CHID45	02	INVERTER,CONT.
	A01B18	05			A01C23	07				16B	9					CHID46	01	INVERTER,CONT.
	A01C23	07														CHID46	02	INVERTER,CONT.
	A01B18	08			A01C23	09				16B	9					CHID47	01	INVERTER,CONT.
	A01C23	09														CHID47	02	INVERTER,CONT.
	A01B18	12			A01C23	13				16B	9					CHID48	01	INVERTER,CONT.
	A01C23	13														CHID48	02	INVERTER,CONT.
	A01B19	01			A01C24	01				16B	9					CHID49	01	INVERTER,CONT.
	A01C24	01														CHID49	02	INVERTER,CONT.
	A01B19	05			A01C24	02				16B	9					CHID50	01	INVERTER,CONT.
	A01C24	02														CHID50	02	INVERTER,CONT.
	A01B19	08			A01C24	06				16B	9					CHID51	01	INVERTER,CONT.
	A01C24	06														CHID51	02	INVERTER,CONT.

Table 5-6. MTS Test Aid Circuit Board Assembly Wire List - Continued

FROM				TO				WIRE								
PREFIX	CONNECTOR	PIN	SH FIG	PREFIX	CONNECTOR	PIN	SH FIG	MULTI	GROUP	CODE	COLOR	IDENT	SLEEVE	SPEC	INST	SIGNAL	STRING SEQ. NO.	SIGNAL DESCRIPTION
	A01B19	12			A01C24	07				16B	9					CHID52	01	INVERTER,CONT.
	A01C24	07														CHID52	02	INVERTER,CONT.
	A01B20	01			A01C24	09				16B	9					CHID53	01	INVERTER,CONT.
	A01C24	09														CHID53	02	INVERTER,CONT.
	A01B20	05			A01C24	13				16B	9					CHID54	01	INVERTER,CONT
	A01C24	13														CHID54	02	INVERTER,CONT.
	A01B20	08			A01C25	01				16B	9					CHID55	01	INVERTER,CONT.
	A01C25	01														CHID55	02	INVERTER,CONT.
	A01B20	12			A01C25	02				16B	9					CHID56	01	INVERTER,CONT.
	A01C25	02														CHID56	02	INVERTER,CONT.
	A01B21	01			A01C25	06				16B	9					CHID57	01	INVERTER,CONT.
	A01C25	06														CHID57	02	INVERTER,CONT.
	A01B21	05			A01C25	07				16B	9					CHID58	01	INVERTER,CONT.
	A01C25	07														CHID58	02	INVERTER,CONT.
	A01B21	08			A01C25	09				16B	9					CHID59	01	INVERTER,CONT.
	A01C25	09														CHID59	02	INVERTER,CONT.
	A01B21	12			A01C25	13				16B	9					CHID60	01	INVERTER,CONT.
	A01C25	13														CHID60	02	INVERTER,CONT.
	A01B22	01			A01C26	01				16B	9					CHID61	01	INVERTER,CONT.
	A01C26	01														CHID61	02	INVERTER,CONT.
	A01B22	05			A01C26	02				16B	9					CHID62	01	INVERTER,CONT.
	A01C26	02														CHID62	02	INVERTER,CONT.
	A01B22	08			A01C26	06				16B	9					CHID63	01	INVERTER,CONT.
	A01C26	06														CHID63	02	INVERTER,CONT.
	A01B22	12			A01C26	07				16B	9					CHID64	01	INVERTER,CONT.
	A01C26	07														CHID64	02	INVERTER,CONT.
	A01B23	01			A01C26	09				16B	9					CHID65	01	INVERTER,CONT.
	A01C26	09														CHID65	02	INVERTER,CONT.
	A01B23	05			A01C26	13				16B	9					CHID66	01	INVERTER,CONT.
	A01C26	13														CHID66	02	INVERTER,CONT.
	A01B23	08			A01C27	01				16B	9					CHID67	01	INVERTER,CONT.
	A01C27	01														CHID67	02	INVERTER,CONT.

Table 5-6. MTS Test Aid Circuit Board Assembly Wire List - Continued.

FROM				TO				WIRE								
PREFIX	CONNECTOR	PIN	SH FIG	PREFIX	CONNECTOR	PIN	SH FIG	MULTI	GROUP	CODE	COLOR	IDENT	SLEEVE	SPEC INST	SIGNAL	STRING SEQ. NO.	SIGNAL DESCRIPTION
	A01B23	12			A01C27	02				16B	9				CHID68	01	INVERTER,CONT.
	A01C27	02													CHID68	02	INVERTER,CONT.
	A01B24	01			A01C27	06				16B	9				CHID69	01	INVERTER,CONT.
	A01C27	06													CHID69	02	INVERTER,CONT.
	A01B24	05			A01C27	07				16B	9				CHID70	01	INVERTER,CONT.
	A01C27	07													CHID70	02	INVERTER,CONT.
	A01B24	08			A01C27	09				16B	9				CHID71	01	INVERTER,CONT.
	A01C27	09													CHID71	02	INVERTER,CONT.
	A01B24	12			A01C27	13				16B	9				CHID72	01	INVERTER,CONT.
	A01C27	13													CHID72	02	INVERTER,CONT
	A01B27	03			A01D19	06				16B	9				DCID01	01	CARD ID 1
	A01D19	06													DCID01	02	CARD ID 1 OUT
	A01B27	07			A01D19	08				16B	9				DCID02	01	CARD ID 2
	A01D19	08													DCID02	02	CARD ID 2 OUT
	A01B27	11			A01D19	09				16B	9				DCID04	01	CARD ID 4
	A01D19	09													DCID04	02	CARD ID 4 OUT
	A01B27	14			A01D19	10				16B	9				DCID08	01	CARD ID 8
	A01D19	10													DCID08	02	CARD ID 8 OUT
	A01B28	03			A01D19	11				16B	9				DCID16	01	CARD ID 16
	A01D19	11													DCID16	02	CARD ID 16 OUT
	A01B28	07			A01D19	12				16B	9				DCID32	01	CARD ID 32
	A01D19	12													DCID32	02	CARD ID 32 OUT
	A01A01	03			A01A19	03				16B	9				DFC01B	01	DATA BIT 01 OUT
	A01A19	03			A01B07	03				16B	9				DFC01B	02	DATA BIT 01 OUT
	A01B07	03			A01D04	01				16B	9				DFC01B	03	DATA BIT 01 OUT
	A01D04	01													DFC01B	04	DATA BIT 01 OUT
	A01A01	07			A01A19	07				16B	9				DFC02B	01	DATA BIT 02 OUT
	A01A19	07			A01B07	07				16B	9				DFC02B	02	DATA BIT 02 OUT
	A01B07	07			A01D04	02				16B	9				DFC02B	03	DATA BIT 02 OUT
	A01D04	02													DFC02B	04	DATA BIT 02 OUT
	A01A01	11			A01A19	11				16B	9				DFC03B	01	DATA BIT 03 OUT
	A01A19	11			A01B07	11				16B	9				DFC03B	02	DATA BIT 03 OUT
	A01B07	11			A01D04	03				16B	9				DFC03B	03	DATA BIT 03 OUT
	A01D04	03													DFC03B	04	DATA BIT 03 OUT
	A01A01	14			A01A19	14				16B	9				DFC04B	01	DATA BIT 04 OUT

Table 5-6. MTS Test Aid Circuit Board Assembly Wire List - Continued.

FROM				TO				WIRE								
PREFIX	CONNECTOR	PIN	SH FIG	PREFIX	CONNECTOR	PIN	SH FIG	MULTI GROUP	CODE	COLOR	IDENT	SLEEVE	SPC INST	SIGNAL	STRING SEQ. NO.	SIGNAL DESCRIPTION
	A01A19	14			A01B07	14			16B	9				DFC04B	02	DATA BIT 04 OUT
	A01B07	14			A01D04	04			16B	9				DFC04B	03	DATA BIT 04 OUT
	A01D04	04												DFC04B	04	DATA BIT 04 OUT
	A01A02	03			A01A20	03			16B	9				DFC05B	01	DATA BIT 05 OUT
	A01A20	03			A01B08	03			16B	9				DFC05B	02	DATA BIT 05 OUT
	A01B08	03			A01D04	05			16B	9				DFC05B	03	DATA BIT 05 OUT
	A01D04	05												DFC05B	04	DATA BIT 05 OUT
	A01A02	07			A01A20	07			16B	9				DFC06B	01	DATA BIT 06 OUT
	A01A20	07			A01B08	07			16B	9				DFC06B	02	DATA BIT 06 OUT
	A01B08	07			A01D04	06			16B	9				DFC06B	03	DATA BIT 06 OUT
	A01D04	06												DFC06B	04	DATA BIT 06 OUT
	A01A02	11			A01A20	11			16B	9				DFC07B	01	DATA BIT 07 OUT
	A01A20	11			A01B08	11			16B	9				DFC07B	02	DATA BIT 07 OUT
	A01B08	11			A01D24	04			16B	9				DFC07B	03	DATA BIT 07 OUT
	A01D24	04												DFC07B	04	DATA BIT 07 OUT
	A01A02	14			A01A20	14			16B	9				DFC08B	01	DATA BIT 08 OUT
	A01A20	14			A01B08	14			16B	9				DFC08B	02	DATA BIT 08 OUT
	A01B08	14			A01D04	08			16B	9				DFC08B	03	DATA BIT 08 OUT
	A01D04	08												DFC08B	04	DATA BIT 08 OUT
	A01A03	03			A01A21	03			16B	9				DFC09B	01	DATA BIT 09 OUT
	A01A21	03			A01B09	03			16B	9				DFC09B	02	DATA BIT 09 OUT
	A01B09	03			A01D04	09			16B	9				DFC09B	03	DATA BIT 09 OUT
	A01D04	09												DFC09B	04	DATA BIT 09 OUT
	A01A03	07			A01A21	07			16B	9				DFC10B	01	DATA BIT 10 OUT
	A01A21	07			A01B09	07			16B	9				DFC10B	02	DATA BIT 10 OUT
	A01B09	07			A01D04	10			16B	9				DFC10B	03	DATA BIT 10 OUT
	A01D04	10												DFC10B	04	DATA BIT 10 OUT
	A01A03	11			A01A21	11			16B	9				DFC11B	01	DATA BIT 11 OUT
	A01A21	11			A01B09	11			16B	9				DFC11B	02	DATA BIT 11 OUT
	A01B09	11			A01D04	11			16B	9				DFC11B	03	DATA BIT 11 OUT
	A01D04	11												DFC11B	04	DATA BIT 11 OUT
	A01A03	14			A01A21	14			16B	9				DFC12B	01	DATA BIT 12 OUT
	A01A21	14			A01B09	14			16B	9				DFC12B	02	DATA BIT 12 OUT
	A01B09	14			A01D04	12			16B	9				DFC12B	03	DATA BIT 12 OUT
	A01D04	12												DFC12B	04	DATA BIT 12 OUT
	A01A04	03			A01A22	03			16B	9				DFC13B	01	DATA BIT 13 OUT
	A01A22	03			A01B10	03			16B	9				DFC13B	02	DATA BIT 13 OUT
	A01B10	03			A01D04	13			16B	9				DFC13B	03	DATA BIT 13 OUT
	A01D04	13												DFC13B	04	DATA BIT 13 OUT
	A01A04	07			A01A22	07			16B	9				DFC14B	01	DATA BIT 14 OUT
	A01A22	07			A01B10	07			16B	9				DFC14B	02	DATA BIT 14 OUT
	A01B10	07			A01D04	14			16B	9				DFC14B	03	DATA BIT 14 OUT
	A01D04	14												DFC14B	04	DATA BIT 14 OUT

Table 5-6. MTS Test Aid Circuit Board Assembly Wire List - Continued.

