

Hybrid32 Pin Card Tests

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This chapter describes Hybrid32 Pin Card tests for Mux systems.

The Hybrid32 Pin Card tests are numbered in the 13000s.

NOTE

All Hybrid32 Pin Card tests require ControlXT Cards.

NOTE

Many of the relay test descriptions include tables that list the relays involved in each subtest. In the tables the relays being tested are in bold type.

NOTE

To isolate relay failures on any Hybrid Card use the Diagnose Relays process in the Mux system Module/Slot Troubleshooting Flowchart.

1. Run Pin Card Relay Tests from the System Diagnostics screen.
 2. Run Diagnostics on a single failing Hybrid Card from the Module/Slot screen.
 3. Run Diagnose Relays (F5) from the Test Execution screen.
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NOTE

Open Relay Tests verify that relays can be opened. If the MOA goes into compliance due to a shorted relay, the system will return the failure message:

-4.400000 L+1 ohms.

This message does not represent a negative resistance but a measurement error. Interpret this message as a shorted path.

NOTE

Confirmation tests are intended to quickly verify system functionality to the module/slot assembly level. To isolate individual field-replaceable relays, use the Diagnose Relays process in the Module/Slot Troubleshooting Flowchart.

Confirmation

- Test 13013
- Test 13021
- Test 13022
- Test 13023
- Test 13024
- Test 13025
- Test 13031
- Test 13032
- Test 13035

Test 13013

Confirm Format Chips and Registers

This confirmation test checks the registers of the format chips on the Hybrid32 Pin Card and then walks 1's and 0's through all the registers and memory.

Test 13021

Confirm Relays can be Closed

This confirmation test verifies that sets of K<x>R and driver and receiver MUX to fixture interface (MINT) pin, analog sub-MUX, X-bus, and XGL-bus relays can be closed. A test failure is caused when any relay in a set being tested fails to close. The relays being tested are shown by subtest in the table below.

Table 10-1

Subtest	Function
Page A	
0a-8a	Close KAR1 through KAR9, KAD1 through KAD9, KAS11, KAX1, and KAXGL1
9a-17a	Close KAR11 through KAR19, KAD11 through KAD19, KAS22, KAX2, and KAXGL2
18a-26a	Close KAR21 through KAR29, KAD21 through KAD29, KAS33, KAX3, and KAXGL3
27a-35a	Close KAR31 through KAR39, KAD31 through KAD39, KAS44, KAX4, and KAXGL4
36a-44a	Close KAR41 through KAR49, KAD41 through KAD49, KAS55, KAX5, and KAXGL5
45a-53a	Close KAR51 through KAR59, KAD51 through KAD59, KAS66, KAX6, and KAXGL6
54a-62a	Close KAR61 through KAR69, KAD61 through KAD69, KAS77, KAX7, and KAXGL7
63a-71a	Close KAR71 through KAR79, KAD71 through KAD79, KAS88, KAX8, and KAXGL8

Table 10-1

Subtest	Function
Page B	
0b-8b	Close KBR1 through KBR9, KBD1 through KBD9, KBS11, KBX1, and KBXGL1
9b-17b	Close KBR11 through KBR19, KBD11 through KBD19, KBS22, KBX2, and KBXGL2
18b-26b	Close KBR21 through KBR29, KBD21 through KBD29, KBS33, KBX3, and KBXGL3
27b-35b	Close KBR31 through KBR39, KBD31 through KBD39, KBS44, KBX4, and KBXGL4
36b-44b	Close KBR41 through KBR49, KBD41 through KBD49, KBS55, KBX5, and KBXGL5
45b-53b	Close KBR51 through KBR59, KBD51 through KBD59, KBS66, KBX6, and KBXGL6
54b-62b	Close KBR61 through KBR69, KBD61 through KBD69, KBS77, KBX7, and KBXGL7
63b-71b	Close KBR71 through KBR79, KBD71 through KBD79, KBS88, KBX8, and KBXGL8

Test 13022

Confirm Driver and Receiver Relays

This confirmation test verifies that the Pin Card driver and receiver channel relays both close and open. A test failure is caused when either relay in a set being tested fails to close. The relays being tested are shown by subtest in the table below.

Table 10-2

Subtest	Function
Page A	
0a-15a	Measure pull-up receiver/driver level of KAR00 through KAR70 and KAP1 through KAP8 for closure check
16a-31a	Measure ground receiver/driver level of KAR00 through KAR70 and KAP1 through KAP8 for open check
32a-48a	Measure pull-up receiver/driver level of KCR00 through KCR70 and KCP1 through KCP8 for closure check
49a-65a	Measure ground receiver/driver level of KCR00 through KCR70 and KCP1 through KCP8 for open check
Page B	
0b-15b	Measure pull-up receiver/driver level of KBR00 through KBR70 and KBP1 through KBP8 for closure check
16b-31b	Measure ground receiver/driver level of KBR00 through KBR70 and KBP1 through KBP8 for open check
32b-48b	Measure pull-up receiver/driver level of KDR00 through KDR70 and KDP1 through KDP8 for closure check
49b-65b	Measure ground receiver/driver level of KDR00 through KDR70 and KDP1 through KDP8 for open check

Test 13023

Confirm Fixture Interface Pins

Requires: Pin Verification Fixture

This confirmation test verifies that the Pin Card fixture interface (MINT) pins have good continuity.

Table 10-3

Subtest	Function
Page A	
0a	Measure path resistance for pins 1, 4, 25, 28, 49, 52, 73, 74
1a	Measure path resistance for pins 3, 6, 27, 30, 51, 54, 75, 76
2a	Measure path resistance for pins 5, 8, 29, 32, 53, 56, 77, 78
a3	Measure path resistance for pins 7, 10, 31, 34, 55, 58, 61, 62
4a	Measure path resistance for pins 9, 12, 33, 36, 57, 42, 63, 64
5a	Measure path resistance for pins 11, 14, 35, 38, 41, 44, 65, 66
6a	Measure path resistance for pins 13, 16, 37, 22, 43, 46, 67, 68
7a	Measure path resistance for pins 15, 18, 21, 24, 45, 48, 69, 70
8a	Measure path resistance for pins 17, 2, 23, 26, 47, 50, 71, 72
Page B	
0b	Measure path resistance for pins 1, 4, 25, 28, 49, 52, 73, 74
1b	Measure path resistance for pins 3, 6, 27, 30, 51, 54, 75, 76
2b	Measure path resistance for pins 5, 8, 29, 32, 53, 56, 77, 78
b3	Measure path resistance for pins 7, 10, 31, 34, 55, 58, 61, 62
4b	Measure path resistance for pins 9, 12, 33, 36, 57, 42, 63, 64
5b	Measure path resistance for pins 11, 14, 35, 38, 41, 44, 65, 66
6b	Measure path resistance for pins 13, 16, 37, 22, 43, 46, 67, 68
7b	Measure path resistance for pins 15, 18, 21, 24, 45, 48, 69, 70
8b	Measure path resistance for pins 17, 2, 23, 26, 47, 50, 71, 72

Test 13024

Confirm Relays can be Opened

This confirmation test verifies that the Pin Card relays can be opened.

Table 10-4

Subtest	Function
Page A	
0a-7a	Check receiver pin relays can be opened
8a-15a	Check driver pin relays can be opened
17a	Check X-bus disconnect relays can be opened
18a	Check XGL-bus relays can be opened
19a	Check XL-bus disconnect and XG-bus disconnect relays can be opened
Page B	
0b-7b	Check receiver pin relays can be opened
8b-15b	Check driver pin relays can be opened
17b	Check X-bus disconnect relays can be opened
18b	Check XGL-bus relays can be opened
19b	Check XL-bus disconnect and XG-bus disconnect relays can be opened

Test 13025

Confirm Ground Relays

Requires: Pin Verification Fixture

This confirmation test verifies that the ground relays can both open and close.

Table 10-5

Subtest	Function
Page A	
0a-5a	Check K<x>G19 through K<x>G60 close
6a-11a	Check K<x>G19 through K<x>G60 can be opened
Page B	
0b-5b	Check K<x>G19 through K<x>G60 close
6b-11b	Check K<x>G19 through K<x>G60 can be opened

Test 13031

Confirm Driver Levels

This confirmation test sets the drivers low to -2.0 volts and then measures the output to verify that the Pin Card driver levels are within tolerance.

Test 13032

Confirm Receiver Levels

This confirmation test verifies the accuracy of the Pin Card receiver levels.

Confirm Driver and Receiver Timing

This confirmation test verifies that the Pin Card driver and receiver timing is accurate. Test 13034

Confirm Driver and Receiver at Speed

This confirmation test verifies that the Pin Card drivers and receivers operate at 6.25 MHz.

Test 13035

Confirm Driver and Receiver Data Capture

This confirmation test verifies that the Pin Card driver and receiver data handling is working.

Card Communication

- Test 13112
- Test 13140 and Test 13150
- Test 13160
- Test 13161
- Test 13170

Test 13112

Reset and Initialize Hybrid32 Pin Card

This test verifies that the Hybrid32 Pin Card initialization properly sets the format chip registers.

Test 13140 and Test 13150

Walk 1's and 0's through Registers

Subtests 0 through 79 walk 1's and 0's through the various cells of the Pin Card.

Test 13160

Walk 1's through RAM

This test walks 1's through the Pin Card RAM.

Test 13161

Check Vector Addresses 14 and 15

This tests the vector address bits 14 and 15.

Test 13170

Verify Read/Write of Format Chip Registers

This test was written because a defective format chip was found to have a register over-writing problem. To test for this problem a unique read/write pattern is used. Failure of any subtest indicates a faulty format chip is present.

Closed Relay

- Test 13210
- Test 13230
- Test 13240
- Test 13260
- Test 13262
- Test 13270
- Test 13272
- Test 13274
- Test 13276
- Test 13278

Test 13210

Test Receiver to X-Bus, Driver to XGL-Bus, and X-Bus Disconnect, Relays can be Closed.

This test verifies that sets of K<x>S, K<x>X, and K<x>XGL relays can be closed. A test failure is caused when either relay in a set being tested fails to close. The relays being tested are shown in bold, by subtest, in the table below.

Figure 10-1 on page 10-12 shows the measurement path.

NOTE

This test does not isolate individual relays. Other relay diagnostic tests isolate individual relays.