FROM				TO				WIRE				SLEEVE	SPC	INST	SIGNAL	STRING SEQ. NO.	SIGNAL DESCRIPTION
PREFIX	CONNECTOR	PIN	SH FIG	PREFIX	CONNECTOR	PIN	SH FIG	MULTI	GROUP	CODE	COLOR	IDENT					
	A01A04	11			A01A22	11				16B	9				DFC15B	01	DATA BIT 15 OUT
	A01A22	11			A01B10	11				16B	9				DFC15B	02	DATA BIT 15 OUT
	A01B10	11			A01D05	01				16B	9				DFC15B	03	DATA BIT 15 OUT
	A01D05	01													DFC15B	04	DATA BIT 15 OUT
	A01A04	14			A01A22	14				16B	9				DFC16B	01	DATA BIT 16 OUT
	A01A22	14			A01B10	14				16B	9				DFC16B	02	DATA BIT 16 OUT
	A01B10	14			A01D05	02				16B	9				DFC16B	03	DATA BIT 16 OUT
	A01D05	02													DFC16B	04	DATA BIT 16 OUT
	A01A05	03			A01A23	03				16B	9				DFC17B	01	DATA BIT 17 OUT
	A01A23	03			A01B11	03				16B	9				DFC17B	02	DATA BIT 17 OUT
	A01B11	03			A01D05	03				16B	9				DFC17B	03	DATA BIT 17 OUT
	A01D05	03													DFC17B	04	DATA BIT 17 OUT
	A01A05	07			A01A23	07				16B	9				DFC18B	01	DATA BIT 18 OUT
	A01A23	07			A01B11	07				16B	9				DFC18B	02	DATA BIT 18 OUT
	A01B11	07			A01D05	04				16B	9				DFC18B	03	DATA BIT 18 OUT
	A01D05	04													DFC18B	04	DATA BIT 18 OUT
	A01A05	11			A01A23	11				16B	9				DFC19B	01	DATA BIT 19 OUT
	A01A23	11			A01B11	11				16B	9				DFC19B	02	DATA BIT 19 OUT
	A01B11	11			A01D05	05				16B	9				DFC19B	03	DATA BIT 19 OUT
	A01D05	05													DFC19B	04	DATA BIT 19 OUT
	A01A05	14			A01A23	14				16B	9				DFC20B	01	DATA BIT 20 OUT
	A01A23	14			A01B11	14				16B	9				DFC20B	02	DATA BIT 20 OUT
	A01B11	14			A01D05	06				16B	9				DFC20B	03	DATA BIT 20 OUT
	A01D05	06													DFC20B	04	DATA BIT 20 OUT
	A01A06	03			A01A24	03				16B	9				DFC21B	01	DATA BIT 21 OUT
	A01A24	03			A01B12	03				16B	9				DFC21B	02	DATA BIT 21 OUT
	A01B12	03			A01D05	08				16B	9				DFC21B	03	DATA BIT 21 OUT
	A01D05	08													DFC21B	04	DATA BIT 21 OUT
	A01A06	07			A01A24	07				16B	9				DFC22B	01	DATA BIT 22 OUT
	A01A24	07			A01B12	07				16B	9				DFC22B	02	DATA BIT 22 OUT
	A01B12	07			A01D05	09				16B	9				DFC22B	03	DATA BIT 22 OUT
	A01D05	09													DFC22B	04	DATA BIT 22 OUT
	A01A06	11			A01A24	11				16B	9				DFC23B	01	DATA BIT 23 OUT
	A01A24	11			A01B12	11				16B	9				DFC23B	02	DATA BIT 23 OUT
	A01B12	11			A01D05	10				16B	9				DFC23B	03	DATA BIT 23 OUT
	A01D05	10													DFC23B	04	DATA BIT 23 OUT
	A01A06	14			A01A24	14				16B	9				DFC24B	01	DATA BIT 24 OUT
	A01A24	14			A01B12	14				16B	9				DFC24B	02	DATA BIT 24 OUT
	A01B12	14			A01D05	11				16B	9				DFC24B	03	DATA BIT 24 OUT
	A01D05	11													DFC24B	04	DATA BIT 24 OUT
	A01A07	03			A01A25	03				16B	9				DFC25B	01	DATA BIT 25 OUT
	A01A25	03			A01B13	03				16B	9				DFC25B	02	DATA BIT 26 OUT
	A01B13	03			A01D05	12				16B	9				DFC25B	03	DATA BIT 25 OUT

Table 5-6. MTS Test Aid Circuit Board Assembly Wire List - Continued.

FROM				TO				WIRE				SLEEVE	SPC	INST	SIGNAL	STRING SEQ. NO.	SIGNAL DESCRIPTION
PREFIX	CONNECTOR	PIN	SH FIG	PREFIX	CONNECTOR	PIN	SH FIG	MULTI	GROUP	CODE	COLOR	IDENT					
	A01D05	12													DFC25B	04	DATA BIT 25 OUT
	A01A07	07			A01A25	07				16B	9				DFC26B	01	DATA BIT 26 OUT
	A01A25	07			A01B13	07				16B	9				DFC26B	02	DATA BIT 27 OUT
	A01B13	07			A01D05	13				16B	9				DFC26B	03	DATA BIT 26 OUT
	A01D05	13													DFC26B	04	DATA BIT 26 OUT
	A01A07	11			A01A25	11				16B	9				DFC27B	01	DATA BIT 27 OUT
	A01A25	11			A01B13	11				16B	9				DFC27B	02	DATA BIT 28 OUT
	A01B13	11			A01D05	14				16B	9				DFC27B	03	DATA BIT 27 OUT
	A01D05	14													DFC27B	04	DATA BIT 27 OUT
	A01A07	14			A01A25	14				16B	9				DFC28B	01	DATA BIT 28 OUT
	A01A25	14			A01B13	14				16B	9				DFC28B	02	DATA BIT 29 OUT
	A01B13	14			A01D09	01				16B	9				DFC28B	03	DATA BIT 28 OUT
	A01D09	01													DFC28B	04	DATA BIT 28 OUT
	A01A08	03			A01A26	03				16B	9				DFC29B	01	DATA BIT 29 OUT
	A01A26	03			A01B14	03				16B	9				DFC29B	02	DATA BIT 29 OUT
	A01B14	03			A01D09	02				16B	9				DFC29B	03	DATA BIT 29 OUT
	A01D09	02													DFC29B	04	DATA BIT 29 OUT
	A01A08	07			A01A26	07				16B	9				DFC30B	01	DATA BIT 30 OUT
	A01A26	07			A01B14	07				16B	9				DFC30B	02	DATA BIT 30 OUT
	A01B14	07			A01D09	03				16B	9				DFC30B	03	DATA BIT 30 OUT
	A01D09	03													DFC30B	04	DATA BIT 30 OUT
	A01A08	11			A01A26	11				16B	9				DFC31B	01	DATA BIT 31 OUT
	A01A26	11			A01B14	11				16B	9				DFC31B	02	DATA BIT 31 OUT
	A01B14	11			A01D09	04				16B	9				DFC31B	03	DATA BIT 31 OUT
	A01D09	04													DFC31B	04	DATA BIT 31 OUT
	A01A08	14			A01A26	14				16B	9				DFC32B	01	DATA BIT 32 OUT
	A01A26	14			A01B14	14				16B	9				DFC32B	02	DATA BIT 32 OUT
	A01B14	14			A01D09	05				16B	9				DFC32B	03	DATA BIT 32 OUT
	A01D09	05													DFC32B	04	DATA BIT 32 OUT
	A01A09	03			A01A27	03				16B	9				DFC33B	01	DATA BIT 33 OUT
	A01A27	03			A01B15	03				16B	9				DFC33B	02	DATA BIT 33 OUT
	A01B15	03			A01D09	06				16B	9				DFC33B	03	DATA BIT 33 OUT
	A01D09	06													DFC33B	04	DATA BIT 33 OUT
	A01A09	07			A01A27	07				16B	9				DFC34B	01	DATA BIT 34 OUT
	A01A27	07			A01B15	07				16B	9				DFC34B	02	DATA BIT 34 OUT
	A01B15	07			A01D09	08				16B	9				DFC34B	03	DATA BIT 34 OUT
	A01D09	08													DFC34B	04	DATA BIT 34 OUT
	A01A09	11			A01A27	11				16B	9				DFC35B	01	DATA BIT 35 OUT
	A01A27	11			A01B15	11				16B	9				DFC35B	02	DATA BIT 35 OUT
	A01B15	11			A01D09	09				16B	9				DFC35B	03	DATA BIT 35 OUT
	A01D09	09													DFC35B	04	DATA BIT 35 OUT

Table 5-6. MTS Test Aid Circuit Board Assembly Wire List - Continued.

FROM				TO				WIRE								
PREFIX	CONNECTOR	PIN	SH FIG	PREFIX	CONNECTOR	PIN	SH FIG	MULTI GROUP	CODE	COLOR	IDENT	SLEEVE	SPC INST	SIGNAL	STRING SEQ. NO.	SIGNAL DESCRIPTION
	A01A09	14			A01A27	14			16B	9				DFC36B	01	DATA BIT 36 OUT
	A01A27	14			A01B15	14			16B	9				DFC36B	02	DATA BIT 36 OUT
	A01B15	14			A01D09	10			16B	9				DFC36B	03	DATA BIT 36 OUT
	A01D09	10												DFC36B	04	DATA BIT 36 OUT
	A01A10	03			A01A28	03			16B	9				DFC37B	01	DATA BIT 37 OUT
	A01A28	03			A01B16	03			16B	9				DFC37B	02	DATA BIT 37 OUT
	A01B16	03			A01D09	11			16B	9				DFC37B	03	DATA BIT 37 OUT
	A01D09	11												DFC37B	04	DATA BIT 37 OUT
	A01A10	07			A01A28	07			16B	9				DFC38B	01	DATA BIT 38 OUT
	A01A28	07			A01B16	07			16B	9				DFC38B	02	DATA BIT 38 OUT
	A01B16	07			A01D09	12			16B	9				DFC38B	03	DATA BIT 38 OUT
	A01D09	12												DFC38B	04	DATA BIT 38 OUT
	A01A10	11			A01A28	11			16B	9				DFC39B	01	DATA BIT 39 OUT
	A01A28	11			A01B16	11			16B	9				DFC39B	02	DATA BIT 39 OUT
	A01B16	11			A01D09	13			16B	9				DFC39B	03	DATA BIT 39 OUT
	A01D09	13												DFC39B	04	DATA BIT 39 OUT
	A01A10	14			A01A28	14			16B	9				DFC40B	01	DATA BIT 40 OUT
	A01A28	14			A01B16	14			16B	9				DFC40B	02	DATA BIT 40 OUT
	A01B16	14			A01D09	14			16B	9				DFC40B	03	DATA BIT 40 OUT
	A01D09	14												DFC40B	04	DATA BIT 40 OUT
	A01A11	03			A01A29	03			16B	9				DFC41B	01	DATA BIT 41 OUT
	A01A29	03			A01B17	03			16B	9				DFC41B	02	DATA BIT 41 OUT
	A01B17	03			A01D10	01			16B	9				DFC41B	03	DATA BIT 41 OUT
	A01D10	01												DFC41B	04	DATA BIT 41 OUT
	A01A11	07			A01A29	07			16B	9				DFC42B	01	DATA BIT 42 OUT
	A01A29	07			A01B17	07			16B	9				DFC42B	02	DATA BIT 42 OUT
	A01B17	07			A01D10	02			16B	9				DFC42B	03	DATA BIT 42 OUT
	A01D10	02												DFC42B	04	DATA BIT 42 OUT
	A01A11	11			A01A29	11			16B	9				DFC43B	01	DATA BIT 43 OUT
	A01A29	11			A01B17	11			16B	9				DFC43B	02	DATA BIT 43 OUT
	A01B17	11			A01D10	03			16B	9				DFC43B	03	DATA BIT 43 OUT
	A01D10	03												DFC43B	04	DATA BIT 43 OUT
	A01A11	14			A01A29	14			16B	9				DFC44B	01	DATA BIT 44 OUT
	A01A29	14			A01B17	14			16B	9				DFC44B	02	DATA BIT 44 OUT
	A01B17	14			A01D10	04			16B	9				DFC44B	03	DATA BIT 44 OUT
	A01D10	04												DFC44B	04	DATA BIT 44 OUT
	A01A12	03			A01A30	03			16B	9				DFC45B	01	DATA BIT 45 OUT
	A01A30	03			A01B18	03			16B	9				DFC45B	02	DATA BIT 45 OUT
	A01B18	03			A01D10	05			16B	9				DFC45B	03	DATA BIT 45 OUT
	A01D10	05												DFC45B	04	DATA BIT 45 OUT
	A01A12	07			A01A30	07			16B	9				DFC46B	01	DATA BIT 46 OUT
	A01A30	07			A01B18	07			16B	9				DFC46B	02	DATA BIT 46 OUT
	A01B18	07			A01D10	06			16B	9				DFC46B	03	DATA BIT 46 OUT

Table 5-6. MTS Test Aid Circuit Board Assembly Wire List - Continued.

FROM				TO				WIRE								
PREFIX	CONNECTOR	PIN	SH FIG	PREFIX	CONNECTOR	PIN	SH FIG	MULTI	GROUP	CODE	COLOR	IDENT	SLEEVE	SPC	INST	SIGNAL	STRING SEQ. NO.	SIGNAL DESCRIPTION
	A01D10	06														DFC46B	04	DATA BIT 46 OUT
	A01A12	11			A01A30	11				16B	9					DFC47B	01	DATA BIT 47 OUT
	A01A30	11			A01B18	11				16B	9					DFC47B	02	DATA BIT 47 OUT
	A01B18	11			A01D10	08				16B	9					DFC47B	03	DATA BIT 47 OUT
	A01D10	08														DFC47B	04	DATA BIT 47 OUT
	A01A12	14			A01A30	14				16B	9					DFC48B	01	DATA BIT 48 OUT
	A01A30	14			A01B18	14				16B	9					DFC48B	02	DATA BIT 48 OUT
	A01B18	14			A01D10	09				16B	9					DFC48B	03	DATA BIT 48 OUT
	A01D10	09														DFC48B	04	DATA BIT 48 OUT
	A01A13	03			A01B01	03				16B	9					DFC49B	01	DATA BIT 49 OUT
	A01B01	03			A01B19	03				16B	9					DFC49B	02	DATA BIT 49 OUT
	A01B19	03			A01D10	10				16B	9					DFC49B	03	DATA BIT 49 OUT
	A01D10	10														DFC49B	04	DATA BIT 49 OUT
	A01A13	07			A01B01	07				16B	9					DFC50B	01	DATA BIT 50 OUT
	A01B01	07			A01B19	07				16B	9					DFC50B	02	DATA BIT 50 OUT
	A01B19	07			A01D10	11				16B	9					DFC50B	03	DATA BIT 50 OUT
	A01D10	11														DFC50B	04	DATA BIT 50 OUT
	A01A13	11			A01B01	11				16B	9					DFC51B	01	DATA BIT 51 OUT
	A01B01	11			A01B19	11				16B	9					DFC51B	02	DATA BIT 51 OUT
	A01B19	11			A01D10	12				16B	9					DFC51B	03	DATA BIT 51 OUT
	A01D10	12														DFC51B	04	DATA BIT 51 OUT
	A01A13	14			A01B01	14				16B	9					DFC52B	01	DATA BIT 52 OUT
	A01B01	14			A01B19	14				16B	9					DFC52B	02	DATA BIT 52 OUT
	A01B19	14			A01D10	13				16B	9					DFC52B	03	DATA BIT 52 OUT
	A01D10	13														DFC52B	04	DATA BIT 52 OUT
	A01A14	03			A01B02	03				16B	9					DFC53B	01	DATA BIT 53 OUT
	A01B02	03			A01B20	03				16B	9					DFC53B	02	DATA BIT 53 OUT
	A01B20	03			A01D10	14				16B	9					DFC53B	03	DATA BIT 53 OUT
	A01D10	14														DFC53B	04	DATA BIT 53 OUT
	A01A14	07			A01B02	07				16B	9					DFC54B	01	DATA BIT 54 OUT
	A01B02	07			A01B20	07				16B	9					DFC54B	02	DATA BIT 54 OUT
	A01B20	07			A01D14	01				16B	9					DFC54B	03	DATA BIT 54 OUT
	A01D14	01														DFC54B	04	DATA BIT 54 OUT
	A01A14	11			A01B02	11				16B	9					DFC55B	01	DATA BIT 55 OUT
	A01B02	11			A01B20	11				16B	9					DFC55B	02	DATA BIT 55 OUT
	A01B20	11			A01D14	02				16B	9					DFC55B	03	DATA BIT 55 OUT
	A01D14	02														DFC55B	04	DATA BIT 55 OUT
	A01A14	14			A01B02	14				16B	9					DFC56B	01	DATA BIT 56 OUT
	A01B02	14			A01B20	14				16B	9					DFC56B	02	DATA BIT 56 OUT
	A01B20	14			A01D14	03				16B	9					DFC56B	03	DATA BIT 56 OUT
	A01D14	03														DFC56B	04	DATA BIT 56 OUT

Table 5-6. MTS Test Aid Circuit Board Assembly Wire List - Continued.

FROM				TO				WIRE								
PREFIX	CONNECTOR	PIN	SH FIG	PREFIX	CONNECTOR	PIN	SH FIG	MULTI GROUP	CODE	COLOR	IDENT	SLEEVE	SPC INST	SIGNAL	STRING SEQ. NO.	SIGNAL DESCRIPTION
	A01A15	03			A01B03	03			16B	9				DFC57B	01	DATA BIT 57 OUT
	A01B03	03			A01B21	03			16B	9				DFC57B	02	DATA BIT 57 OUT
	A01B21	03			A01D14	04			16B	9				DFC57B	03	DATA BIT 57 OUT
	A01D14	04												DFC57B	04	DATA BIT 57 OUT
	A01A15	07			A01B03	07			16B	9				DFC58B	01	DATA BIT 58 OUT
	A01B03	07			A01B21	07			16B	9				DFC58B	02	DATA BIT 58 OUT
	A01B21	07			A01D14	05			16B	9				DFC58B	03	DATA BIT 58 OUT
	A01D14	05												DFC58B	04	DATA BIT 58 OUT
	A01A15	11			A01B03	11			16B	9				DFC59B	01	DATA BIT 59 OUT
	A01B03	11			A01B21	11			16B	9				DFC59B	02	DATA BIT 59 OUT
	A01B21	11			A01D14	06			16B	9				DFC59B	03	DATA BIT 59 OUT
	A01D14	06												DFC59B	04	DATA BIT 59 OUT
	A01A15	14			A01B03	14			16B	9				DFC60B	01	DATA BIT 60 OUT
	A01B03	14			A01B21	14			16B	9				DFC60B	02	DATA BIT 60 OUT
	A01B21	14			A01D14	08			16B	9				DFC60B	03	DATA BIT 60 OUT
	A01D14	08												DFC60B	04	DATA BIT 60 OUT
	A01A16	03			A01B04	03			16B	9				DFC61B	01	DATA BIT 61 OUT
	A01B04	03			A01B22	03			16B	9				DFC61B	02	DATA BIT 61 OUT
	A01B22	03			A01D14	09			16B	9				DFC61B	03	DATA BIT 61 OUT
	A01D14	09												DFC61B	04	DATA BIT 61 OUT
	A01A16	07			A01B04	07			16B	9				DFC62B	01	DATA BIT 62 OUT
	A01B04	07			A01B22	07			16B	9				DFC62B	02	DATA BIT 62 OUT
	A01B22	07			A01D14	10			16B	9				DFC62B	03	DATA BIT 62 OUT
	A01D14	10												DFC62B	04	DATA BIT 62 OUT
	A01A16	11			A01B04	11			16B	9				DFC63B	01	DATA BIT 63 OUT
	A01B04	11			A01B22	11			16B	9				DFC63B	02	DATA BIT 63 OUT
	A01B22	11			A01D14	11			16B	9				DFC63B	03	DATA BIT 63 OUT
	A01D14	11												DFC63B	04	DATA BIT 63 OUT
	A01A16	14			A01B04	14			16B	9				DFC64B	01	DATA BIT 64 OUT
	A01B04	14			A01B22	14			16B	9				DFC64B	02	DATA BIT 64 OUT
	A01B22	14			A01D14	12			16B	9				DFC64B	03	DATA BIT 64 OUT
	A01D14	12												DFC64B	04	DATA BIT 64 OUT
	A01A17	03			A01B05	03			16B	9				DFC65B	01	DATA BIT 65 OUT
	A01B05	03			A01B23	03			16B	9				DFC65B	02	DATA BIT 65 OUT
	A01B23	03			A01D14	13			16B	9				DFC65B	03	DATA BIT 65 OUT
	A01D14	13												DFC65B	04	DATA BIT 65 OUT
	A01A17	07			A01B05	07			16B	9				DFC66B	01	DATA BIT 66 OUT
	A01B05	07			A01B23	07			16B	9				DFC66B	02	DATA BIT 66 OUT
	A01B23	07			A01D14	14			16B	9				DFC66B	03	DATA BIT 66 OUT
	A01D14	14												DFC66B	04	DATA BIT 66 OUT
	A01A17	11			A01B05	11			16B	9				DFC67B	01	DATA BIT 67 OUT
	A01B05	11			A01B23	11			16B	9				DFC67B	02	DATA BIT 67 OUT
	A01B23	11			A01D15	01			16B	9				DFC67B	03	DATA BIT 67 OUT

Table 5-6. MTS Test Aid Circuit Board Assembly Wire List - Continued.

FROM				TO				WIRE								
PREFIX	CONNECTOR	PIN	SH FIG	PREFIX	CONNECTOR	PIN	SH FIG	MULTI GROUP	CODE	COLOR	IDENT	SLEEVE	SPC	INST	SIGNAL	STRING SEQ. NO.	SIGNAL DESCRIPTION
	A01D15	01													DFC67B	04	DATA BIT 67 OUT
	A01A17	14			A01B05	14			16B	9					DFC68B	01	DATA BIT 68 OUT
	A01B05	14			A01B23	14			16B	9					DFC68B	02	DATA BIT 68 OUT
	A01B23	14			A01D15	02			16B	9					DFC68B	03	DATA BIT 68 OUT
	A01D15	02													DFC68B	04	DATA BIT 68 OUT
	A01A18	03			A01B06	03			16B	9					DFC69B	01	DATA BIT 69 OUT
	A01B06	03			A01B24	03			16B	9					DFC69B	02	DATA BIT 69 OUT
	A01B24	03			A01D15	03			16B	9					DFC69B	03	DATA BIT 69 OUT
	A01D15	03													DFC69B	04	DATA BIT 69 OUT
	A01A18	07			A01B06	07			16B	9					DFC70B	01	DATA BIT 70 OUT
	A01B06	07			A01B24	07			16B	9					DFC70B	02	DATA BIT 70 OUT
	A01B24	07			A01D15	04			16B	9					DFC70B	03	DATA BIT 70 OUT
	A01D15	04													DFC70B	04	DATA BIT 70 OUT
	A01A18	11			A01B06	11			16B	9					DFC71B	01	DATA BIT 71 OUT
	A01B06	11			A01B24	11			16B	9					DFC71B	02	DATA BIT 71 OUT
	A01B24	11			A01D15	05			16B	9					DFC71B	03	DATA BIT 71 OUT
	A01D15	05													DFC71B	04	DATA BIT 71 OUT
	A01A18	14			A01B06	14			16B	9					DFC72B	01	DATA BIT 72 OUT
	A01B06	14			A01B24	14			16B	9					DFC72B	02	DATA BIT 72 OUT
	A01B24	14			A01D15	06			16B	9					DFC72B	03	DATA BIT 72 OUT
	A01D15	06													DFC72B	04	DATA BIT 72 OUT
	A01D04	07			A01D05	07			16B	9					DLPTSW	01	LAMP TEST
	A01D05	07			A01D09	07			16B	9					DLPTSW	02	LAMP TEST
	A01D09	07			A01D10	07			16B	9					DLPTSW	03	LAMP TEST
	A01D10	07			A01D14	07			16B	9					DLPTSW	04	LAMP TEST
	A01D14	07			A01D15	07			16B	9					DLPTSW	05	LAMP TEST
	A01D15	07			A01D19	07			16B	9					DLPTSW	06	LAMP TEST
	A01D19	07			A01D20	07			16B	9					DLPTSW	07	LAMP TEST
	A01D20	07			A01D24	07			16B	9					DLPTSW	08	LAMP TEST
	A01D24	07													DLPTSW	09	LAMP TEST
	A01B25	03			A01D20	10			16B	9					DSLT00	01	SELF TEST B0 OUT
	A01D20	10													DSLT00	02	SELF TEST B0 OUT
	A01B25	07			A01D20	11			16B	9					DSLT01	01	SELF TEST B1 OUT
	A01D20	11													DSLT01	02	SELF TEST B1 OUT
	A01B25	11			A01D20	12			16B	9					DSLT02	01	SELF TEST B2 OUT
	A01D20	12													DSLT02	02	SELF TEST B2 OUT
	A01B25	14			A01D20	13			16B	9					DSLT03	01	SELF TEST B3 OUT
	A01D20	13													DSLT03	02	SELF TEST B3 OUT
	A01B26	03			A01D20	14			16B	9					DSLT04	01	SELF TEST B4 OUT
	A01D20	14													DSLT04	02	SELF TEST B4 OUT

Table 5-6. MTS Test Aid Circuit Board Assembly Wire List - Continued.

FROM				TO				WIRE								
PREFIX	CONNECTOR	PIN	SH FIG	PREFIX	CONNECTOR	PIN	SH FIG	MULTI GROUP	CODE	COLOR	IDENT	SLEEVE	SPC	INST	SIGNAL	STRING SEQ. NO.	SIGNAL DESCRIPTION
	A01B26	07			A01D24	01			16B	9					DSLT05	01	SELF TEST B5 OUT
	A01D24	01													DSLT05	02	SELF TEST B5 OUT
	A01B26	11			A01D24	02			16B	9					DSLT06	01	SELF TEST B6 OUT
	A01D24	02													DSLT06	02	SELF TEST B6 OUT
	A01B26	14			A01D24	03			16B	9					DSLT07	01	SELF TEST B7 OUT
	A01D24	03													DSLT07	02	SELF TEST B7 OUT
	A01B28	11			A01D19	13			16B	9					DSTA01	01	STATE 1 OUT
	A01D19	13													DSTA01	02	STATE 1 OUT
	A01B28	14			A01D19	14			16B	9					DSTA02	01	STATE 2 OUT
	A01D19	14													DSTA02	02	STATE 2 OUT
	A01B29	03			A01D20	01			16B	9					DSTA03	01	STATE 3 OUT
	A01D20	01													DSTA03	02	STATE 3 OUT
	A01B29	07			A01D20	02			16B	9					DSTA04	01	STATE 4 OUT
	A01D20	02													DSTA04	02	STATE 4 OUT
	A01B29	11			A01D20	03			16B	9					DSTA05	01	STATE 5 OUT
	A01D20	03													DSTA05	02	STATE 5 OUT
	A01B29	14			A01D20	04			16B	9					DSTA06	01	STATE 6 OUT
	A01D20	04													DSTA06	02	STATE 6 OUT
	A01B30	03			A01D20	05			16B	9					DSTA07	01	STATE 7 OUT
	A01D20	05													DSTA07	02	STATE 7 OUT
	A01B30	07			A01D20	06			16B	9					DSTA08	01	STATE 8 OUT
	A01D20	06													DSTA08	02	STATE 8 OUT
	A01B30	11			A01D20	08			16B	9					DSTA09	01	STATE 9 OUT
	A01D20	08													DSTA09	02	STATE 9 OUT
	A01B30	14			A01D20	09			16B	9					DSTA10	01	STATE 10 OUT
	A01D20	09													DSTA10	02	STATE 10 OUT
	A01C02	11			A01D15	14			16B	9					DXAD01	01	X ADDRESS 1 OUT
	A01D15	14													DXAD01	02	X ADDRESS 1 OUT
	A01C02	14			A01D19	01			16B	9					DXAD02	01	X ADDRESS 2 OUT
	A01D19	01													DXAD02	02	X ADDRESS 2 OUT
	A01C03	03			A01D19	02			16B	9					DXAD04	01	X ADDRESS 4 OUT
	A01D19	02													DXAD04	02	X ADDRESS 4 OUT

Table 5-6. MTS Test Aid Circuit Board Assembly Wire List - Continued.