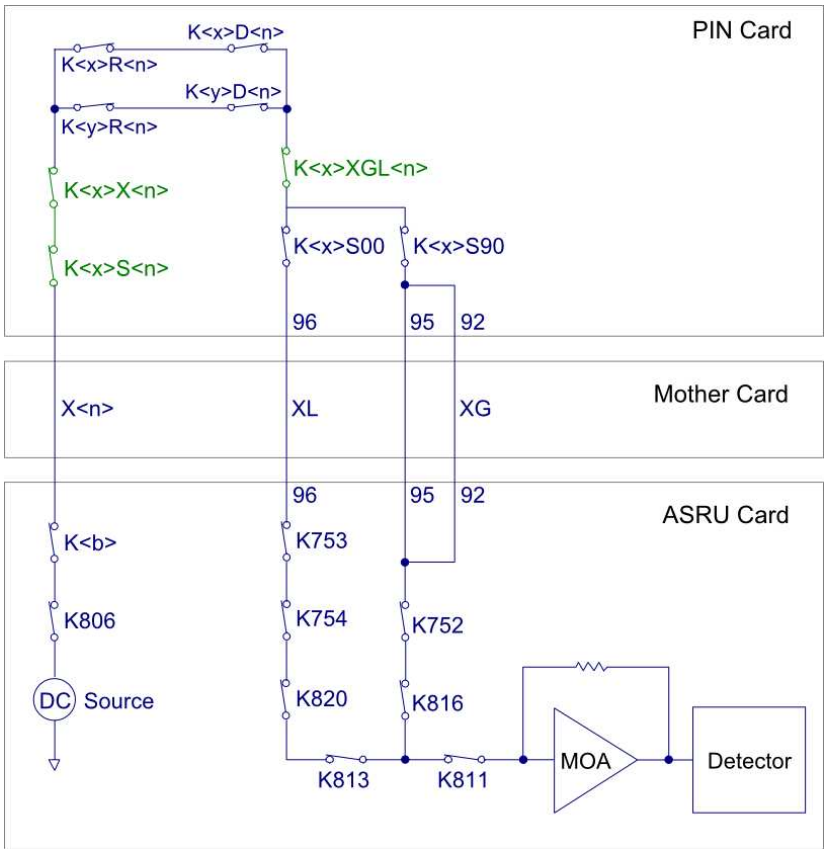
Table 10-6

Subtest	K	X<n>	K<x>S<n>	K<x>X<n>	K<x>D<n>	K<y>D<n>	K<x>R<n>	K<y>R<n>	K<x>XGL<n>
Page A									
0a	K733	X1	KAS11	KAX1	KAD1	KAD2	KAR1	KAR2	KAXGL1
1a	K734	X2	KAS22	KAX2	KAD11	KAD12	KAR11	KAR12	KAXGL2
2a	K735	X3	KAS33	KAX3	KAD21	KAD22	KAR21	KAR22	KAXGL3
3a	K736	X4	KAS44	KAX4	KAD31	KAD32	KAR31	KAR32	KAXGL4
4a	K737	X5	KAS55	KAX5	KAD41	KAD42	KAR41	KAR42	KAXGL5
5a	K738	X6	KAS66	KAX6	KAD51	KAD52	KAR51	KAR52	KAXGL6
6a	K739	X7	KAS77	KAX7	KAD61	KAD62	KAR61	KAR62	KAXGL7
7a	K740	X8	KAS88	KAX8	KAD71	KAD72	KAR71	KAR72	KAXGL8

Table 10-6

Subtest	K	X<n>	K<x>S<n>	K<x>X<n>	K<x>D<n>	K<y>D<n>	K<x>R<n>	K<y>R<n>	K<x>XGL<n>
Page B									
0b	K733	X1	KBS11	KBX1	KBD1	KBD2	KBR1	KBR2	KBXGL1
1b	K734	X2	KBS22	KBX2	KBD11	KBD12	KBR11	KBR12	KBXGL2
2b	K735	X3	KBS33	KBX3	KBD21	KBD22	KBR21	KBR22	KBXGL3
3b	K736	X4	KBS44	KBX4	KBD31	KBD32	KBR31	KBR32	KBXGL4
4b	K737	X5	KBS55	KBX5	KBD41	KBD42	KBR41	KBR42	KBXGL5
5b	K738	X6	KBS66	KBX6	KBD51	KBD52	KBR51	KBR52	KBXGL6
6b	K739	X7	KBS77	KBX7	KBD61	KBD62	KBR61	KBR62	KBXGL7
7b	K740	X8	KBS88	KBX8	KBD71	KBD72	KBR71	KBR72	KBXGL8
Page A									
8a	K733	X1	KAS11	KCX1	KAD1	KAD2	KAR1	KAR2	KCXGL1
9a	K734	X2	KAS22	KCX2	KAD11	KAD12	KAR11	KAR12	KCXGL2
10a	K735	X3	KAS33	KCX3	KAD21	KAD22	KAR21	KAR22	KCXGL3
11a	K736	X4	KAS44	KCX4	KAD31	KAD32	KAR31	KAR32	KCXGL4
12a	K737	X5	KAS55	KCX5	KAD41	KAD42	KAR41	KAR42	KCXGL5
13a	K738	X6	KAS66	KCX6	KAD51	KAD52	KAR51	KAR52	KCXGL6
14a	K739	X7	KAS77	KCX7	KAD61	KAD62	KAR61	KAR62	KCXGL7
15a	K740	X8	KAS88	KCX8	KAD71	KAD72	KAR71	KAR72	KCXGL8
Page B									
8b	K733	X1	KBS11	KDX1	KBD1	KBD2	KBR1	KBR2	KDXGL1
9b	K734	X2	KBS22	KDX2	KBD11	KBD12	KBR11	KBR12	KDXGL2
10b	K735	X3	KBS33	KDX3	KBD21	KBD22	KBR21	KBR22	KDXGL3
11b	K736	X4	KBS44	KDX4	KBD31	KBD32	KBR31	KBR32	KDXGL4
12b	K737	X5	KBS55	KDX5	KBD41	KBD42	KBR41	KBR42	KDXGL5
13b	K738	X6	KBS66	KDX6	KBD51	KBD52	KBR51	KBR52	KDXGL6
14b	K739	X7	KBS77	KDX7	KBD61	KBD62	KBR61	KBR62	KDXGL7
15b	K740	X8	KBS88	KDX8	KBD71	KBD72	KBR71	KBR72	KDXGL8

Figure 10-1 Test 13210



Test 13230

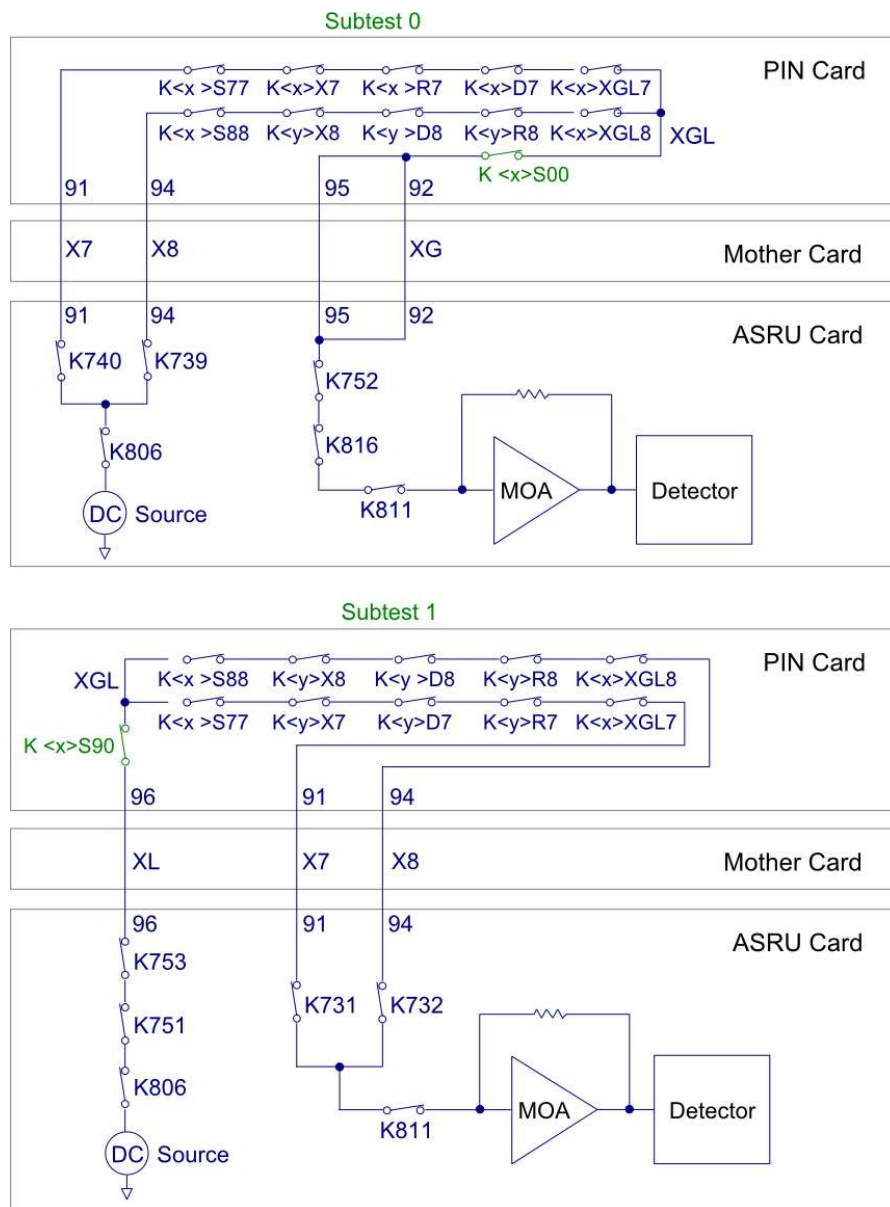
Test XG-Bus and XL-Bus Disconnect Relays can be Closed

This test verifies that individual $K\langle x \rangle S00$ and $K\langle x \rangle S90$ relays can be closed. A test failure is caused when the relay being tested fails to close. The relay being tested is shown in bold, by subtest, in the table below. **Figure 10-2** shows the measurement paths for subtest 0 and subtest 1.

Table 10-7

Subtest	K<x>S<n>	K<y>S77	K<z>S88	K<x>R61	K<y>R71	K<x>D61	K<y>D71	K<x>X7	K<y>X8	K<x>XGL7	K<y>XGL8
Page A											
0a	KAS00	KAS77	KAS88	KAR61	KAR71	KAD61	KAD71	KAX7	KAX8	KAXGL7	KAXGL8
1a	KAS90	KAS77	KAS88	KAR61	KAR71	KAD61	KAD71	KAX7	KAX8	KAXGL7	KAXGL8
Page B											
0b	KBS00	KBS77	KBS88	KBR61	KBR71	KBD61	KBD71	KBX7	KBX8	KBXGL7	KBXGL8
1b	KBS90	KBS77	KBS88	KBR61	KBR71	KBD61	KBD71	KBX7	KBX8	KBXGL7	KBXGL8

Figure 10-2 Test 13230



Test 13240

Test Pairs of Receiver and Driver (MUX) Relays to (MINT) Pin can be Closed.