FROM				TO				WIRE								
PREFIX	CONNECTOR	PIN	SH FIG	PREFIX	CONNECTOR	PIN	SH FIG	MULTI	GROUP	CODE	COLOR	IDENT	SLEEVE	SPC	INST	SIGNAL	STRING SEQ. NO.	SIGNAL DESCRIPTION
	A01C03	07			A01D19	03				16B	9					DXAD08	01	X ADDRESS 8 OUT
	A01D19	03														DXAD08	02	X ADDRESS 8 OUT
	A01C01	03			A01D15	08				16B	9					DYAD01	01	Y ADDRESS 1 OUT
	A01D15	08														DYAD01	02	Y ADDRESS 1 OUT
	A01C01	07			A01D15	09				16B	9					DYAD02	01	Y ADDRESS 2 OUT
	A01D15	09														DYAD02	02	Y ADDRESS 2 OUT
	A01C01	11			A01D15	10				16B	9					DYAD04	01	Y ADDRESS 4 OUT
	A01D15	10														DYAD04	02	Y ADDRESS 4 OUT
	A01C01	14			A01D15	11				16B	9					DYAD08	01	Y ADDRESS 8 OUT
	A01D15	11														DYAD08	02	Y ADDRESS 8 OUT
	A01C02	03			A01D15	12				16B	9					DYAD16	01	Y ADDRESS 16 OUT
	A01D15	12														DYAD16	02	Y ADDRESS 16 OUT
	A01C02	07			A01D15	13				16B	9					DYAD32	01	Y ADDRESS 32 OUT
	A01D15	13														DYAD32	02	Y ADDRESS 32 OUT
	A01A19	01			A01C04	01				16B	9					FHID01	01	INVERTER,FUNCTION
	A01C04	01														FHID01	02	INVERTER,FUNCTION
	A01A19	05			A01C04	02				16B	9					FHID02	01	INVERTER,FUNCTION
	A01C04	02														FHID02	02	INVERTER,FUNCTION
	A01A19	08			A01C04	06				16B	9					FHID03	01	INVERTER,FUNCTION
	A01C04	06														FHID03	02	INVERTER,FUNCTION
	A01A19	12			A01C04	07				16B	9					FHID04	01	INVERTER,FUNCTION
	A01C04	07														FHID04	02	INVERTER,FUNCTION
	A01A20	01			A01C04	09				16B	9					FHID05	01	INVERTER,FUNCTION
	A01C04	09														FHID05	02	INVERTER,FUNCTION
	A01A20	05			A01C04	13				16B	9					FHID06	01	INVERTER,FUNCTION
	A01C04	13														FHID06	02	INVERTER,FUNCTION
	A01A20	08			A01C05	01				16B	9					FHID07	01	INVERTER,FUNCTION
	A01C05	01														FHID07	02	INVERTER,FUNCTION
	A01A20	12			A01C05	02				16B	9					FHID08	01	INVERTER,FUNCTION
	A01C05	02														FHID08	02	INVERTER,FUNCTION
	A01A21	01			A01C05	06				16B	9					FHID09	01	INVERTER,FUNCTION
	A01C05	06														FHID09	02	INVERTER,FUNCTION

Table 5-6. MTS Test Aid Circuit Board Assembly Wire List - Continued.

FROM				TO				WIRE								
PREFIX	CONNECTOR	PIN	SH FIG	PREFIX	CONNECTOR	PIN	SH FIG	MULTI	GROUP	CODE	COLOR	IDENT	SLEEVE	SPC	INST	SIGNAL	STRING SEQ. NO.	SIGNAL DESCRIPTION
	A01A21	05			A01C05	07				16B	9					FHID10	01	INVERTER,FUNCTION
	A01C05	07														FHID10	02	INVERTER,FUNCTION
	A01A21	08			A01C05	09				16B	9					FHID11	01	INVERTER,FUNCTION
	A01C05	09														FHID11	02	INVERTER,FUNCTION
	A01A21	12			A01C05	13				16B	9					FHID12	01	INVERTER,FUNCTION
	A01C05	13														FHID12	02	INVERTER,FUNCTION
	A01A22	01			A01C06	01				16B	9					FHID13	01	INVERTER,FUNCTION
	A01C06	01														FHID13	02	INVERTER,FUNCTION
	A01A22	05			A01C06	02				16B	9					FHID14	01	INVERTER,FUNCTION
	A01C06	02														FHID14	02	INVERTER,FUNCTION
	A01A22	08			A01C06	06				16B	9					FHID15	01	INVERTER,FUNCTION
	A01C06	06														FHID15	02	INVERTER,FUNCTION
	A01A22	12			A01C06	07				16B	9					FHID16	01	INVERTER,FUNCTION
	A01C06	07														FHID16	02	INVERTER,FUNCTION
	A01A23	01			A01C06	09				16B	9					FHID17		INVERTER,FUNCTION
	A01C06	09														FHID17	02	INVERTER,FUNCTION
	A01A23	05			A01C06	13				16B	9					FHID18	01	INVERTER,FUNCTION
	A01C06	13														FHID18	02	INVERTER,FUNCTION
	A01A23	08			A01C07	01				16B	9					FHID19	01	INVERTER,FUNCTION
	A01C07	01														FHID19	02	INVERTER,FUNCTION
	A01A23	12			A01C07	02				16B	9					FHID20	01	INVERTER,FUNCTION
	A01C07	02														FHID20	02	INVERTER,FUNCTION
	A01A24	01			A01C07	06				16B	9					FHID21	01	INVERTER,FUNCTION
	A01C07	06														FHID21	02	INVERTER,FUNCTION
	A01A24	05			A01C07	07				16B	9					FHID22	01	INVERTER,FUNCTION
	A01C07	07														FHID22	02	INVERTER,FUNCTION
	A01A24	08			A01C07	09				16B	9					FHID23	01	INVERTER,FUNCTION
	A01C07	09														FHID23	02	INVERTER,FUNCTION
	A01A24	12			A01C07	13				16B	9					FHID24	01	INVERTER,FUNCTION
	A01C07	13														FHID24	02	INVERTER,FUNCTION
	A01A25	01			A01C08	01				16B	9					FHID25	01	INVERTER,FUNCTION
	A01C08	01														FHID25	02	INVERTER,FUNCTION

Table 5-6. MTS Test Aid Circuit Board Assembly Wire List - Continued.

FROM				TO				WIRE								
PREFIX	CONNECTOR	PIN	SH FIG	PREFIX	CONNECTOR	PIN	SH FIG	MULTI GROUP	CODE	COLOR	IDENT	SLEEVE	SPC	INST	SIGNAL	STRING SEQ. NO.	SIGNAL DESCRIPTION
	A01A25	05			A01C08	02			16B	9					FHID26	01	INVERTER,FUNCTION
	A01C08	02													FHID26	02	INVERTER,FUNCTION
	A01A25	08			A01C08	06			16B	9					FHID27	01	INVERTER,FUNCTION
	A01C08	06													FHID27	02	INVERTER,FUNCTION
	A01A25	12			A01C08	07			16B	9					FHID28	01	INVERTER,FUNCTION
	A01C08	07													FHID28	02	INVERTER,FUNCTION
	A01A26	01			A01C08	09			16B	9					FHID29	01	INVERTER,FUNCTION
	A01C08	09													FHID29	02	INVERTER,FUNCTION
	A01A26	05			A01C08	13			16B	9					FHID30	01	INVERTER,FUNCTION
	A01C08	13													FHID30	02	INVERTER,FUNCTION
	A01A26	08			A01C09	01			16B	9					FHID31	01	INVERTER,FUNCTION
	A01C09	01													FHID31	02	INVERTER,FUNCTION
	A01A26	12			A01C09	02			16B	9					FHID32	01	INVERTER,FUNCTION
	A01C09	02													FHID32	02	INVERTER,FUNCTION
	A01A27	01			A01C09	06			16B	9					FHID33	01	INVERTER,FUNCTION
	A01C09	06													FHID33	02	INVERTER,FUNCTION
	A01A27	05			A01C09	07			16B	9					FHID34	01	INVERTER,FUNCTION
	A01C09	07													FHID34	02	INVERTER,FUNCTION
	A01A27	08			A01C09	09			16B	9					FHID35	01	INVERTER,FUNCTION
	A01C09	09													FHID35	02	INVERTER,FUNCTION
	A01A27	12			A01C09	13			16B	9					FHID36	01	INVERTER,FUNCTION
	A01C09	13													FHID36	02	INVERTER,FUNCTION
	A01A28	01			A01C10	01			16B	9					FHID37	01	INVERTER,FUNCTION
	A01C10	01													FHID37	02	INVERTER,FUNCTION
	A01A28	05			A01C10	02			16B	9					FHID38	01	INVERTER,FUNCTION
	A01C10	02													FHID38	02	INVERTER,FUNCTION
	A01A28	08			A01C10	06			16B	9					FHID39	01	INVERTER,FUNCTION
	A01C10	06													FHID39	02	INVERTER,FUNCTION
	A01A28	12			A01C10	07			16B	9					FHID40	01	INVERTER,FUNCTION
	A01C10	07													FHID40	02	INVERTER,FUNCTION
	A01A29	01			A01C10	09			16B	9					FHID41	01	INVERTER,FUNCTION
	A01C10	09													FHID41	02	INVERTER,FUNCTION

Table 5-6. MTS Test Aid Circuit Board Assembly Wire List - Continued.

FROM				TO				WIRE								
PREFIX	CONNECTOR	PIN	SH FIG	PREFIX	CONNECTOR	PIN	SH FIG	MULTI GROUP	CODE	COLOR	IDENT	SLEEVE	SPC	INST	SIGNAL	STRING SEQ. NO.	SIGNAL DESCRIPTION
	A01A29	05			A01C10	13			16B	9					FHID42	01	INVERTER,FUNCTION
	A01C10	13													FHID42	02	INVERTER,FUNCTION
	A01A29	08			A01C11	01			16B	9					FHID43	01	INVERTER,FUNCTION
	A01C11	01													FHID43	02	INVERTER,FUNCTION
	A01A29	12			A01C11	02			16B	9					FHID44	01	INVERTER,FUNCTION
	A01C11	02													FHID44	02	INVERTER,FUNCTION
	A01A30	01			A01C11	06			16B	9					FHID45	01	INVERTER,FUNCTION
	A01C11	06													FHID45	02	INVERTER,FUNCTION
	A01A30	05			A01C11	07			16B	9					FHID46	01	INVERTER,FUNCTION
	A01C11	07													FHID46	02	INVERTER,FUNCTION
	A01A30	08			A01C11	09			16B	9					FHID47	01	INVERTER,FUNCTION
	A01C11	09													FHID47	02	INVERTER,FUNCTION
	A01A30	12			A01C11	13			16B	9					FHID48	01	INVERTER,FUNCTION
	A01C11	13													FHID48	02	INVERTER,FUNCTION
	A01B01	01			A01C12	01			16B	9					FHID49	01	INVERTER,FUNCTION
	A01C12	01													FHID49	02	INVERTER,FUNCTION
	A01B01	05			A01C12	02			16B	9					FHID50	01	INVERTER,FUNCTION
	A01C12	02													FHID50	02	INVERTER,FUNCTION
	A01B01	08			A01C12	06			16B	9					FHID51	01	INVERTER,FUNCTION
	A01C12	06													FHID51	02	INVERTER,FUNCTION
	A01B01	12			A01C12	07			16B	9					FHID52	01	INVERTER,FUNCTION
	A01C12	07													FHID52	02	INVERTER,FUNCTION
	A01B02	01			A01C12	09			16B	9					FHID53	01	INVERTER,FUNCTION
	A01C12	09													FHID53	02	INVERTER,FUNCTION
	A01B02	05			A01C12	13			16B	9					FHID54	01	INVERTER,FUNCTION
	A01C12	13													FHID54	02	INVERTER,FUNCTION
	A01B02	08			A01C13	01			16B	9					FHID55	01	INVERTER,FUNCTION
	A01C13	01													FHID55	02	INVERTER,FUNCTION
	A01B02	12			A01C13	02			16B	9					FHID56	01	INVERTER,FUNCTION
	A01C13	02													FHID56	02	INVERTER,FUNCTION
	A01B03	01			A01C13	06			16B	9					FHID57	01	INVERTER,FUNCTION
	A01C13	06													FHID57	02	INVERTER,FUNCTION

Table 5-6. MTS Test Aid Circuit Board Assembly Wire List - Continued.

FROM				TO				WIRE				SLEEVE	SPEC	INST	SIGNAL	STRING SEQ. NO.	SIGNAL DESCRIPTION
PREFIX	CONNECTOR	PIN	SH FIG	PREFIX	CONNECTOR	PIN	SH FIG	MULTI	GROUP	CODE	COLOR	IDENT						
	A01B03	05			A01C13	07				16B	9				FHID58	01	INVERTER,FUNCTION
	A01C13	07													FHID58	02	INVERTER,FUNCTION
	A01B03	08			A01C13	09				16B	9				FHID59	01	INVERTER,FUNCTION
	A01C13	09													FHID59	02	INVERTER,FUNCTION
	A01B03	12			A01C13	13				16B	9				FHID60	01	INVERTER,FUNCTION
	A01C13	13													FHID60	02	INVERTER,FUNCTION
	A01B04	01			A01C14	01				16B	9				FHID61	01	INVERTER,FUNCTION
	A01C14	01													FHID61	02	INVERTER,FUNCTION
	A01B04	05			A01C14	02				16B	9				FHID62	01	INVERTER,FUNCTION
	A01C14	02													FHID62	02	INVERTER,FUNCTION
	A01B04	08			A01C14	06				16B	9				FHID63	01	INVERTER,FUNCTION
	A01C14	06													FHID63	02	INVERTER,FUNCTION
	A01B04	12			A01C14	07				16B	9				FHID64	01	INVERTER,FUNCTION
	A01C14	07													FHID64	02	INVERTER,FUNCTION
	A01B05	01			A01C14	09				16B	9				FHID65	01	INVERTER,FUNCTION
	A01C14	09													FHID65	02	INVERTER,FUNCTION
	A01B05	05			A01C14	13				16B	9				FHID66	01	INVERTER,FUNCTION
	A01C14	13													FHID66	02	INVERTER,FUNCTION
	A01B05	08			A01C15	01				16B	9				FHID67	01	INVERTER,FUNCTION
	A01C15	01													FHID67	02	INVERTER,FUNCTION
	A01B05	12			A01C15	02				16B	9				FHID68	01	
	A01C15	02													FHID68	02	INVERTER,FUNCTION
	A01B06	01			A01C15	06				16B	9				FHID69	01	INVERTER,FUNCTION
	A01C15	06													FHID69	02	INVERTER,FUNCTION
	A01B06	05			A01C15	07				16B	9				FHID70	01	INVERTER,FUNCTION
	A01C15	07													FHID70	02	INVERTER,FUNCTION
	A01B06	08			A01C15	09				16B	9				FHID71	01	INVERTER,FUNCTION
	A01C15	09													FHID71	02	INVERTER,FUNCTION
	A01B06	12			A01C15	13				16B	9				FHID72	01	INVERTER,FUNCTION
	A01C15	13													FHID72	02	INVERTER,FUNCTION
	A01A01	G			A01A01	10				16B	9				GND01A01	01	
	A01A01	10													GND01A01	02	

Table 5-6. MTS Test Aid Circuit Board Assembly Wire List - Continued.

FROM				TO				WIRE								
PREFIX	CONNECTOR	PIN	SH FIG	PREFIX	CONNECTOR	PIN	SH FIG	MULTI GROUP	CODE	COLOR	IDENT	SLEEVE	SPC INST	SIGNAL	STRING SEQ. NO.	SIGNAL DESCRIPTION
	A01A02	G			A01A02	10			16B	9				GND01A02	01	
	A01A02	10												GND01A02	02	
	A01A03	G			A01A03	10			16B	9				GND01A03	01	
	A01A03	10												GND01A03	02	
	A01A04	G			A01A04	10			16B	9				GND01A04	01	
	A01A04	10												GND01A04	02	
	A01A05	G			A01A05	10			16B	9				GND01A05	01	
	A01A05	10												GND01A05	02	
	A01A06	G			A01A06	10			16B	9				GND01A06	01	
	A01A06	10												GND01A06	02	
	A01A07	G			A01A07	10			16B	9				GND01A07	01	
	A01A07	10												GND01A07	02	
	A01A08	G			A01A08	10			16B	9				GND01A08	01	
	A01A08	10												GND01A08	02	
	A01A09	G			A01A09	10			16B	9				GND01A09	01	
	A01A09	10												GND01A09	02	
	A01A10	G			A01A10	10			16B	9				GND01A10	01	
	A01A10	10												GND01A10	02	
	A01A11	G			A01A11	10			16B	9				GND01A11	01	
	A01A11	10												GND01A11	02	
	A01A12	G			A01A12	10			16B	9				GND01A12	01	
	A01A12	10												GND01A12	02	
	A01A13	G			A01A13	10			16B	9				GND01A13	01	
	A01A13	10												GND01A13	02	
	A01A14	G			A01A14	10			16B	9				GND01A14	01	
	A01A14	10												GND01A14	02	
	A01A15	G			A01A15	10			16B	9				GND01A15	01	
	A01A15	10												GND01A15	02	
	A01A16	G			A01A16	10			16B	9				GND01A16	01	
	A01A16	10												GND01A16	02	
	A01A17	G			A01A17	10			16B	9				GND01A17	01	
	A01A17	10												GND01A17	02	

Table 5-6. MTS Test Aid Circuit Board Assembly Wire List - Continued.

FROM				TO				WIRE								
PREFIX	CONNECTOR	PIN	SH FIG	PREFIX	CONNECTOR	PIN	SH FIG	MULTI	GROUP	CODE	COLOR	IDENT	SLEEVE	SPC	INST	SIGNAL	STRING SEQ. NO.	SIGNAL DESCRIPTION
	A01A18	G			A01A18	10				16B	9					GND01A18	01	
	A01A18	10														GND01A18	02	
	A01A19	G			A01A19	10				16B	9					GND01A19	01	
	A01A19	10														GND01A19	02	
	A01A20	G			A01A20	10				16B	9					GND01A20	01	
	A01A20	10														GND01A20	02	
	A01A21	G			A01A21	10				16B	9					GND01A21	01	
	A01A21	10														GND01A21	02	
	A01A22	G			A01A22	10				16B	9					GND01A22	01	
	A01A22	10														GND01A22	02	
	A01A23	G			A01A23	10				16B	9					GND01A23	01	
	A01A23	10														GND01A23	02	
	A01A24	G			A01A24	10				16B	9					GND01A24	01	
	A01A24	10														GND01A24	02	
	A01A25	G			A01A25	10				16B	9					GND01A25	01	
	A01A25	10														GND01A25	02	
	A01A26	G			A01A26	10				16B	9					GND01A26	01	
	A01A26	10														GND01A26	02	
	A01A27	G			A01A27	10				16B	9					GND01A27	01	
	A01A27	10														GND01A27	02	
	A01A28	G			A01A28	10				16B	9					GND01A28	01	
	A01A28	10														GND01A28	02	
	A01A29	G			A01A29	10				16B	9					GND01A29	01	
	A01A29	10														GND01A29	02	
	A01A30	G			A01A30	10				16B	9					GND01A30	01	
	A01A30	10														GND01A30	02	
	A01B01	G			A01B01	10				16B	9					GND01B01	01	
	A01B01	10														GND01B01	02	
	A01B02	G			A01B02	10				16B	9					GND01B02	01	
	A01B02	10														GND01B02	02	
	A01B03	G			A01B03	10				16B	9					GND01B03	01	
	A01B03	10														GND01B03	02	

Table 5-6. MTS Test Aid Circuit Board Assembly Wire List - Continued.

FROM				TO				WIRE								
PREFIX	CONNECTOR	PIN	SH FIG	PREFIX	CONNECTOR	PIN	SH FIG	MULTI	GROUP	CODE	COLOR	IDENT	SLEEVE	SPC	INST	SIGNAL	STRING SEQ. NO.	SIGNAL DESCRIPTION
	A01B04	G			A01B04	10				16B	9					GND01B04	01	
	A01B04	10														GND01B04	02	
	A01B05	G			A01B05	10				16B	9					GND01B05	01	
	A01B05	10														GND01B05	02	
	A01B06	G			A01B06	10				16B	9					GND01B06	01	
	A01B06	10														GND01B06	02	
	A01B07	G			A01B07	10				16B	9					GND01B07	01	
	A01B07	10														GND01B07	02	
	A01B08	G			A01B08	10				16B	9					GND01B08	01	
	A01B08	10														GND01B08	02	
	A01B09	G			A01B09	10				16B	9					GND01B09	01	
	A01B09	10														GND01B09	02	
	A01B10	G			A01B10	10				16B	9					GND01B10	01	
	A01B10	10														GND01B10	02	
	A01B11	G			A01B11	10				16B	9					GND01B11	01	
	A01B11	10														GND01B11	02	
	A01B12	G			A01B12	10				16B	9					GND01B12	01	
	A01B12	10														GND01B12	02	
	A01B13	G			A01B13	10				16B	9					GND01B13	01	
	A01B13	10														GND01B13	02	
	A01B14	G			A01B14	10				16B	9					GND01B14	01	
	A01B14	10														GND01B14	02	
	A01B15	G			A01B15	10				16B	9					GND01B15	01	
	A01B15	10														GND01B15	02	
	A01B16	G			A01B16	10				16B	9					GND01B16	01	
	A01B16	10														GND01B16	02	
	A01B17	G			A01B17	10				16B	9					GND01B17	01	
	A01B17	10														GND01B17	02	
	A01B18	G			A01B18	10				16B	9					GND01B18	01	
	A01B18	10														GND01B18	02	
	A01B19	G			A01B19	10				16B	9					GND01B19	01	
	A01B19	10														GND01B19	02	

Table 5-6. MTS Test Aid Circuit Board Assembly Wire List - Continued.

FROM				TO				WIRE								
PREFIX	CONNECTOR	PIN	SH FIG	PREFIX	CONNECTOR	PIN	SH FIG	MULTI GROUP	CODE	COLOR	IDENT	SLEEVE	SPC	INST	SIGNAL	STRING SEQ. NO.	SIGNAL DESCRIPTION
	A01B20	G			A01B20	10			16B	9					GND01B20	01	
	A01B20	10													GND01B20	02	
	A01B21	G			A01B21	10			16B	9					GND01B21	01	
	A01B21	10													GND01B21	02	
	A01B22	G			A01B22	10			16B	9					GND01B22	01	
	A01B22	10													GND01B22	02	
	A01B23	G			A01B23	10			16B	9					GND01B23	01	
	A01B23	10													GND01B23	02	
	A01B24	G			A01B24	10			16B	9					GND01B24	01	
	A01B24	10													GND01B24	02	
	A01B25	G			A01B25	10			16B	9					GND01B25	01	
	A01B25	10													GND01B25	02	
	A01B26	G			A01B26	10			16B	9					GND01B26	01	
	A01B26	10													GND01B26	02	
	A01B27	G			A01B27	10			16B	9					GND01B27	01	
	A01B27	10													GND01B27	02	
	A01B28	G			A01B28	10			16B	9					GND01B28	01	
	A01B28	10													GND01B28	02	
	A01B29	G			A01B29	10			16B	9					GND01B29	01	
	A01B29	10													GND01B29	02	
	A01B30	G			A01B30	10			16B	9					GND01B30	01	
	A01B30	10													GND01B30	02	
	A01C01	G			A01C01	10			16B	9					GND01C01	01	
	A01C01	10													GND01C01	02	
	A01C02	G			A01C02	10			16B	9					GND01C02	01	
	A01C02	10													GND01C02	02	
	A01C03	G			A01C03	10			16B	9					GND01C03	01	
	A01C03	10													GND01C03	02	
	A01C04	G			A01C04	10			16B	9					GND01C04	01	
	A01C04	10													GND01C04	02	
	A01C05	G			A01C05	10			16B	9					GND01C05	01	
	A01C05	10													GND01C05	02	

Table 5-6. MTS Test Aid Circuit Board Assembly Wire List - Continued.

FROM				TO				WIRE				SLEEVE	SPC	INST	SIGNAL	STRING SEQ. NO.	SIGNAL DESCRIPTION
PREFIX	CONNECTOR	PIN	SH FIG	PREFIX	CONNECTOR	PIN	SH FIG	MULTI GROUP	CODE	COLOR	IDENT						
	A01C06	G			A01C06	10			16B	9					GND01C06	01	
	A01C06	10													GND01C06	02	
	A01C07	G			A01C07	10			16B	9					GND01C07	01	
	A01C07	10													GND01C07	02	
	A01C08	G			A01C08	10			16B	9					GND01C08	01	
	A01C08	10													GND01C08	02	
	A01C09	G			A01C09	10			16B	9					GND01C09	01	
	A01C09	10													GND01C09	02	
	A01C10	G			A01C10	10			16B	9					GND01C10	01	
	A01C10	10													GND01C10	02	
	A01C11	G			A01C11	10			16B	9					GND01C11	01	
	A01C11	10													GND01C11	02	
	A01C12	G			A01C12	10			16B	9					GND01C12	01	
	A01C12	10													GND01C12	02	
	A01C13	G			A01C13	10			16B	9					GND01C13	01	
	A01C13	10													GND01C13	02	
	A01C14	G			A01C14	10			16B	9					GND01C14	01	
	A01C14	10													GND01C14	02	
	A01C15	G			A01C15	10			16B	9					GND01C15	01	
	A01C15	10													GND01C15	02	
	A01C16	G			A01C16	10			16B	9					GND01C16	01	
	A01C16	10													GND01C16	02	
	A01C17	G			A01C17	10			16B	9					GND01C17	01	
	A01C17	10													GND01C17	02	
	A01C18	G			A01C18	10			16B	9					GND01C18	01	
	A01C18	10													GND01C18	02	
	A01C19	G			A01C19	10			16B	9					GND01C19	01	
	A01C19	10													GND01C19	02	
	A01C20	G			A01C20	10			16B	9					GND01C20	01	
	A01C20	10													GND01C20	02	
	A01C21	G			A01C21	10			16B	9					GND01C21	01	
	A01C21	10													GND01C21	02	

Table 5-6. MTS Test Aid Circuit Board Assembly Wire List - Continued.