This test verifies that pairs of the K<x>R and K<x>D relays can be closed. A test failure is caused when either relay being tested fails to close. The relay being tested is shown in bold, by subtest, in the table below.

Test 13240 requires the proper operation of K<x>S, K<x>X, and KGL relays.

Since Test 13240 cannot isolate single relay failures, run tests 13974 and 13975, which require the Pin Verification Fixture, to isolate individual receiver and driver relays.

Figure 10-3 on page 10-20 shows the measurement path.

Table 10-8

Subtest	K	X<n>	K<x>S<n>	K<x>X<n>	K<x>R<y>	K<x>D<n>	K<x>XGL<n>
Page A							
0a	K733	X1	KAS11	KAX1	KAR1	KAD1	KAXGL1
1a	K733	X1	KAS11	KAX1	KAR2	KAD2	KAXGL1
2a	K733	X1	KAS11	KAX1	KAR3	KAD3	KAXGL1
3a	K733	X1	KAS11	KAX1	KAR4	KAD4	KAXGL1
4a	K733	X1	KAS11	KAX1	KAR5	KAD5	KAXGL1
5a	K733	X1	KAS11	KAX1	KAR6	KAD6	KAXGL1
6a	K733	X1	KAS11	KAX1	KAR7	KAD7	KAXGL1
7a	K733	X1	KAS11	KAX1	KAR8	KAD8	KAXGL1
8a	K733	X1	KAS11	KAX1	KAR9	KAD9	KAXGL1
9a	K734	X2	KAS22	KAX2	KAR11	KAD11	KAXGL2
10a	K734	X2	KAS22	KAX2	KAR12	KAD12	KAXGL2
11a	K734	X2	KAS22	KAX2	KAR13	KAD13	KAXGL2
12a	K734	X2	KAS22	KAX2	KAR14	KAD14	KAXGL2
13a	K734	X2	KAS22	KAX2	KAR15	KAD15	KAXGL2
14a	K734	X2	KAS22	KAX2	KAR16	KAD16	KAXGL2
15a	K734	X2	KAS22	KAX2	KAR17	KAD17	KAXGL2
16a	K734	X2	KAS22	KAX2	KAR18	KAD18	KAXGL2
17a	K734	X2	KAS22	KAX2	KAR19	KAD19	KAXGL2
18a	K735	X3	KAS33	KAX3	KAR21	KAD21	KAXGL3

Table 10-8

Subtest	K	X<n>	K<x>S<n>	K<x>X<n>	K<x>R<y>	K<x>D<n>	K<x>XGL<n>
19a	K735	X3	KAS33	KAX3	KAR22	KAD22	KAXGL3
20a	K735	X3	KAS33	KAX3	KAR23	KAD23	KAXGL3
21a	K735	X3	KAS33	KAX3	KAR24	KAD24	KAXGL3
22a	K735	X3	KAS33	KAX3	KAR25	KAD25	KAXGL3
23a	K735	X3	KAS33	KAX3	KAR26	KAD26	KAXGL3
24a	K735	X3	KAS33	KAX3	KAR27	KAD27	KAXGL3
25a	K735	X3	KAS33	KAX3	KAR28	KAD28	KAXGL3
26a	K735	X3	KAS33	KAX3	KAR29	KAD29	KAXGL3
27a	K736	X4	KAS44	KAX4	KAR31	KAD31	KAXGL4
28a	K736	X4	KAS44	KAX4	KAR32	KAD32	KAXGL4
29a	K736	X4	KAS44	KAX4	KAR33	KAD33	KAXGL4
30a	K736	X4	KAS44	KAX4	KAR34	KAD34	KAXGL4
31a	K736	X4	KAS44	KAX4	KAR35	KAD35	KAXGL4
32a	K736	X4	KAS44	KAX4	KAR36	KAD36	KAXGL4
33a	K736	X4	KAS44	KAX4	KAR37	KAD37	KAXGL4
34a	K736	X4	KAS44	KAX4	KAR38	KAD38	KAXGL4
35a	K736	X4	KAS44	KAX4	KAR39	KAD39	KAXGL4
36a	K737	X5	KAS55	KAX5	KAR41	KAD41	KAXGL5
37a	K737	X5	KAS55	KAX5	KAR42	KAD42	KAXGL5
38a	K737	X5	KAS55	KAX5	KAR43	KAD43	KAXGL5
39a	K737	X5	KAS55	KAX5	KAR44	KAD44	KAXGL5
40a	K737	X5	KAS55	KAX5	KAR45	KAD45	KAXGL5
41a	K737	X5	KAS55	KAX5	KAR46	KAD46	KAXGL5
42a	K737	X5	KAS55	KAX5	KAR47	KAD47	KAXGL5
43a	K737	X5	KAS55	KAX5	KAR48	KAD48	KAXGL5
44a	K737	X5	KAS55	KAX5	KAR49	KAD49	KAXGL5
45a	K738	X6	KAS66	KAX6	KAR51	KAD51	KAXGL6
46a	K738	X6	KAS66	KAX6	KAR52	KAD52	KAXGL6
47a	K738	X6	KAS66	KAX6	KAR53	KAD53	KAXGL6
48a	K738	X6	KAS66	KAX6	KAR54	KAD54	KAXGL6

Table 10-8

Subtest	K	X<n>	K<x>S<n>	K<x>X<n>	K<x>R<y>	K<x>D<n>	K<x>XGL<n>
49a	K738	X6	KAS66	KAX6	KAR55	KAD55	KAXGL6
50a	K738	X6	KAS66	KAX6	KAR56	KAD56	KAXGL6
51a	K738	X6	KAS66	KAX6	KAR57	KAD57	KAXGL6
52a	K738	X6	KAS66	KAX6	KAR58	KAD58	KAXGL6
53a	K738	X6	KAS66	KAX6	KAR59	KAD59	KAXGL6
54a	K739	X7	KAS77	KAX7	KAR61	KAD61	KAXGL7
55a	K739	X7	KAS77	KAX7	KAR62	KAD62	KAXGL7
56a	K739	X7	KAS77	KAX7	KAR63	KAD63	KAXGL7
57a	K739	X7	KAS77	KAX7	KAR64	KAD64	KAXGL7
58a	K739	X7	KAS77	KAX7	KAR65	KAD65	KAXGL7
59a	K739	X7	KAS77	KAX7	KAR66	KAD66	KAXGL7
60a	K739	X7	KAS77	KAX7	KAR67	KAD67	KAXGL7
61a	K739	X7	KAS77	KAX7	KAR68	KAD68	KAXGL7
62a	K739	X7	KAS77	KAX7	KAR69	KAD69	KAXGL7
63a	K740	X8	KAS88	KAX8	KAR71	KAD71	KAXGL8
64a	K740	X8	KAS88	KAX8	KAR72	KAD72	KAXGL8
65a	K740	X8	KAS88	KAX8	KAR73	KAD73	KAXGL8
66a	K740	X8	KAS88	KAX8	KAR74	KAD74	KAXGL8
67a	K740	X8	KAS88	KAX8	KAR75	KAD75	KAXGL8
68a	K740	X8	KAS88	KAX8	KAR76	KAD76	KAXGL8
69a	K740	X8	KAS88	KAX8	KAR77	KAD77	KAXGL8
70a	K740	X8	KAS88	KAX8	KAR78	KAD78	KAXGL8
71a	K740	X8	KAS88	KAX8	KAR79	KAD79	KAXGL8
Page B							
0b	K733	X1	KBS11	KBX1	KBR1	KBD1	KBXGL1
1b	K733	X1	KBS11	KBX1	KBR2	KBD2	KBXGL1
2b	K733	X1	KBS11	KBX1	KBR3	KBD3	KBXGL1
3b	K733	X1	KBS11	KBX1	KBR4	KBD4	KBXGL1
4b	K733	X1	KBS11	KBX1	KBR5	KBD5	KBXGL1
5b	K733	X1	KBS11	KBX1	KBR6	KBD6	KBXGL1

Table 10-8

Subtest	K	X<n>	K<x>S<n>	K<x>X<n>	K<x>R<y>	K<x>D<n>	K<x>XGL<n>
6b	K733	X1	KBS11	KBX1	KBR7	KBD7	KBXGL1
7b	K733	X1	KBS11	KBX1	KBR8	KBD8	KBXGL1
8b	K733	X1	KBS11	KBX1	KBR9	KBD9	KBXGL1
9b	K734	X2	KBS22	KBX2	KBR11	KBD11	KBXGL2
10b	K734	X2	KBS22	KBX2	KBR12	KBD12	KBXGL2
11b	K734	X2	KBS22	KBX2	KBR13	KBD13	KBXGL2
12b	K734	X2	KBS22	KBX2	KBR14	KBD14	KBXGL2
13b	K734	X2	KBS22	KBX2	KBR15	KBD15	KBXGL2
14b	K734	X2	KBS22	KBX2	KBR16	KBD16	KBXGL2
15b	K734	X2	KBS22	KBX2	KBR17	KBD17	KBXGL2
16b	K734	X2	KBS22	KBX2	KBR18	KBD18	KBXGL2
17b	K734	X2	KBS22	KBX2	KBR19	KBD19	KBXGL2
18b	K735	X3	KBS33	KBX3	KBR21	KBD21	KBXGL3
19b	K735	X3	KBS33	KBX3	KBR22	KBD22	KBXGL3
20b	K735	X3	KBS33	KBX3	KBR23	KBD23	KBXGL3
21b	K735	X3	KBS33	KBX3	KBR24	KBD24	KBXGL3
22b	K735	X3	KBS33	KBX3	KBR25	KBD25	KBXGL3
23b	K735	X3	KBS33	KBX3	KBR26	KBD26	KBXGL3
24b	K735	X3	KBS33	KBX3	KBR27	KBD27	KBXGL3
25b	K735	X3	KBS33	KBX3	KBR28	KBD28	KBXGL3
26b	K735	X3	KBS33	KBX3	KBR29	KBD29	KBXGL3
27b	K736	X4	KBS44	KBX4	KBR31	KBD31	KBXGL4
28b	K736	X4	KBS44	KBX4	KBR32	KBD32	KBXGL4
29b	K736	X4	KBS44	KBX4	KBR33	KBD33	KBXGL4
30b	K736	X4	KBS44	KBX4	KBR34	KBD34	KBXGL4
31b	K736	X4	KBS44	KBX4	KBR35	KBD35	KBXGL4
32b	K736	X4	KBS44	KBX4	KBR36	KBD36	KBXGL4
33b	K736	X4	KBS44	KBX4	KBR37	KBD37	KBXGL4
34b	K736	X4	KBS44	KBX4	KBR38	KBD38	KBXGL4
35b	K736	X4	KBS44	KBX4	KBR39	KBD39	KBXGL4