FROM				TO				WIRE								
PREFIX	CONNECTOR	PIN	SH FIG	PREFIX	CONNECTOR	PIN	SH FIG	MULTI	GROUP	CODE	COLOR	IDENT	SLEEVE	SPEC INST	SIGNAL	STRING SEQ. NO.	SIGNAL DESCRIPTION
	A01C22	G			A01C22	10				16B	9				GND01C22	01	
	A01C22	10													GND01C22	02	
	A01C23	G			A01C23	10				16B	9				GND01C23	01	
	A01C23	10													GND01C23	02	
	A01C24	G			A01C24	10				16B	9				GND01C24	01	
	A01C24	10													GND01C24	02	
	A01C25	G			A01C25	10				16B	9				GND01C25	01	
	A01C25	10													GND01C25	02	
	A01C26	G			A01C26	10				16B	9				GND01C26	01	
	A01C26	10													GND01C26	02	
	A01C27	G			A01C27	10				16B	9				GND01C27	01	
	A01C27	10													GND01C27	02	
	A01C28	G			A01C28	10				16B	9				GND01C28	01	
	A01C28	10													GND01C28	02	
	A01C29	G			A01C29	10				16B	9				GND01C29	01	
	A01C29	10													GND01C29	02	
	A01C30	G			A01C30	10				16B	9				GND01C30	01	
	A01C30	10													GND01C30	02	
	A01C03	14			A01D19	05				16B	9				HBLAF0A	01	DATA CLOCK OUT
	A01D19	05													HBLAF0A	02	DATA CLOCK OUT
	A01C03	11			A01D19	04				16B	9				HBLAK0A	01	ENABLE TC OUT
	A01D19	04													HBLAK0A	02	ENABLE TC OUT
	A01D25	02			A01C28	06				16B	9				SCP00A	01	STEP CLOCK PULSE
	A01C28	06													SCP00A	02	STEP CLOCK PULSE
	A01D25	01			A01C28	01				16B	9				SCP000	01	STEP CLOCK PULSE
	A01C28	01													SCP000	02	STEP CLOCK PULSE
	A01D25	03			A01C28	02				16B	9				SCP01A	01	STEP CP
	A01C28	02			A01C28	07				16B	9				SCP01A	02	STEP CP
	A01C28	07													SCP01A	03	STEP CP
	A01B07	02			A01B07	06				16B	9				TCIN3A	01	CONTINUITY ENABLE
	A01B07	06			A01B07	09				16B	9				TCIN3A	02	CONTINUITY ENABLE
	A01B07	09			A01B07	13				16B	9				TCIN3A	03	CONTINUITY ENABLE
	A01B07	13			A01B08	02				16B	9				TCIN3A	04	CONTINUITY ENABLE
	A01B08	02			A01B08	06				16B	9				TCIN3A	05	CONTINUITY ENABLE
	A01B08	06			A01B08	09				16B	9				TCIN3A	06	CONTINUITY ENABLE

Table 5-6. MTS Test Aid Circuit Board Assembly Wire List - Continued.

FROM				TO				WIRE								
PREFIX	CONNECTOR	PIN	SH FIG	PREFIX	CONNECTOR	PIN	SH FIG	MULTI GROUP	CODE	COLOR	IDENT	SLEEVE	SPC	INST	SIGNAL	STRING SEQ. NO.	SIGNAL DESCRIPTION
	A01B08	09			A01B08	13			16B	9					TCIN3A	07	CONTINUITY ENABLE
	A01B08	13			A01B09	02			16B	9					TCIN3A	08	CONTINUITY ENABLE
	A01B09	02			A01B09	06			16B	9					TCIN3A	09	CONTINUITY ENABLE
	A01B09	06			A01B09	09			16B	9					TCIN3A	10	CONTINUITY ENABLE
	A01B09	09			A01B09	13			16B	9					TCIN3A	11	CONTINUITY ENABLE
	A01B09	13			A01B10	02			16B	9					TCIN3A	12	CONTINUITY ENABLE
	A01B10	02			A01B10	06			16B	9					TCIN3A	13	CONTINUITY ENABLE
	A01B10	06			A01B10	09			16B	9					TCIN3A	14	CONTINUITY ENABLE
	A01B10	09			A01B10	13			16B	9					TCIN3A	15	CONTINUITY ENABLE
	A01B10	13			A01B11	02			16B	9					TCIN3A	16	CONTINUITY ENABLE
	A01B11	02			A01B11	06			16B	9					TCIN3A	17	CONTINUITY ENABLE
	A01B11	06			A01B11	09			16B	9					TCIN3A	18	CONTINUITY ENABLE
	A01B11	09			A01B11	13			16B	9					TCIN3A	19	CONTINUITY ENABLE
	A01B11	13			A01B12	02			16B	9					TCIN3A	20	CONTINUITY ENABLE
	A01B12	02			A01B12	06			16B	9					TCIN3A	21	CONTINUITY ENABLE
	A01B12	06			A01B12	09			16B	9					TCIN3A	22	CONTINUITY ENABLE
	A01B12	09			A01B12	13			16B	9					TCIN3A	23	CONTINUITY ENABLE
	A01B12	13			A01B13	02			16B	9					TCIN3A	24	CONTINUITY ENABLE
	A01B13	02			A01B13	06			16B	9					TCIN3A	25	CONTINUITY ENABLE
	A01B13	06			A01B13	09			16B	9					TCIN3A	26	CONTINUITY ENABLE
	A01B13	09			A01B13	13			16B	9					TCIN3A	27	CONTINUITY ENABLE
	A01B13	13			A01B14	02			16B	9					TCIN3A	28	CONTINUITY ENABLE
	A01B14	02			A01B14	06			16B	9					TCIN3A	29	CONTINUITY ENABLE
	A01B14	06			A01B14	09			16B	9					TCIN3A	30	CONTINUITY ENABLE
	A01B14	09			A01B14	13			16B	9					TCIN3A	31	CONTINUITY ENABLE
	A01B14	13			A01B15	02			*16B*	*9*					*TCIN3A*	*32*	*CONTINUITY ENABLE*
	A01B15	02			A01B15	06			16B	9					TCIN3A	33	CONTINUITY ENABLE
	A01B15	06			A01B15	09			16B	9					TCIN3A	34	CONTINUITY ENABLE
	A01B15	09			A01B15	13			16B	9					TCIN3A	35	CONTINUITY ENABLE
	A01B15	13			A01B16	02			16B	9					TCIN3A	36	CONTINUITY ENABLE
	A01B16	02			A01B16	06			16B	9					TCIN3A	37	CONTINUITY ENABLE
	A01B16	06			A01B16	09			16B	9					TCIN3A	38	CONTINUITY ENABLE
	A01B16	09			A01B16	13			16B	9					TCIN3A	39	CONTINUITY ENABLE
	A01B16	13			A01B17	02			16B	9					TCIN3A	40	CONTINUITY ENABLE
	A01B17	02			A01B17	06			16B	9					TCIN3A	41	CONTINUITY ENABLE
	A01B17	06			A01B17	09			16B	9					TCIN3A	42	CONTINUITY ENABLE
	A01B17	09			A01B17	13			16B	9					TCIN3A	43	CONTINUITY ENABLE
	A01B17	13			A01B18	02			16B	9					TCIN3A	44	CONTINUITY ENABLE
	A01B18	02			A01B18	06			16B	9					TCIN3A	45	CONTINUITY ENABLE
	A01B18	06			A01B18	09			16B	9					TCIN3A	46	CONTINUITY ENABLE
	A01B18	09			A01B18	13			16B	9					TCIN3A	47	CONTINUITY ENABLE
	A01B18	13			A01B19	02			16B	9					TCIN3A	48	CONTINUITY ENABLE
	A01B19	02			A01B19	06			16B	9					TCIN3A	49	CONTINUITY ENABLE
	A01B19	06			A01B19	09			16B	9					TCIN3A	50	CONTINUITY ENABLE
	A01B19	09			A01B19	13			16B	9					TCIN3A	51	CONTINUITY ENABLE
	A01B19	13			A01B20	02			16B	9					TCIN3A	52	CONTINUITY ENABLE
	A01B20	02			A01B20	06			16B	9					TCIN3A	53	CONTINUITY ENABLE
	A01B20	06			A01B20	09			16B	9					TCIN3A	54	CONTINUITY ENABLE
	A01B20	09			A01B20	13			16B	9					TCIN3A	55	CONTINUITY ENABLE
	A01B20	13			A01B21	02			16B	9					TCIN3A	56	CONTINUITY ENABLE
	A01B21	02			A01B21	06			16B	9					TCIN3A	57	CONTINUITY ENABLE
	A01B21	06			A01B21	09			16B	9					TCIN3A	58	CONTINUITY ENABLE
	A01B21	09			A01B21	13			16B	9					TCIN3A	59	CONTINUITY ENABLE
	A01B21	13			A01B22	02			16B	9					TCIN3A	60	CONTINUITY ENABLE
	A01B22	02			A01B22	06			16B	9					TCIN3A	61	CONTINUITY ENABLE
	A01B22	06			A01B22	09			16B	9					TCIN3A	62	CONTINUITY ENABLE
	A01B22	09			A01B22	13			*16B*	*9*					*TCIN3A*	*63*	*CONTINUITY ENABLE*
	A01B22	13			A01B23	02			16B	9					TCIN3A	64	CONTINUITY ENABLE
	A01B23	02			A01B23	06			16B	9					TCIN3A	65	CONTINUITY ENABLE
	A01B23	06			A01B23	09			16B	9					TCIN3A	66	CONTINUITY ENABLE
	A01B23	09			A01B23	13			16B	9					TCIN3A	67	CONTINUITY ENABLE
	A01B23	13			A01B24	02			16B	9					TCIN3A	68	CONTINUITY ENABLE
	A01B24	02			A01B24	06			16B	9					TCIN3A	69	CONTINUITY ENABLE

Table 5-6. MTS Test Aid Circuit Board Assembly Wire List - Continued.

FROM				TO				WIRE								
PREFIX	CONNECTOR	PIN	SH FIG	PREFIX	CONNECTOR	PIN	SH FIG	MULTI GROUP	CODE	COLOR	IDENT	SLEEVE	SPC	INST	SIGNAL	STRING SEQ. NO.	SIGNAL DESCRIPTION
	A01B24	06			A01B24	09			16B	9					TCIN3A	70	CONTINUITY ENABLE
	A01B24	09			A01B24	13			16B	9					TCIN3A	71	CONTINUITY ENABLE
	A01B24	13			A01D25	07			16B	9					TCIN3A	72	CONTINUITY ENABLE
	A01D25	07													TCIN3A	73	CONTINUITY ENABLE
	A01A01	02			A01A01	06			16B	9					TDIN1A	01	DATA ENABLE
	A01A01	06			A01A01	09			16B	9					TDIN1A	02	
	A01A01	09			A01A01	13			16B	9					TDIN1A	03	
	A01A01	13			A01A02	02			16B	9					TDIN1A	04	
	A01A02	02			A01A02	06			16B	9					TDIN1A	05	
	A01A02	06			A01A02	09			16B	9					TDIN1A	06	
	A01A02	09			A01A02	13			16B	9					TDIN1A	07	
	A01A02	13			A01A03	02			16B	9					TDIN1A	08	DATA ENABLE
	A01A03	02			A01A03	06			16B	9					TDIN1A	09	DATA ENABLE
	A01A03	06			A01A03	09			16B	9					TDIN1A	10	DATA ENABLE
	A01A03	09			A01A03	13			16B	9					TDIN1A	11	DATA ENABLE
	A01A03	13			A01A04	02			16B	9					TDIN1A	12	DATA ENABLE
	A01A04	02			A01A04	06			16B	9					TDIN1A	13	DATA ENABLE
	A01A04	06			A01A04	09			16B	9					TDIN1A	14	DATA ENABLE
	A01A04	09			A01A04	13			16B	9					TDIN1A	15	DATA ENABLE
	A01A04	13			A01A05	02			16B	9					TDIN1A	16	DATA ENABLE
	A01A05	02			A01A05	06			16B	9					TDIN1A	17	DATA ENABLE
	A01A05	06			A01A05	09			16B	9					TDIN1A	18	DATA ENABLE
	A01A05	09			A01A05	13			16B	9					TDIN1A	19	DATA ENABLE
	A01A05	13			A01A06	02			16B	9					TDIN1A	20	DATA ENABLE
	A01A06	02			A01A06	06			16B	9					TDIN1A	21	DATA ENABLE
	A01A06	06			A01A06	09			16B	9					TDIN1A	22	DATA ENABLE
	A01A06	09			A01A06	13			16B	9					TDIN1A	23	DATA ENABLE
	A01A06	13			A01A07	02			16B	9					TDIN1A	24	DATA ENABLE
	A01A07	02			A01A07	06			16B	9					TDIN1A	25	DATA ENABLE
	A01A07	06			A01A07	09			16B	9					TDIN1A	26	DATA ENABLE
	A01A07	09			A01A07	13			16B	9					TDIN1A	27	DATA ENABLE
	A01A07	13			A01A08	02			16B	9					TDIN1A	28	DATA ENABLE
	A01A08	02			A01A08	06			16B	9					TDIN1A	29	DATA ENABLE
	A01A08	06			A01A08	09			16B	9					TDIN1A	30	DATA ENABLE
	A01A08	09			A01A08	13			16B	9					TDIN1A	31	DATA ENABLE
	A01A08	13			A01A09	02			16B	9					TDIN1A	32	DATA ENABLE
	A01A09	02			A01A09	06			16B	9					TDIN1A	33	DATA ENABLE
	A01A09	06			A01A09	09			16B	9					TDIN1A	34	DATA ENABLE
	A01A09	09			A01A09	13			16B	9					TDIN1A	35	DATA ENABLE
	A01A09	13			A01A10	02			16B	9					TDIN1A	36	DATA ENABLE
	A01A10	02			A01A10	06			16B	9					TDIN1A	37	DATA ENABLE
	A01A10	06			A01A10	09			16B	9					TDIN1A	38	DATA ENABLE
	A01A10	09			A01A10	13			16B	9					TDIN1A	39	DATA ENABLE
	A01A10	13			A01A11	02			16B	9					TDIN1A	40	DATA ENABLE
	A01A11	02			A01A11	06			16B	9					TDIN1A	41	DATA ENABLE
	A01A11	06			A01A11	09			16B	9					TDIN1A	42	DATA ENABLE
	A01A11	09			A01A11	13			16B	9					TDIN1A	43	DATA ENABLE
	A01A11	13			A01A12	02			16B	9					TDIN1A	44	DATA ENABLE
	A01A12	02			A01A12	06			16B	9					TDIN1A	45	DATA ENABLE
	A01A12	06			A01A12	09			16B	9					TDIN1A	46	DATA ENABLE
	A01A12	09			A01A12	13			16B	9					TDIN1A	47	DATA ENABLE
	A01A12	13			A01A13	02			16B	9					TDIN1A	48	DATA ENABLE
	A01A13	02			A01A13	06			16B	9					TDIN1A	49	DATA ENABLE
	A01A13	06			A01A13	09			16B	9					TDIN1A	50	DATA ENABLE
	A01A13	09			A01A13	13			16B	9					TDIN1A	51	DATA ENABLE
	A01A13	13			A01A14	02			16B	9					TDIN1A	52	DATA ENABLE
	A01A14	02			A01A14	06			16B	9					TDIN1A	53	DATA ENABLE
	A01A14	06			A01A14	09			16B	9					TDIN1A	54	DATA ENABLE
	A01A14	09			A01A14	13			16B	9					TDIN1A	55	DATA ENABLE
	A01A14	13			A01A15	02			16B	9					TDIN1A	56	DATA ENABLE
	A01A15	02			A01A15	06			16B	9					TDIN1A	57	DATA ENABLE

Table 5-6. MTS Test Aid Circuit Board Assembly Wire List - Continued.

FROM				TO				WIRE								
PREFIX	CONNECTOR	PIN	SH FIG	PREFIX	CONNECTOR	PIN	SH FIG	MULTI GROUP	CODE	COLOR	IDENT	SLEEVE	SPC INST	SIGNAL	STRING SEQ. NO.	SIGNAL DESCRIPTION
	A01A15	06			A01A15	09			16B	9				TDIN1A	58	DATA ENABLE
	A01A15	09			A01A15	13			16B	9				TDIN1A	59	DATA ENABLE
	A01A15	13			A01A16	02			16B	9				TDIN1A	60	DATA ENABLE
	A01A16	02			A01A16	06			16B	9				TDIN1A	61	DATA ENABLE
	A01A16	06			A01A16	09			16B	9				TDIN1A	62	DATA ENABLE
	A01A16	09			A01A16	13			16B	9				TDIN1A	63	DATA ENABLE
	A01A16	13			A01A17	02			16B	9				TDIN1A	64	DATA ENABLE
	A01A17	02			A01A17	06			16B	9				TDIN1A	65	DATA ENABLE
	A01A17	06			A01A17	09			16B	9				TDIN1A	66	DATA ENABLE
	A01A17	09			A01A17	13			16B	9				TDIN1A	67	DATA ENABLE
	A01A17	13			A01A18	02			16B	9				TDIN1A	68	DATA ENABLE
	A01A18	02			A01A18	06			16B	9				TDIN1A	69	DATA ENABLE
	A01A18	06			A01A18	09			16B	9				TDIN1A	70	DATA ENABLE
	A01A18	09			A01A18	13			16B	9				TDIN1A	71	DATA ENABLE
	A01A18	13			A01D25	05			16B	9				TDIN1A	72	DATA ENABLE
	A01D25	05												TDIN1A	73	DATA ENABLE
	A01A19	02			A01A19	06			16B	9				TFIN2A	01	FUNCTIONAL ENABLE
	A01A19	06			A01A19	09			16B	9				TFIN2A	02	FUNCTIONAL ENABLE
	A01A19	09			A01A19	13			16B	9				TFIN2A	03	FUNCTIONAL ENABLE
	A01A19	13			A01A20	02			16B	9				TFIN2A	04	FUNCTIONAL ENABLE
	A01A20	02			A01A20	06			16B	9				TFIN2A	05	FUNCTIONAL ENABLE
	A01A20	06			A01A20	09			16B	9				TFIN2A	06	FUNCTIONAL ENABLE
	A01A20	09			A01A20	13			16B	9				TFIN2A	07	FUNCTIONAL ENABLE
	A01A20	13			A01A21	02			16B	9				TFIN2A	08	FUNCTIONAL ENABLE
	A01A21	02			A01A21	06			16B	9				TFIN2A	09	FUNCTIONAL ENABLE
	A01A21	06			A01A21	09			16B	9				TFIN2A	10	FUNCTIONAL ENABLE
	A01A21	09			A01A21	13			16B	9				TFIN2A	11	FUNCTIONAL ENABLE
	A01A21	13			A01A22	02			16B	9				TFIN2A	12	FUNCTIONAL ENABLE
	A01A22	02			A01A22	06			16B	9				TFIN2A	13	FUNCTIONAL ENABLE
	A01A22	06			A01A22	09			16B	9				TFIN2A	14	FUNCTIONAL ENABLE
	A01A22	09			A01A22	13			16B	9				TFIN2A	15	FUNCTIONAL ENABLE
	A01A22	13			A01A23	02			16B	9				TFIN2A	16	FUNCTIONAL ENABLE
	A01A23	02			A01A23	06			16B	9				TFIN2A	17	FUNCTIONAL ENABLE
	A01A23	06			A01A23	09			16B	9				TFIN2A	18	FUNCTIONAL ENABLE
	A01A23	09			A01A23	13			16B	9				TFIN2A	19	FUNCTIONAL ENABLE
	A01A23	13			A01A24	02			16B	9				TFIN2A	20	FUNCTIONAL ENABLE
	A01A24	02			A01A24	06			16B	9				TFIN2A	21	FUNCTIONAL ENABLE
	A01A24	06			A01A24	09			16B	9				TFIN2A	22	FUNCTIONAL ENABLE
	A01A24	09			A01A24	13			16B	9				TFIN2A	23	FUNCTIONAL ENABLE
	A01A24	13			A01A25	02			16B	9				TFIN2A	24	FUNCTIONAL ENABLE
	A01A25	02			A01A25	06			16B	9				TFIN2A	25	FUNCTIONAL ENABLE
	A01A25	06			A01A25	09			16B	9				TFIN2A	26	FUNCTIONAL ENABLE
	A01A25	09			A01A25	13			16B	9				TFIN2A	27	FUNCTIONAL ENABLE
	A01A25	13			A01A26	02			16B	9				TFIN2A	28	FUNCTIONAL ENABLE
	A01A26	02			A01A26	06			16B	9				TFIN2A	29	FUNCTIONAL ENABLE
	A01A26	06			A01A26	09			16B	9				TFIN2A	30	FUNCTIONAL ENABLE
	A01A26	09			A01A26	13			16B	9				TFIN2A	31	FUNCTIONAL ENABLE
	A01A26	13			A01A27	02			16B	9				TFIN2A	32	FUNCTIONAL ENABLE
	A01A27	02			A01A27	06			16B	9				TFIN2A	33	FUNCTIONAL ENABLE
	A01A27	06			A01A27	09			16B	9				TFIN2A	34	FUNCTIONAL ENABLE
	A01A27	09			A01A27	13			16B	9				TFIN2A	35	FUNCTIONAL ENABLE
	A01A27	13			A01A28	02			16B	9				TFIN2A	36	FUNCTIONAL ENABLE
	A01A28	02			A01A28	06			16B	9				TFIN2A	37	FUNCTIONAL ENABLE
	A01A28	06			A01A28	09			16B	9				TFIN2A	38	FUNCTIONAL ENABLE
	A01A28	09			A01A28	13			16B	9				TFIN2A	39	FUNCTIONAL ENABLE
	A01A28	13			A01A29	02			16B	9				TFIN2A	40	FUNCTIONAL ENABLE
	A01A29	02			A01A29	06			16B	9				TFIN2A	41	FUNCTIONAL ENABLE
	A01A29	06			A01A29	09			16B	9				TFIN2A	42	FUNCTIONAL ENABLE
	A01A29	09			A01A29	13			16B	9				TFIN2A	43	FUNCTIONAL ENABLE
	A01A29	13			A01A30	02			16B	9				TFIN2A	44	FUNCTIONAL ENABLE
	A01A30	02			A01A30	06			16B	9				TFIN2A	45	FUNCTIONAL ENABLE

Table 5-6. MTS Test Aid Circuit Board Assembly Wire List - Continued.

FROM				TO				WIRE								
PREFIX	CONNECTOR	PIN	SH FIG	PREFIX	CONNECTOR	PIN	SH FIG	MULTI GROUP	CODE	COLOR	IDENT	SLEEVE	SPC	INST	SIGNAL	STRING SEQ. NO.	SIGNAL DESCRIPTION
	A01A30	06			A01A30	09			16B	9					TFIN2A	46	FUNCTIONAL ENABLE
	A01A30	09			A01A30	13			16B	9					TFIN2A	47	FUNCTIONAL ENABLE
	A01A30	13			A01B01	02			16B	9					TFIN2A	48	FUNCTIONAL ENABLE
	A01B01	02			A01B01	06			16B	9					TFIN2A	49	FUNCTIONAL ENABLE
	A01B01	06			A01B01	09			16B	9					TFIN2A	50	FUNCTIONAL ENABLE
	A01B01	09			A01B01	13			16B	9					TFIN2A	51	FUNCTIONAL ENABLE
	A01B01	13			A01B02	02			16B	9					TFIN2A	52	FUNCTIONAL ENABLE
	A01B02	02			A01B02	06			16B	9					TFIN2A	53	FUNCTIONAL ENABLE
	A01B02	06			A01B02	09			16B	9					TFIN2A	54	FUNCTIONAL ENABLE
	A01B02	09			A01B02	13			16B	9					TFIN2A	55	FUNCTIONAL ENABLE
	A01B02	13			A01B03	02			16B	9					TFIN2A	56	FUNCTIONAL ENABLE
	A01B03	02			A01B03	06			16B	9					TFIN2A	57	FUNCTIONAL ENABLE
	A01B03	06			A01B03	09			16B	9					TFIN2A	58	FUNCTIONAL ENABLE
	A01B03	09			A01B03	13			16B	9					TFIN2A	59	FUNCTIONAL ENABLE
	A01B03	13			A01B04	02			16B	9					TFIN2A	60	FUNCTIONAL ENABLE
	A01B04	02			A01B04	06			16B	9					TFIN2A	61	FUNCTIONAL ENABLE
	A01B04	06			A01B04	09			16B	9					TFIN2A	62	FUNCTIONAL ENABLE
	A01B04	09			A01B04	13			16B	9					TFIN2A	63	FUNCTIONAL ENABLE
	A01B04	13			A01B05	02			16B	9					TFIN2A	64	FUNCTIONAL ENABLE
	A01B05	02			A01B05	06			16B	9					TFIN2A	65	FUNCTIONAL ENABLE
	A01B05	06			A01B05	09			16B	9					TFIN2A	66	FUNCTIONAL ENABLE
	A01B05	09			A01B05	13			16B	9					TFIN2A	67	FUNCTIONAL ENABLE
	A01B05	13			A01B06	02			16B	9					TFIN2A	68	FUNCTIONAL ENABLE
	A01B06	02			A01B06	06			16B	9					TFIN2A	69	FUNCTIONAL ENABLE
	A01B06	06			A01B06	09			16B	9					TFIN2A	70	FUNCTIONAL ENABLE
	A01B06	09			A01B06	13			16B	9					TFIN2A	71	FUNCTIONAL ENABLE
	A01B06	13			A01D25	06			16B	9					TFIN2A	72	FUNCTIONAL ENABLE
	A01D25	06													TFIN2A	73	FUNCTIONAL ENABLE
	A01C28	03			A01C28	05			16B	9					WTSSCA1	01	STEP CP
	A01C28	05													WTSSCA1	02	STEP CP

APPENDIX A
REFERENCES

DA Pam 310-1	Consolidated Index of Army Publications and Blank Forms.
SB 11-573	Painting and Preservation. Supplies Available for Field Use for Electronic Command Equipment.
TB 43-0118	Field Instructions for Painting and Preserving Electronics Command Equipment. Including Camouflage Pattern Painting of Electrical Equipment Shelters.
TM 38-750	The Army Maintenance Management System (TAMMS).
TM 740-90-1	Administrative Storage of Equipment.
TM 750-244-2	Procedures for Destruction of Electronics Material to Prevent Enemy Use (Electronics Command).
TM 11-6625-654-14	Operator's, Organizational, Direct Support and General Support Maintenance Repair Parts and Special Tools List (Including Depot Maintenance Repair Parts and Special Tools List) for Multimeter AN/USM-223.
TM 11-6625-700-10	Operator's Manual Digital Readout, Electronics Counter AN/USM-207 (NSN 6625-00-911-6368).
TM 11-6625-1541-15	Operator, Organizational, Direct Support, General Support and Depot Maintenance Manual Hewlett-Packard RMS Voltmeter Model 3400A.
TM 11-6625-2735-14 0969-LP-170-1090 TO 33A1-13-498-1	Operator, Organizational, Direct Support and General Support Maintenance Manual (Including Depot Maintenance) for Oscilloscope OS-261/U (NSN 6625-00-127-0079).
TM 11-6625-2953-14	Operator, Organizational, Direct Support and General Support Maintenance Manual Multimeter AN/USM-451 (NSN 6625-00-060-6804).
TM 11-7010-201-40-1 ET821-AA-MMI-010/E154MTS TO 31S5-2TSQ73-2-1	General Support and Maintenance Manual: Electronics Circuit Plug-in Unit Test Set TS-3317( )/TSQ-73 (NSN 1430-01-033-1078).
TM 11-7010-201-40P ET821-AA-PLG-O1O/E154MTS TO 31S5-2TSQ73-4	Repair Parts and Special Tools List (RPSTL): Electronic Circuit Plug-in Test Set TS-3317( )/TSQ-73 (NSN 1430-01-033-1078).