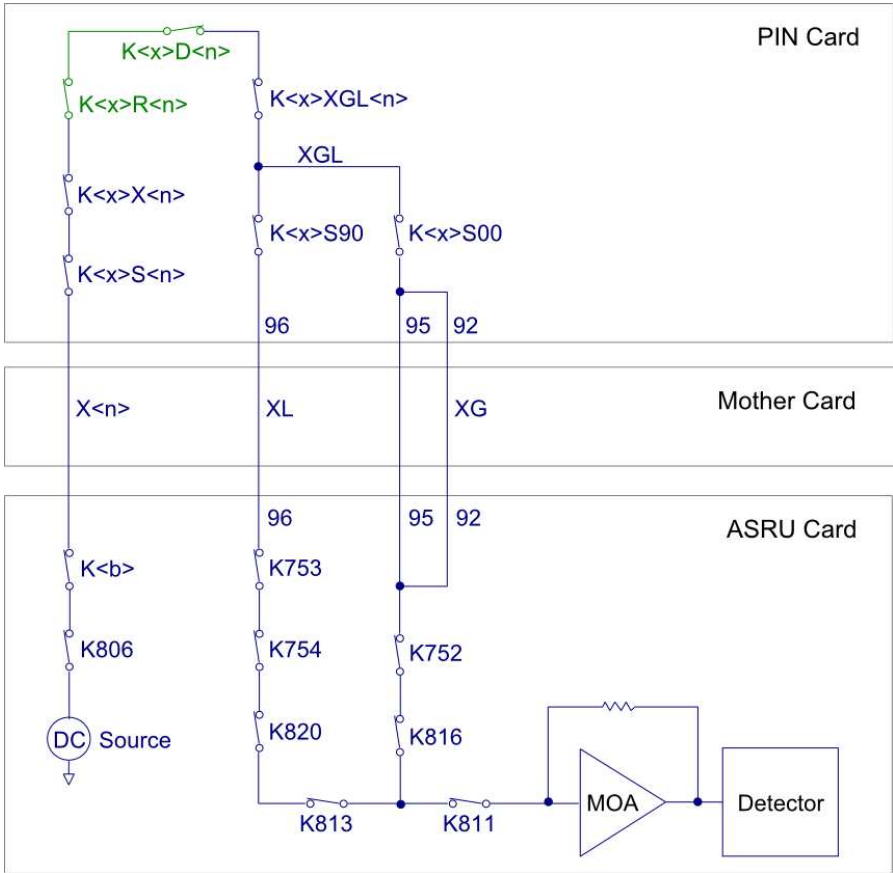
Table 10-8

Subtest	K	X<n>	K<x>S<n>	K<x>X<n>	K<x>R<y>	K<x>D<n>	K<x>XGL<n>
36b	K737	X5	KBS55	KBX5	KBR41	KBD41	KBXGL5
37b	K737	X5	KBS55	KBX5	KBR42	KBD42	KBXGL5
38b	K737	X5	KBS55	KBX5	KBR43	KBD43	KBXGL5
39b	K737	X5	KBS55	KBX5	KBR44	KBD44	KBXGL5
40b	K737	X5	KBS55	KBX5	KBR45	KBD45	KBXGL5
41b	K737	X5	KBS55	KBX5	KBR46	KBD46	KBXGL5
42b	K737	X5	KBS55	KBX5	KBR47	KBD47	KBXGL5
43b	K737	X5	KBS55	KBX5	KBR48	KBD48	KBXGL5
44b	K737	X5	KBS55	KBX5	KBR49	KBD49	KBXGL5
45b	K738	X6	KBS66	KBX6	KBR51	KBD51	KBXGL6
46b	K738	X6	KBS66	KBX6	KBR52	KBD52	KBXGL6
47b	K738	X6	KBS66	KBX6	KBR53	KBD53	KBXGL6
48b	K738	X6	KBS66	KBX6	KBR54	KBD54	KBXGL6
49b	K738	X6	KBS66	KBX6	KBR55	KBD55	KBXGL6
50b	K738	X6	KBS66	KBX6	KBR56	KBD56	KBXGL6
51b	K738	X6	KBS66	KBX6	KBR57	KBD57	KBXGL6
52b	K738	X6	KBS66	KBX6	KBR58	KBD58	KBXGL6
53b	K738	X6	KBS66	KBX6	KBR59	KBD59	KBXGL6
54b	K739	X7	KBS77	KBX7	KBR61	KBD61	KBXGL7
55b	K739	X7	KBS77	KBX7	KBR62	KBD62	KBXGL7
56b	K739	X7	KBS77	KBX7	KBR63	KBD63	KBXGL7
57b	K739	X7	KBS77	KBX7	KBR64	KBD64	KBXGL7
58b	K739	X7	KBS77	KBX7	KBR65	KBD65	KBXGL7
59b	K739	X7	KBS77	KBX7	KBR66	KBD66	KBXGL7
60b	K739	X7	KBS77	KBX7	KBR67	KBD67	KBXGL7
61b	K739	X7	KBS77	KBX7	KBR68	KBD68	KBXGL7
62b	K739	X7	KBS77	KBX7	KBR69	KBD69	KBXGL7
63b	K740	X8	KBS88	KBX8	KBR71	KBD71	KBXGL8
64b	K740	X8	KBS88	KBX8	KBR72	KBD72	KBXGL8
65b	K740	X8	KBS88	KBX8	KBR73	KBD73	KBXGL8

Table 10-8

Subtest	K	X<n>	K<x>S<n>	K<x>X<n>	K<x>R<y>	K<x>D<n>	K<x>XGL<n>
66b	K740	X8	KBS88	KBX8	KBR74	KBD74	KBXGL8
67b	K740	X8	KBS88	KBX8	KBR75	KBD75	KBXGL8
68b	K740	X8	KBS88	KBX8	KBR76	KBD76	KBXGL8
69b	K740	X8	KBS88	KBX8	KBR77	KBD77	KBXGL8
70b	K740	X8	KBS88	KBX8	KBR78	KBD78	KBXGL8
71b	K740	X8	KBS88	KBX8	KBR79	KBD79	KBXGL8

Figure 10-3 Test 13240



Test 13260

Test Receiver Channel Relays can be Closed

This test verifies that the K<x>R relays can be closed. A test failure is caused when the relay being tested fails to close. The relay being tested is shown in bold, by subtest, in the table below.

Test 13260 sets the receiver references (RHI and RLO) to +2.0 and -2.0 volts, enables the receiver's pull-up, closes the relay, and then measures the receiver's input level. A 10 kohm path to ground ensures the test will fail if the path is open; it eliminates the possibility of a drift value that passes.

Test 13260 requires the proper operation of X-bus, X-bus disconnect, and XGL-bus relays.

Figure 10-4 on page 10-23 shows the measurement path.

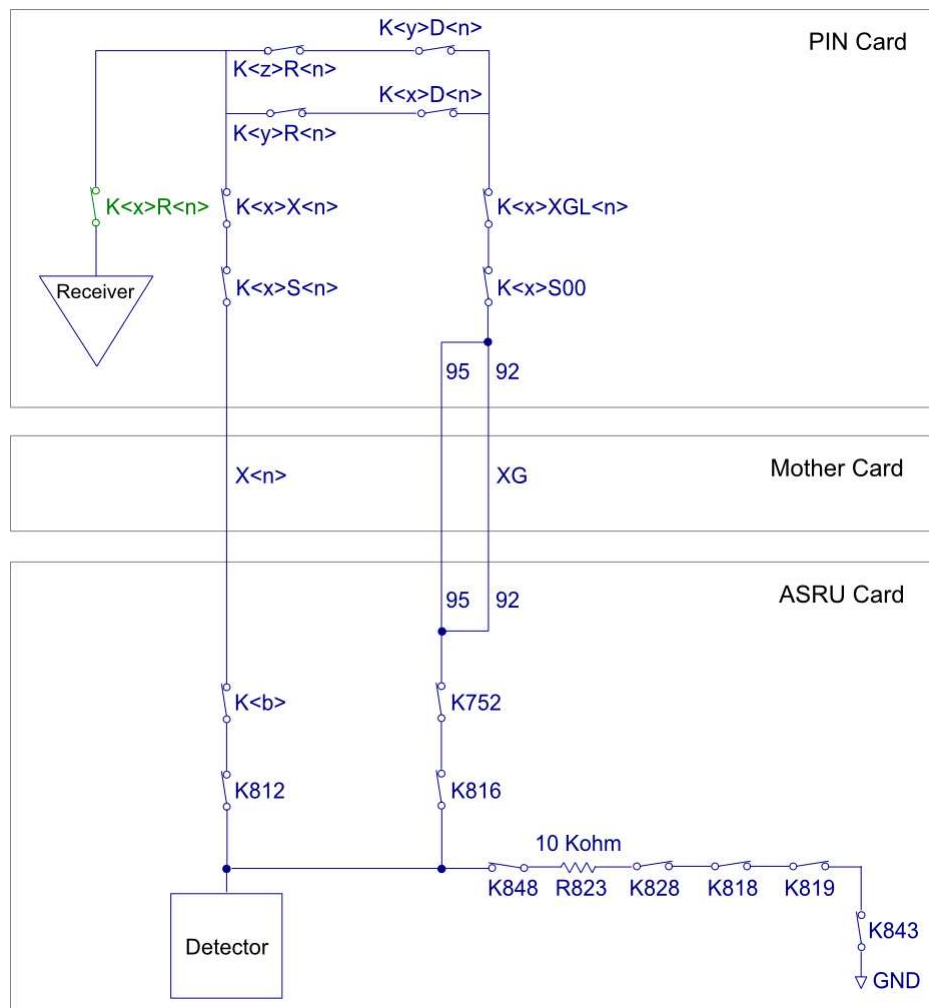
Table 10-9

Subtest	K	K<x>R<n>	K<y>R<n>	K<z>R<n>	K<x>XGL<n>	K<x>S<n>	K<x>X<n>	K<x>D<n>	K<y>D<n>
Page A									
0a	K725	KAR00	KAR1	KAR2	KAXGL1	KAS11	KAX1	KAD1	KAD2
1a	K726	KAR10	KAR11	KAR12	KAXGL2	KAS22	KAX2	KAD11	KAD12
2a	K727	KAR20	KAR21	KAR22	KAXGL3	KAS33	KAX3	KAD21	KAD22
3a	K728	KAR30	KAR31	KAR32	KAXGL4	KAS44	KAX4	KAD31	KAD32
4a	K729	KAR40	KAR41	KAR42	KAXGL5	KAS55	KAX5	KAD41	KAD42
5a	K730	KAR50	KAR51	KAR52	KAXGL6	KAS66	KAX6	KAD51	KAD52
6a	K731	KAR60	KAR61	KAR62	KAXGL7	KAS77	KAX7	KAD61	KAD62
7a	K732	KAR70	KAR71	KAR72	KAXGL8	KAS88	KAX8	KAD71	KAD72
Page B									
0b	K725	KBR00	KBR1	KBR2	KBXGL1	KBS11	KBX1	KBD1	KBD2
1b	K726	KBR10	KBR11	KBR12	KBXGL2	KBS22	KBX2	KBD11	KBD12
2b	K727	KBR20	KBR21	KBR22	KBXGL3	KBS33	KBX3	KBD21	KBD22
3b	K728	KBR30	KBR31	KBR32	KBXGL4	KBS44	KBX4	KBD31	KBD32
4b	K729	KBR40	KBR41	KBR42	KBXGL5	KBS55	KBX5	KBD41	KBD42
5b	K730	KBR50	KBR51	KBR52	KBXGL6	KBS66	KBX6	KBD51	KBD52
6b	K731	KBR60	KBR61	KBR62	KBXGL7	KBS77	KBX7	KBD61	KBD62
7b	K732	KBR70	KBR71	KBR72	KBXGL8	KBS88	KBX8	KBD71	KBD72
Page A									
0a	K725	KCR00	KAR1	KAR2	KCXGL1	KAS11	KCX1	KAD1	KAD2
1a	K726	KCR10	KAR11	KAR12	KCXGL2	KAS22	KCX2	KAD11	KAD12
2a	K727	KCR20	KAR21	KAR22	KCXGL3	KAS33	KCX3	KAD21	KAD22
3a	K728	KCR30	KAR31	KAR32	KCXGL4	KAS44	KCX4	KAD31	KAD32
4a	K729	KCR40	KAR41	KAR42	KCXGL5	KAS55	KCX5	KAD41	KAD42
5a	K730	KCR50	KAR51	KAR52	KCXGL6	KAS66	KCX6	KAD51	KAD52
6a	K731	KCR60	KAR61	KAR62	KCXGL7	KAS77	KCX7	KAD61	KAD62
7a	K732	KCR70	KAR71	KAR72	KCXGL8	KAS88	KCX8	KAD71	KAD72

Table 10-9

Subtest	K	K<x>R<n>	K<y>R<n>	K<z>R<n>	K<x>XGL<n>	K<x>S<n>	K<x>X<n>	K<x>D<n>	K<y>D<n>
Page B									
0b	K725	KDR00	KBR1	KBR2	KDXGL1	KBS11	KDX1	KBB1	KBB2
1b	K726	KDR10	KBR11	KBR12	KDXGL2	KBS22	KDX2	KBB11	KBB12
2b	K727	KDR20	KBR21	KBR22	KDXGL3	KBS33	KDX3	KBB21	KBB22
3b	K728	KDR30	KBR31	KBR32	KDXGL4	KBS44	KDX4	KBB31	KBB32
4b	K729	KDR40	KBR41	KBR42	KDXGL5	KBS55	KDX5	KBB41	KBB42
5b	K730	KDR50	KBR51	KBR52	KDXGL6	KBS66	KDX6	KBB51	KBB52
6b	K731	KDR60	KBR61	KBR62	KDXGL7	KBS77	KDX7	KBB61	KBB62
7b	K732	KDR70	KBR71	KBR72	KDXGL8	KBS88	KDX8	KBB71	KBB72

Figure 10-4 Test 13260



Test 13262

Test General Purpose Relays can be Closed

This test verifies that the KGP relays can be closed. A test failure is caused when the relay being tested fails to close. The relay being tested is shown in bold, by subtest, in the table below.

Table 10-10

Subtest	KGP<n>
Side A	Side A
0a	KGP1
1a	KGP2
Side B	Side B
0b	KGP1
1b	KGP2

Test 13270

Test Driver Channel Relays can be Closed

This test verifies that the K<x>P can be closed. A test failure is caused when the relay being tested fails to close. The relay being tested is shown in bold, by subtest, in the table below.

Test 13270 sets the driver high (+3.5 volts), closes the driver channel relay, and then measures the driver output level. A 10-kohm path to ground ensures that the test will fail if the path is open and eliminates the possibility of a drift value.

Test 13270 requires the proper operation of X-bus, X-bus disconnect, XGL-bus, and fixture interface (MINT) pin (MUX) relays.

Figure 10-5 on page 10-26 shows the measurement path.

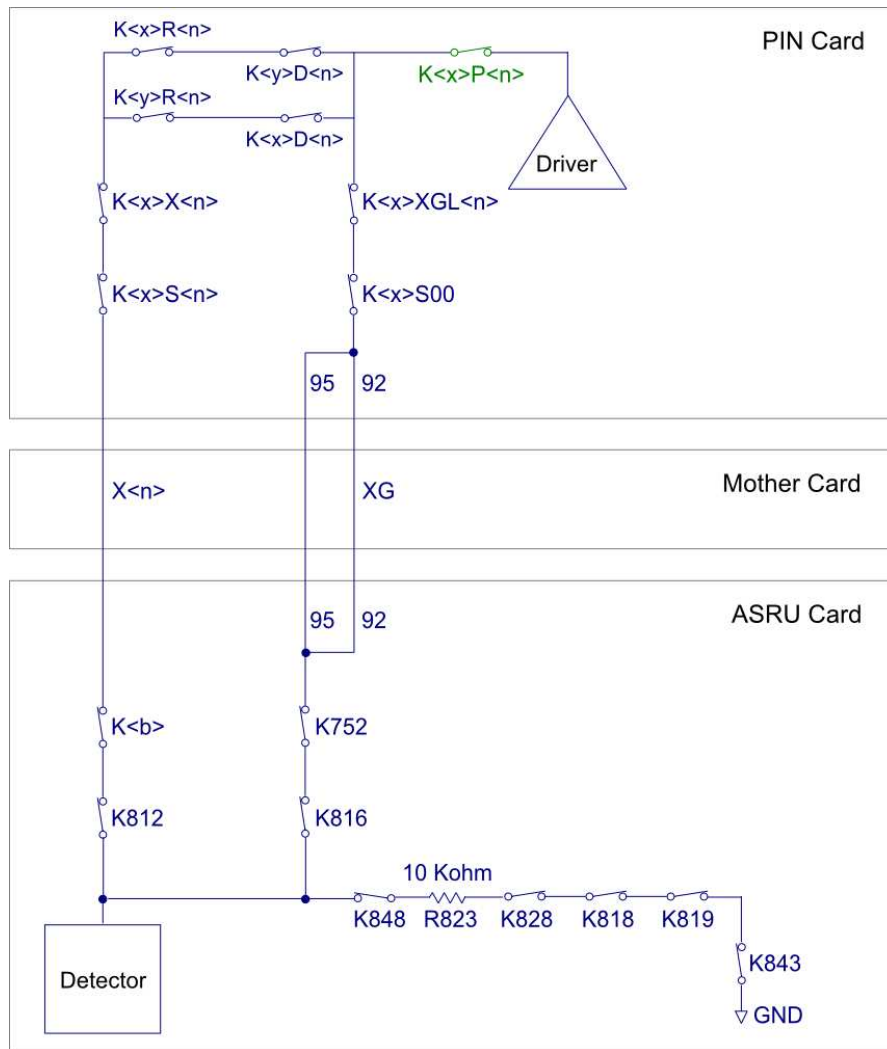
Table 10-11

Subtest	K	K<x>P<a>	K<x>XGL<n>	K<x>S<n>	K<x>X<n>	K<x>D<n>	K<y>D<n>	K<x>R<n>	K<y>R<n>
Page A									
0a	K725	KAP1	KAXGL1	KAS11	KAX1	KAD1	KAD2	KAR1	KAR2
1a	K726	KAP2	KAXGL2	KAS22	KAX2	KAD11	KAD12	KAR11	KAR12
2a	K727	KAP3	KAXGL3	KAS33	KAX3	KAD21	KAD22	KAR21	KAR22
3a	K728	KAP4	KAXGL4	KAS44	KAX4	KAD31	KAD32	KAR31	KAR32
4a	K729	KAP5	KAXGL5	KAS55	KAX5	KAD41	KAD42	KAR41	KAR42
5a	K730	KAP6	KAXGL6	KAS66	KAX6	KAD51	KAD52	KAR51	KAR52
6a	K731	KAP7	KAXGL7	KAS77	KAX7	KAD61	KAD62	KAR61	KAR62
7a	K732	KAP8	KAXGL8	KAS88	KAX8	KAD71	KAD72	KAR71	KAR72
Page B									
0b	K725	KBP1	KBXGL1	KBS11	KBX1	KBD1	KBD2	KBR1	KBR2
1b	K726	KBP2	KBXGL2	KBS22	KBX2	KBD11	KBD12	KBR11	KBR12
2b	K727	KBP3	KBXGL3	KBS33	KBX3	KBD21	KBD22	KBR21	KBR22
3b	K728	KBP4	KBXGL4	KBS44	KBX4	KBD31	KBD32	KBR31	KBR32
4b	K729	KBP5	KBXGL5	KBS55	KBX5	KBD41	KBD42	KBR41	KBR42
5b	K730	KBP6	KBXGL6	KBS66	KBX6	KBD51	KBD52	KBR51	KBR52
6b	K731	KBP7	KBXGL7	KBS77	KBX7	KBD61	KBD62	KBR61	KBR62
7b	K732	KBP8	KBXGL8	KBS88	KBX8	KBD71	KBD72	KBR71	KBR72
Page A									
0a	K725	KCP1	KCXGL1	KAS11	KCX1	KAD1	KAD2	KAR1	KAR2
1a	K726	KCP2	KCXGL2	KAS22	KCX2	KAD11	KAD12	KAR11	KAR12
2a	K727	KCP3	KCXGL3	KAS33	KCX3	KAD21	KAD22	KAR21	KAR22
3a	K728	KCP4	KCXGL4	KAS44	KCX4	KAD31	KAD32	KAR31	KAR32
4a	K729	KCP5	KCXGL5	KAS55	KCX5	KAD41	KAD42	KAR41	KAR42
5a	K730	KCP6	KCXGL6	KAS66	KCX6	KAD51	KAD52	KAR51	KAR52
6a	K731	KCP7	KCXGL7	KAS77	KCX7	KAD61	KAD62	KAR61	KAR62
7a	K732	KCP8	KCXGL8	KAS88	KCX8	KAD71	KAD72	KAR71	KAR72
Page B									
0b	K725	KDP1	KDXGL1	KBS11	KDX1	KBD1	KBD2	KBR1	KBR2

Table 10-11

Subtest	K	K<x>P<a>	K<x>XGL<n>	K<x>S<n>	K<x>X<n>	K<x>D<n>	K<y>D<n>	K<x>R<n>	K<y>R<n>
1b	K726	KDP2	KDXGL2	KBS22	KDX2	KBD11	KBD12	KBR11	KBR12
2b	K727	KDP3	KDXGL3	KBS33	KDX3	KBD21	KBD22	KBR21	KBR22
3b	K728	KDP4	KDXGL4	KBS44	KDX4	KBD31	KBD32	KBR31	KBR32
4b	K729	KDP5	KDXGL5	KBS55	KDX5	KBD41	KBD42	KBR41	KBR42
5b	K730	KDP6	KDXGL6	KBS66	KDX6	KBD51	KBD52	KBR51	KBR52
6b	K731	KDP7	KDXGL7	KBS77	KDX7	KBD61	KBD62	KBR61	KBR62
7b	K732	KDP8	KDXGL8	KBS88	KDX8	KBD71	KBD72	KBR71	KBR72

Figure 10-5 Test 13270



Test 13272

Test Driver to Receiver Relays can be Closed.