APPENDIX B

EXPENDABLE SUPPLIES AND MATERIALS LIST

Section I. INTRODUCTION

B-1. Scope

This appendix lists expendable supplies and materials you will need to operate and maintain the TS-3317( )/TSQ-73. These items are authorized to you by CTA 50-970, Expendable Items (Except Medical, Class V, Repair Parts, and Heraldic Items).

B-2. Explanation of Columns

a. Column 1 - Item Number. This number is assigned to the entry in the listing and is referenced in the narrative instructions to identify the material (e.g., "Use cleaning compound, item 5, App. D").

b. Column 2 - Level. This column identifies the lowest level of maintenance that requires the listed item.

C - Operator/Crew
O - Organizational Maintenance
F - Direct Support Maintenance
H - General Support Maintenance

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

d. Column 4 - Description. Indicates the Federal item name and, if required, a description to identify the item. The last line for each item indicates the part number followed by the Federal Supply Code for Manufacturer (FSCM) in parentheses, if applicable.

e. Column 5 - Unit of Measure (U/M). Indicates the measure used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation (e.g., ea, in, pr). If the unit of measure differs from the unit of issue, requisition the lowest unit of issue that will satisfy your requirements.

(1) Level	(2) National Stock Number	(3) Description	(4) U/M
H	7920-00-924-5700	Cloth, Cleaning	EA
H	6850-00-105-3084	Trichlorotrifluoroethane	OZ

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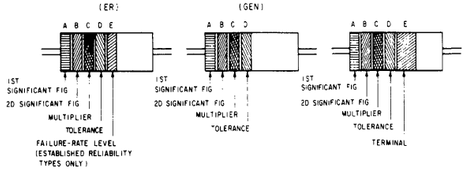


COLOR CODE MARKING FOR COMPOSITION TYPE RESISTORS

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=1.0	
BROWN	1	BROWN	1	BROWN	10			RED	P=0.1	
RED	2	RED	2	RED	100			ORANGE	R=0.01	
ORANGE	3	ORANGE	3	ORANGE	1,000			YELLOW	S=0.001	
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	0.01					
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 (PERCENT FAILURE PER 1,000 HOURS) ON FILM RESISTORS, THIS BAND SHALL BE APPROXIMATELY 1-1/2 TIMES THE WIDTH OF OTHER BANDS, AND INDICATES TYPE OF TERMINAL

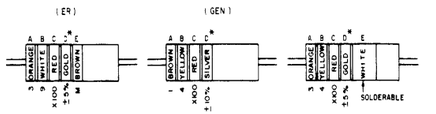
RESISTANCES IDENTIFIED BY NUMBERS AND LETTERS (THESE ARE NOT COLOR CODED)

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



NOMINAL RESISTANCE 3,900 OHMS
RESISTANCE TOLERANCE ±5%
FAILURE RATE LEVEL M

NOMINAL RESISTANCE 1,400 OHMS
RESISTANCE TOLERANCE ±10%

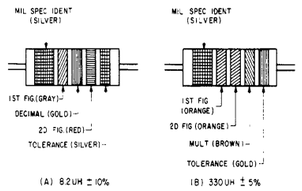
NOMINAL RESISTANCE 3,400 OHMS
RESISTANCE TOLERANCE ±5%
TERMINAL SOLDERABLE

COMPOSITION-TYPE RESISTORS

FILM-TYPE RESISTORS

* 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 THE CODING FOR AN 8.2UH CHOKE IS GIVEN. AT B, THE COLOR BANDS FOR A 330UH 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

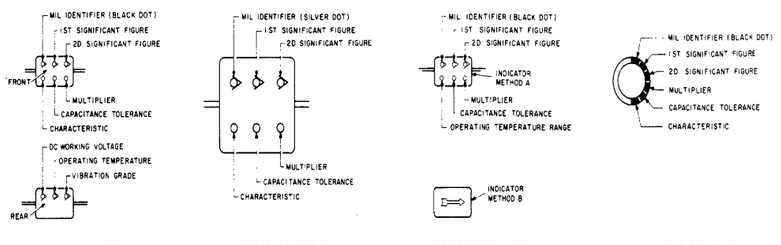


TABLE 3 — FOR USE WITH STYLES CM, CN, CY AND CB.

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	CY, CM	CM
BLACK	CM, CY, CB	C	0	1			±20%	±20%		A			-55°TO+70°C	10-55 H z
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	10-2,000H z
GREEN		5	5		±5%				F			500		
BLUE		6	6										-55°TO+150°C	
PURPLE (VIOLET)		7	7											
GRAY		8	8											
WHITE		9	9											
GOLD				0.1			±5%	±5%						
SILVER	CN			0.01	±10%	±10%	±10%	±10%						

TABLE 4 — TEMPERATURE COMPENSATING, STYLE CC

COLOR	TEMPERATURE COEFFICIENT*	1ST SIG FIG.	2D SIG FIG.	MULTIPLIER*	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				
GRAY		8	8	0.01*			
WHITE		9	9	0.1*	±10%		
GOLD	+100			0.1		±1.0 UUF	
SILVER				0.01			

1 THE MULTIPLIER IS THE NUMBER BY WHICH THE TWO SIGNIFICANT (SIG) FIGURES ARE MULTIPLIED TO OBTAIN THE CAPACITANCE IN UUF.

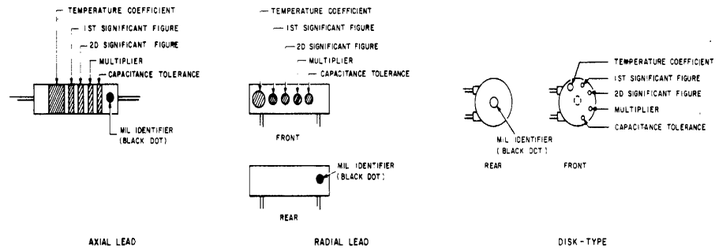
2 LETTERS INDICATE THE CHARACTERISTICS DESIGNATED IN APPLICABLE SPECIFICATIONS MIL-C-5, MIL-C-250, MIL-C-11272B, AND MIL-C-10950C RESPECTIVELY.

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.

* OPTIONAL CODING WHERE METALLIC PIGMENTS ARE UNDESIRABLE.

EL4QU042



C. COLOR CODE MARKING FOR MILITARY STANDARD CAPACITORS

Figure FO-1. Standard Color Coding Chart

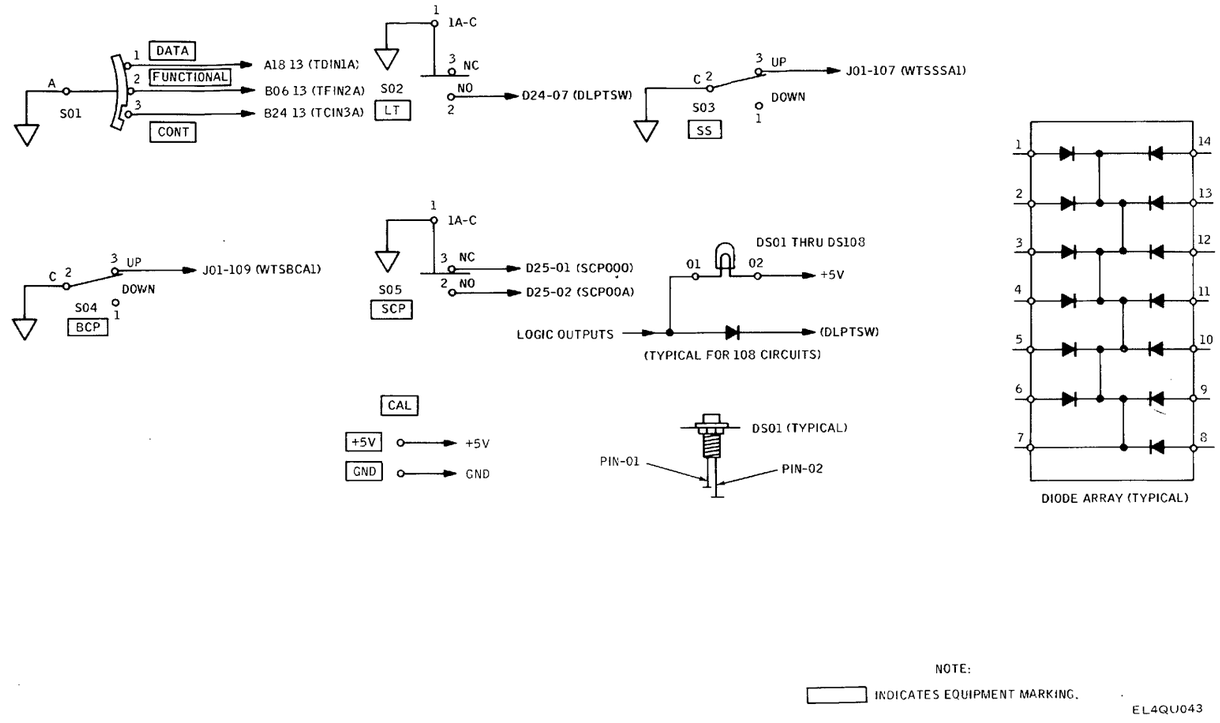
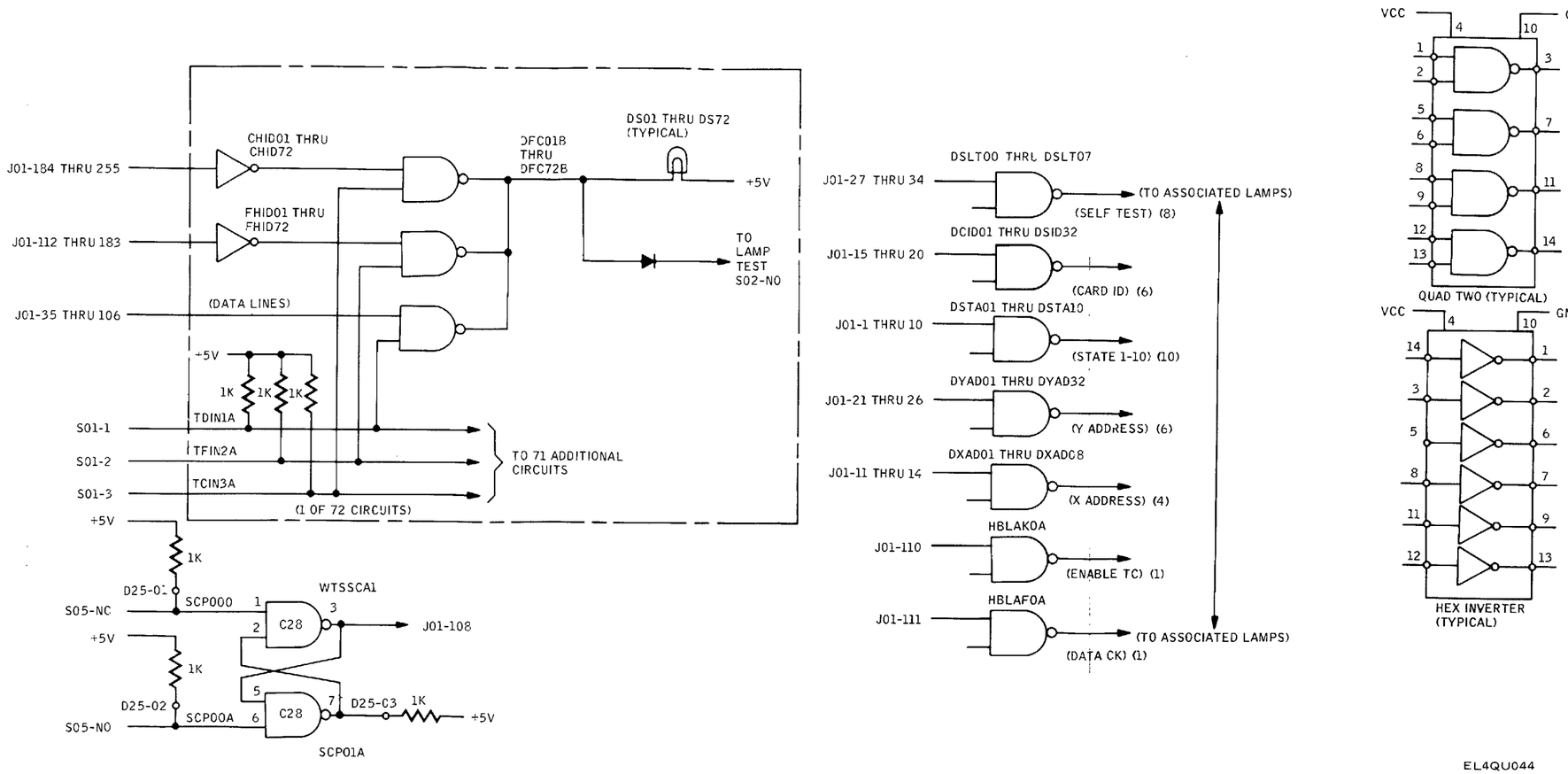


Figure FO-2. MTS Test Aid Schematic Diagram (Sheet 1 of 2)



* GOVERNMENT PRINTING OFFICE: 1987 - 181421 / 70912

Figure FO-2. MTS Test Aid Schematic Diagram (Sheet 2 of 2)

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