This test verifies that the K<x>C driver to receiver relays can be closed. A test failure is caused when the relay being tested fails to close. The relay being tested is shown in bold, by subtest, in the table below.

This test can be executed with or without the Pin Verification Fixture. It requires proper operation of: ASRU, Disconnect relays, X Bus relays, Driver relays, and Receiver relays.

Figure 10-6 on page 10-29 shows the measurement path.

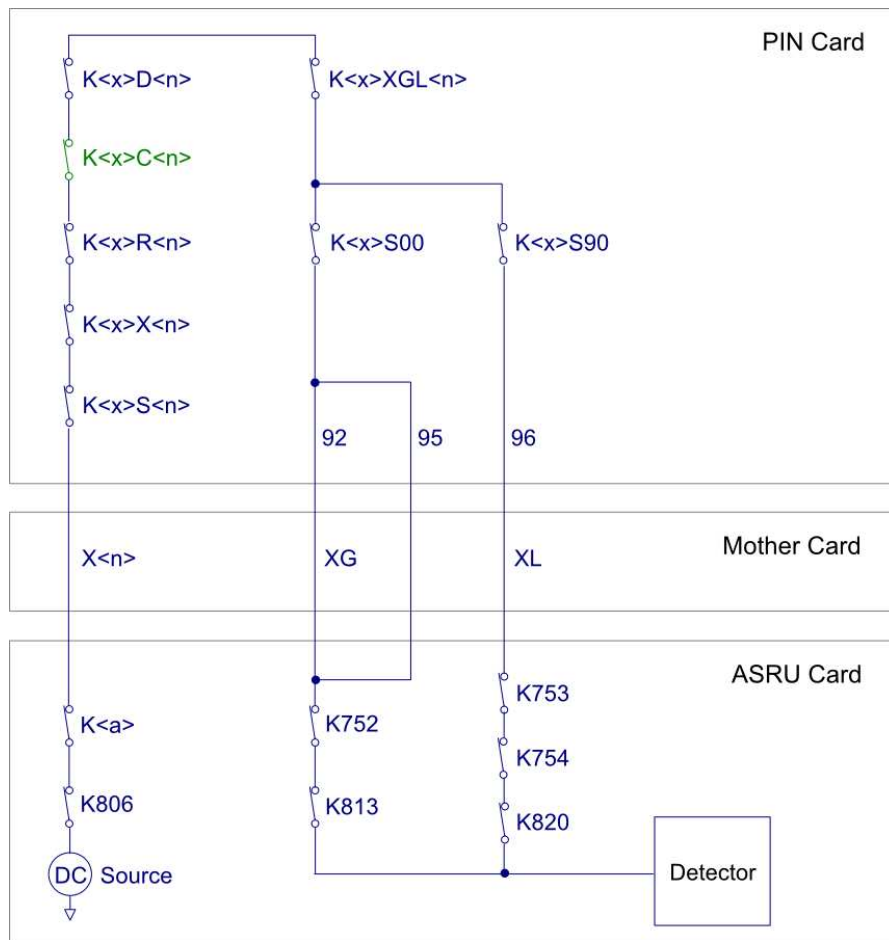
Table 10-12

Subtest	K<n>	K<x>S<n>	K<x>X<n>	K<x>R<n>	K<x>C<n>	K<x>D<n>	K<x>XGL<n>
Page A							
0a	K733	KAS11	KAX1	KAR00	KAC0	KAD00	KAXGL1
1a	K734	KAS22	KAX2	KAR10	KAC1	KAD10	KAXGL2
2a	K735	KAS33	KAX3	KAR20	KAC2	KAD20	KAXGL3
3a	K746	KAS44	KAX4	KAR30	KAC3	KAD30	KAXGL4
4a	K737	KAS55	KAX5	KAR40	KAC4	KAD40	KAXGL5
5a	K738	KAS66	KAX6	KAR50	KAC5	KAD50	KAXGL6
6a	K739	KAS77	KAX7	KAR60	KAC6	KAD60	KAXGL7
7a	K740	KAS88	KAX8	KAR70	KAC7	KAD70	KAXGL8
Page B							
0b	K733	KBS11	KBX1	KBR00	KBC0	KBD00	KBXGL1
1b	K734	KBS22	KBX2	KBR10	KBC1	KBD10	KBXGL2
2b	K735	KBS33	KBX3	KBR20	KBC2	KBD20	KBXGL3
3b	K746	KBS44	KBX4	KBR30	KBC3	KBD30	KBXGL4
4b	K737	KBS55	KBX5	KBR40	KBC4	KBD40	KBXGL5
5b	K738	KBS66	KBX6	KBR50	KBC5	KBD50	KBXGL6
6b	K739	KBS77	KBX7	KBR60	KBC6	KBD60	KBXGL7
7b	K740	KBS88	KBX8	KBR70	KBC7	KBD70	KBXGL8

Table 10-12

Subtest	K<n>	K<x>S<n>	K<x>X<n>	K<x>R<n>	K<x>C<n>	K<x>D<n>	K<x>XGL<n>
Page A							
0a	K733	KAS11	KCX1	KCR00	KCC0	KCD00	KCXGL1
1a	K734	KAS22	KCX2	KCR10	KCC1	KCD10	KCXGL2
2a	K735	KAS33	KCX3	KCR20	KCC2	KCD20	KCXGL3
3a	K746	KAS44	KCX4	KCR30	KCC3	KCD30	KCXGL4
4a	K737	KAS55	KCX5	KCR40	KCC4	KCD40	KCXGL5
5a	K738	KAS66	KCX6	KCR50	KCC5	KCD50	KCXGL6
6a	K739	KAS77	KCX7	KCR60	KCC6	KCD60	KCXGL7
7a	K740	KAS88	KCX8	KCR70	KCC7	KCD70	KCXGL8
Page B							
0b	K733	KBS11	KDX1	KDR00	KDC0	KDD00	KDXGL1
1b	K734	KBS22	KDX2	KDR10	KDC1	KDD10	KDXGL2
2b	K735	KBS33	KDX3	KDR20	KDC2	KDD20	KDXGL3
3b	K746	KBS44	KDX4	KDR30	KDC3	KDD30	KDXGL4
4b	K737	KBS55	KDX5	KDR40	KDC4	KDD40	KDXGL5
5b	K738	KBS66	KDX6	KDR50	KDC5	KDD50	KDXGL6
6b	K739	KBS77	KDX7	KDR60	KDC6	KDD60	KDXGL7
7b	K740	KBS88	KDX8	KDR70	KDC7	KDD70	KDXGL8

Figure 10-6 Test 13272



Test 13274

Test Driver to XL-Bus Relays can be Closed

This test verifies the K<x>XL relays can be closed. A test failure is caused when the relay being tested fails to close. The relay being tested is shown in bold, by subtest, in the table below.

This test can be executed with or without the Pin Verification Fixture. Each X-bus pin is connected to the ASRU's S-bus, and the XL-bus pin is connected to the I-bus. A resistance measurement is then performed.

Requires proper operation of: ASRU, disconnect relays, X Bus relays, Receiver relays, Driver-to-Receiver relays, and Driver relays.

Figure 10-7 on page 10-32 shows the measurement path.

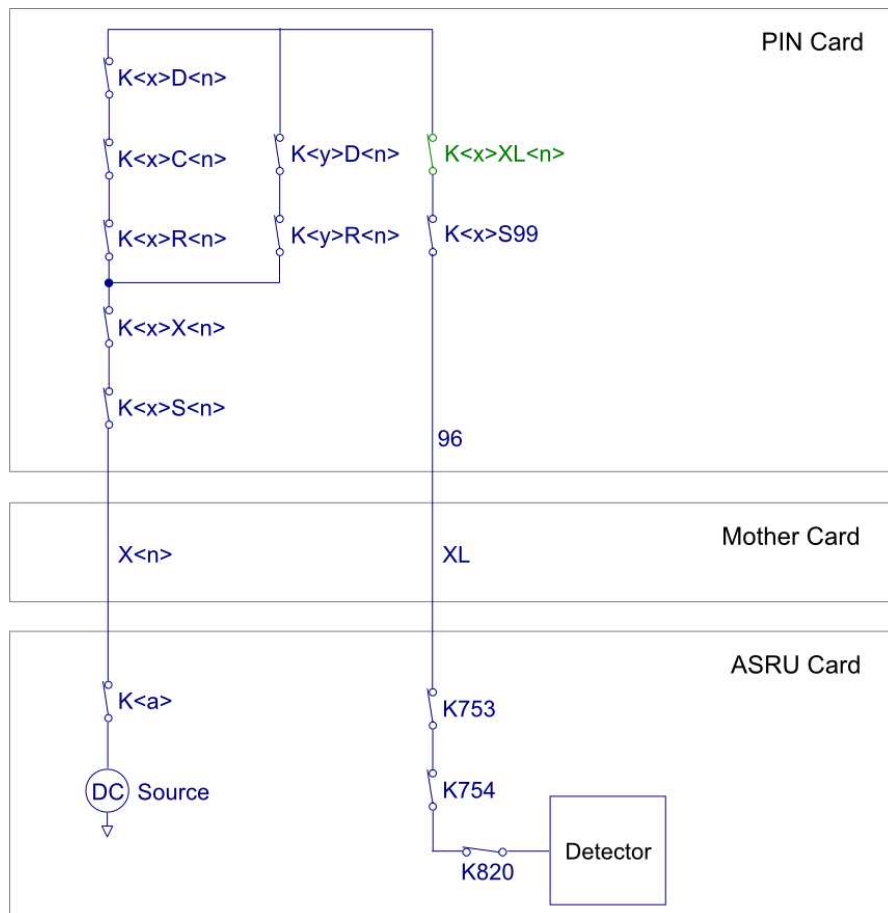
Table 10-13

Subtest	K<a>	K<x>XL<n>	K<x>S<n>	K<x>X<n>	K<x>R<n>	K<y>R<n>	K<x>C<n>	K<x>D<n>	K<y>D<n>
Page A									
0a	K733	KAXL1	KAS11	KAX1	KAR00	KAR1	KAC0	KAD00	KAD1
1a	K734	KAXL2	KAS22	KAX2	KAR10	KAR11	KAC1	KAD10	KAD11
2a	K735	KAXL3	KAS33	KAX3	KAR20	KAR21	KAC2	KAD20	KAD21
3a	K736	KAXL4	KAS44	KAX4	KAR30	KAR31	KAC3	KAD30	KAD31
4a	K737	KAXL5	KAS55	KAX5	KAR40	KAR41	KAC4	KAD40	KAD41
5a	K738	KAXL6	KAS66	KAX6	KAR50	KAR51	KAC5	KAD50	KAD51
6a	K739	KAXL7	KAS77	KAX7	KAR60	KAR61	KAC6	KAD60	KAD61
7a	K740	KAXL8	KAS88	KAX8	KAR70	KAR71	KAC7	KAD70	KAD71
Page B									
0b	K733	KBXL1	KBS11	KBX1	KBR00	KBR1	KBC0	KBD00	KBD1
1b	K734	KBXL2	KBS22	KBX2	KBR10	KBR11	KBC1	KBD10	KBD11
2b	K735	KBXL3	KBS33	KBX3	KBR20	KBR21	KBC2	KBD20	KBD21
3b	K736	KBXL4	KBS44	KBX4	KBR30	KBR31	KBC3	KBD30	KBD31
4b	K737	KBXL5	KBS55	KBX5	KBR40	KBR41	KBC4	KBD40	KBD41
5b	K738	KBXL6	KBS66	KBX6	KBR50	KBR51	KBC5	KBD50	KBD51
6b	K739	KBXL7	KBS77	KBX7	KBR60	KBR61	KBC6	KBD60	KBD61
7b	K740	KBXL8	KBS88	KBX8	KBR70	KBR71	KBC7	KBD70	KBD71

Table 10-13

Subtest	K<a>	K<x>XL<n>	K<x>S<n>	K<x>X<n>	K<x>R<n>	K<y>R<n>	K<x>C<n>	K<x>D<n>	K<y>D<n>
Page A									
0a	K733	KCXL1	KAS11	KCX1	KCR00	KAR1	KCC0	KCD00	KAD1
1a	K734	KCXL2	KAS22	KCX2	KCR10	KAR11	KCC1	KCD10	KAD11
2a	K735	KCXL3	KAS33	KCX3	KCR20	KAR21	KCC2	KCD20	KAD21
3a	K736	KCXL4	KAS44	KCX4	KCR30	KAR31	KCC3	KCD30	KAD31
4a	K737	KCXL5	KAS55	KCX5	KCR40	KAR41	KCC4	KCD40	KAD41
5a	K738	KCXL6	KAS66	KCX6	KCR50	KAR51	KCC5	KCD50	KAD51
6a	K739	KCXL7	KAS77	KCX7	KCR60	KAR61	KCC6	KCD60	KAD61
7a	K740	KCXL8	KAS88	KCX8	KCR70	KAR71	KCC7	KCD70	KAD71
Page B									
0b	K733	KDXL1	KBS11	KDX1	KDR00	KBR1	KDC0	KDD00	KBD1
1b	K734	KDXL2	KBS22	KDX2	KDR10	KBR11	KDC1	KDD10	KBD11
2b	K735	KDXL3	KBS33	KDX3	KDR20	KBR21	KDC2	KDD20	KBD21
3b	K736	KDXL4	KBS44	KDX4	KDR30	KBR31	KDC3	KDD30	KBD31
4b	K737	KDXL5	KBS55	KDX5	KDR40	KBR41	KDC4	KDD40	KBD41
5b	K738	KDXL6	KBS66	KDX6	KDR50	KBR51	KDC5	KDD50	KBD51
6b	K739	KDXL7	KBS77	KDX7	KDR60	KBR61	KDC6	KDD60	KBD61
7b	K740	KDXL8	KBS88	KDX8	KDR70	KBR71	KDC7	KDD70	KBD71

Figure 10-7 Test 13274



Test 13276

Test X-Bus Disconnect Relays can be Closed.

This test verifies the K<x>S relays can be closed. A test failure is caused when the relay being tested fails to close. The relay being tested is shown in bold, by subtest, in the table below.

This test can be executed with or without the Pin Verification Fixture. A pair of disconnect relays are closed creating a path in and out of the Pin card. One X-bus pin is connected to the ASRU source via the S-bus, another X-bus pin is connected to the ASRU detector via the L-bus, and a resistance measurement performed.

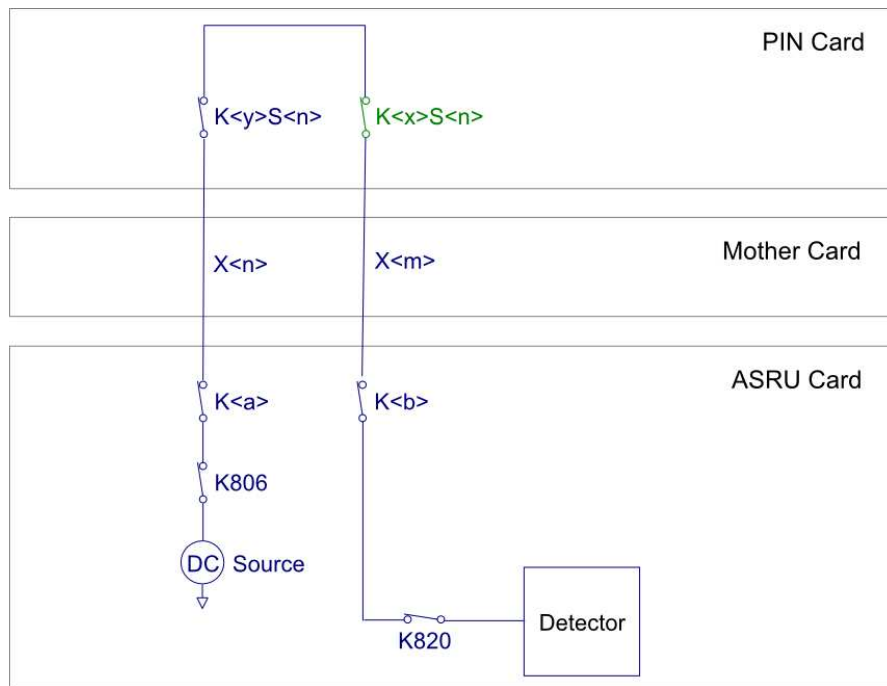
This test requires the proper operation of the ASRU and the other sets of Pin disconnect relays.

Figure 10-8 on page 10-34 shows the measurement path.

Table 10-14

Subtest	K<a>	K	K<x>S<n>	K<y>S<n>
Page A				
0a	K733	K719	KAS31	KAS11
1a	K734	K720	KAS42	KAS22
2a	K735	K721	KAS53	KAS33
3a	K736	K722	KAS64	KAS44
4a	K737	K723	KAS75	KAS55
5a	K738	K724	KAS86	KAS66
6a	K739	K717	KAS17	KAS77
7a	K740	K718	KAS28	KAS88
Page B				
0b	K733	K719	KBS31	KBS11
1b	K734	K720	KBS42	KBS22
2b	K735	K721	KBS53	KBS33
3b	K736	K722	KBS64	KBS44
4b	K737	K723	KBS75	KBS55
5b	K738	K724	KBS86	KBS66
6b	K739	K717	KBS17	KBS77
7b	K740	K718	KBS28	KBS88

Figure 10-8 Test 13276



Test 13278

Test Ground-Bounce Relays can be Closed

This test verifies the KBV relays can be closed. A test failure is caused when the relay being tested fails to close. The relay being tested is shown in bold, by subtest, in the table below.

This test is only executed *without* the Pin Verification Fixture. It requires the proper operation of: ASRU, Disconnect relays, X Bus relays, and Channel MUX relays. A redundant test path is created up the KBV relays, and the detector measures for 0 volts across the closed relay. The return path is via chassis ground.

Figure 10-9 shows the measurement path.

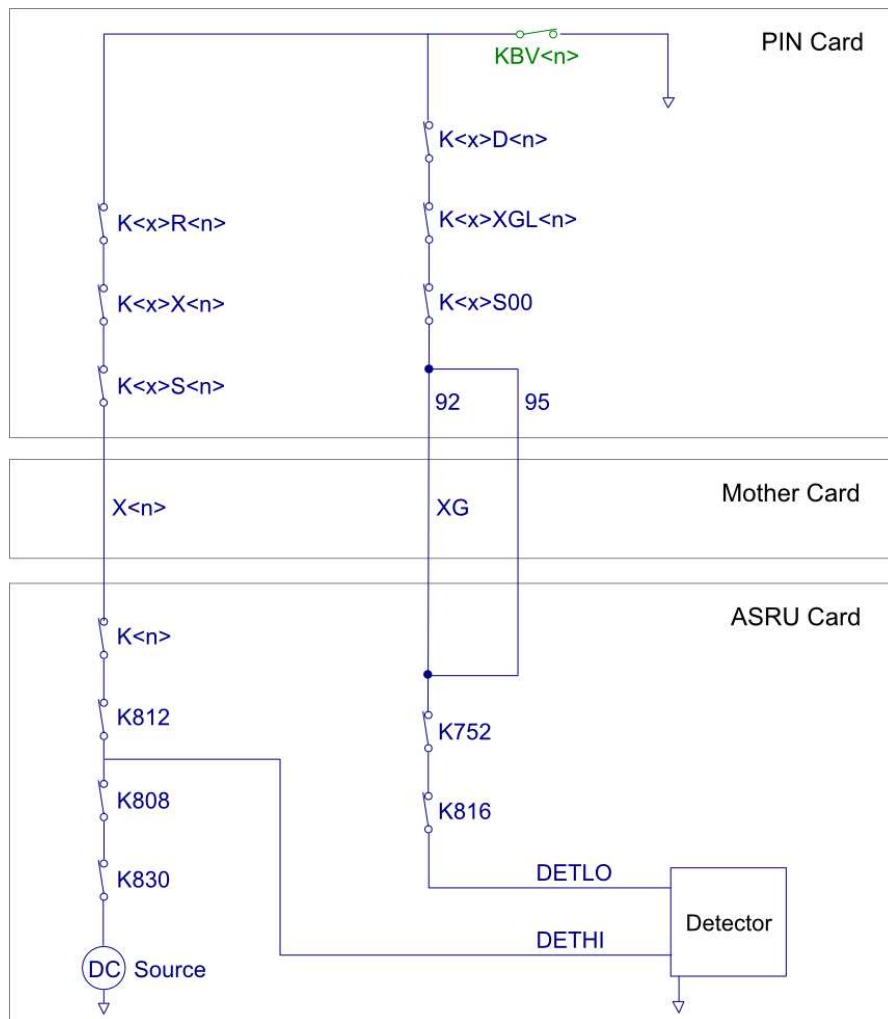
Table 10-15

Subtest	K<n>	KBV<n>	K<x>D<n>	K<x>R<n>	K<x>X<n>	K<x>XGL<n>	K<x>S<n>
Page B							
0	K726	KBV11	KBD11	KBR11	KBX2	KBXGL2	KBS22
1	K726	KBV12	KBD12	KBR12	KBX2	KBXGL2	KBS22
2	K726	KBV13	KBD13	KBR13	KBX2	KBXGL2	KBS22
3	K726	KBV14	KBD14	KBR14	KBX2	KBXGL2	KBS22
4	K726	KBV15	KBD15	KBR15	KBX2	KBXGL2	KBS22
5	K726	KBV16	KBD16	KBR16	KBX2	KBXGL2	KBS22
6	K726	KBV17	KBD17	KBR17	KBX2	KBXGL2	KBS22
7	K726	KBV18	KBD18	KBR18	KBX2	KBXGL2	KBS22
8	K726	KBV19	KBD19	KBR19	KBX2	KBXGL2	KBS22
9	K728	KBV31	KBD31	KBR31	KBX4	KBXGL4	KBS44
10	K728	KBV32	KBD32	KBR32	KBX4	KBXGL4	KBS44
11	K728	KBV33	KBD33	KBR33	KBX4	KBXGL4	KBS44
12	K728	KBV34	KBD34	KBR34	KBX4	KBXGL4	KBS44
13	K728	KBV35	KBD35	KBR35	KBX4	KBXGL4	KBS44
14	L728	KBV36	KBD36	KBR36	KBX4	KBXGL4	KBS44
15	K728	KBV37	KBD37	KBR37	KBX4	KBXGL4	KBS44
16	K728	KBV38	KBD38	KBR38	KBX4	KBXGL4	KBS44
17	K728	KBV39	KBD39	KBR39	KBX4	KBXGL4	KBS44
18	K729	KBV41	KBD41	KBR41	KBX5	KBXGL5	KBS55
19	K729	KBV42	KBD42	KBR42	KBX5	KBXGL5	KBS55
20	K729	KBV43	KBD43	KBR43	KBX5	KBXGL5	KBS55
21	K729	KBV44	KBD44	KBR44	KBX5	KBXGL5	KBS55
22	K729	KBV45	KBD45	KBR45	KBX5	KBXGL5	KBS55
23	K729	KBV46	KBD46	KBR46	KBX5	KBXGL5	KBS55
24	K729	KBV47	KBD47	KBR47	KBX5	KBXGL5	KBS55
25	K729	KBV48	KBD48	KBR48	KBX5	KBXGL5	KBS55
26	K729	KBV49	KBD49	KBR49	KBX5	KBXGL5	KBS55
27	K731	KBV61	KBD61	KBR61	KBX7	KBXGL7	KBS77

Table 10-15

Subtest	K<n>	KBV<n>	K<x>D<n>	K<x>R<n>	K<x>X<n>	K<x>XGL<n>	K<x>S<n>
28	K731	KBV62	KBD62	KBR62	KBX7	KBXGL7	KBS77
29	K731	KBV63	KBD63	KBR63	KBX7	KBXGL7	KBS77
30	K731	KBV64	KBD64	KBR64	KBX7	KBXGL7	KBS77
31	K731	KBV65	KBD65	KBR65	KBX7	KBXGL7	KBS77
32	K731	KBV66	KBD66	KBR66	KBX7	KBXGL7	KBS77
33	K731	KBV67	KBD67	KBR67	KBX7	KBXGL7	KBS77
34	K731	KBV68	KBD68	KBR68	KBX7	KBXGL7	KBS77
35	K731	KBV69	KBD69	KBR69	KBX7	KBXGL7	KBS77

Figure 10-9 Test 13278



Open Relay

- Test 13310
- Test 13320
- Test 13330
- Test 13340
- Test 13350
- Test 13360
- Test 13362
- Test 13370
- Test 13372
- Test 13374
- Test 13376
- Test 13378
- Test 13380

Test 13310

Test Receiver to X-Bus Relays can be Opened

This test verifies that the K<x>X relays can be opened. A test failure is caused when the relay being tested fails to open. The relay being tested is shown in bold, by subtest, in the table below.

Test 13310 is dependent on functioning XGL-bus, X-bus disconnect, and fixture interface (MINT) pin (MUX) relays.

Figure 10-10 on page 10-39 shows the measurement path.

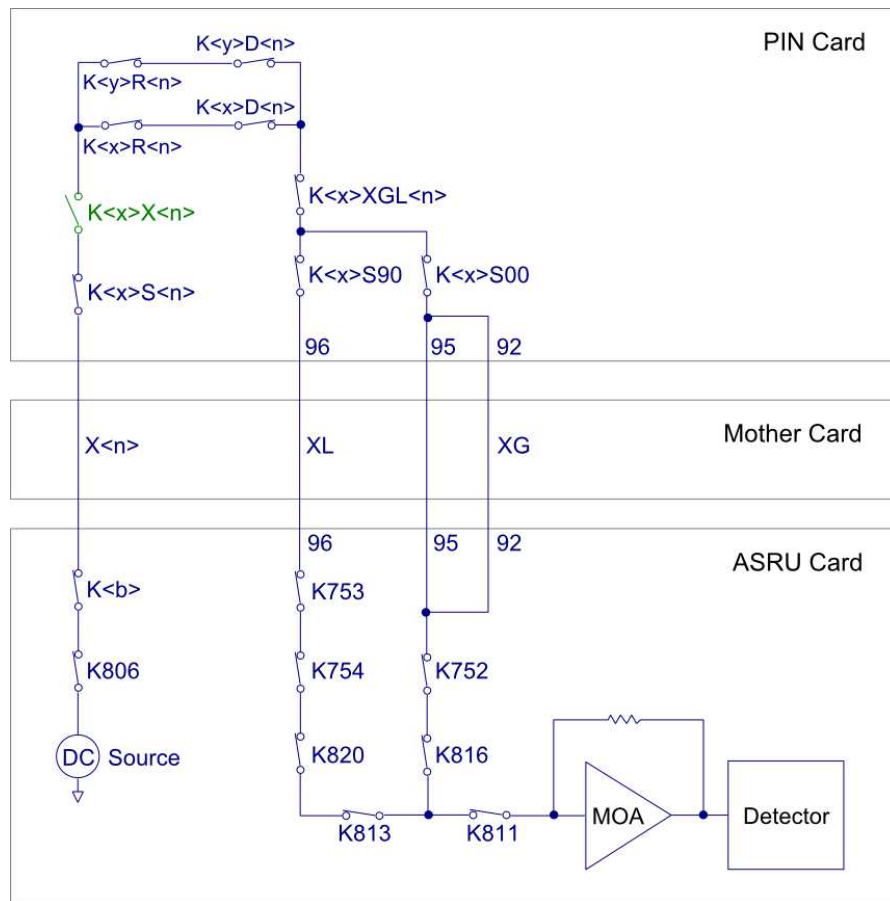
Table 10-16

Subtest	K	X<n>	K<x>X<n>	K<x>S<n>	K<x>D<n>	K<y>D<n>	K<x>R<n>	K<y>R<n>	K<x>XGL<n>
Page A									
0a	K733	X1	KAX1	KAS11	KAD1	KAD2	KAR1	KAR2	KAXGL1
1a	K734	X2	KAX2	KAS22	KAD11	KAD12	KAR11	KAR12	KAXGL2
2a	K735	X3	KAX3	KAS33	KAD21	KAD22	KAR21	KAR22	KAXGL3
3a	K736	X4	KAX4	KAS44	KAD31	KAD32	KAR31	KAR32	KAXGL4
4a	K737	X5	KAX5	KAS55	KAD41	KAD42	KAR41	KAR42	KAXGL5
5a	K738	X6	KAX6	KAS66	KAD51	KAD52	KAR51	KAR52	KAXGL6
6a	K739	X7	KAX7	KAS77	KAD61	KAD62	KAR61	KAR62	KAXGL7
7a	K740	X8	KAX8	KAS88	KAD71	KAD72	KAR71	KAR72	KAXGL8

Table 10-16

Subtest	K	X<n>	K<x>X<n>	K<x>S<n>	K<x>D<n>	K<y>D<n>	K<x>R<n>	K<y>R<n>	K<x>XGL<n>
Page B									
0b	K733	X1	KBX1	KBS11	KBD1	KBD2	KBR1	KBR2	KBXGL1
1b	K734	X2	KBX2	KBS22	KBD11	KBD12	KBR11	KBR12	KBXGL2
2b	K735	X3	KBX3	KBS33	KBD21	KBD22	KBR21	KBR22	KBXGL3
3b	K736	X4	KBX4	KBS44	KBD31	KBD32	KBR31	KBR32	KBXGL4
4b	K737	X5	KBX5	KBS55	KBD41	KBD42	KBR41	KBR42	KBXGL5
5b	K738	X6	KBX6	KBS66	KBD51	KBD52	KBR51	KBR52	KBXGL6
6b	K739	X7	KBX7	KBS77	KBD61	KBD62	KBR61	KBR62	KBXGL7
7b	K740	X8	KBX8	KBS88	KBD71	KBD72	KBR71	KBR72	KBXGL8
Page A									
8a	K733	X1	KCX1	KAS11	KAD1	KAD2	KAR1	KAR2	KCXGL1
9a	K734	X2	KCX2	KAS22	KAD11	KAD12	KAR11	KAR12	KCXGL2
10a	K735	X3	KCX3	KAS33	KAD21	KAD22	KAR21	KAR22	KCXGL3
11a	K736	X4	KCX4	KAS44	KAD31	KAD32	KAR31	KAR32	KCXGL4
12a	K737	X5	KCX5	KAS55	KAD41	KAD42	KAR41	KAR42	KCXGL5
13a	K738	X6	KCX6	KAS66	KAD51	KAD52	KAR51	KAR52	KCXGL6
14a	K739	X7	KCX7	KAS77	KAD61	KAD62	KAR61	KAR62	KCXGL7
15a	K740	X8	KCX8	KAS88	KAD71	KAD72	KAR71	KAR72	KCXGL8
Page B									
8b	K733	X1	KDX1	KBS11	KBD1	KBD2	KBR1	KBR2	KDXGL1
9b	K734	X2	KDX2	KBS22	KBD11	KBD12	KBR11	KBR12	KDXGL2
10b	K735	X3	KDX3	KBS33	KBD21	KBD22	KBR21	KBR22	KDXGL3
11b	K736	X4	KDX4	KBS44	KBD31	KBD32	KBR31	KBR32	KDXGL4
12b	K737	X5	KDX5	KBS55	KBD41	KBD42	KBR41	KBR42	KDXGL5
13b	K738	X6	KDX6	KBS66	KBD51	KBD52	KBR51	KBR52	KDXGL6
14b	K739	X7	KDX7	KBS77	KBD61	KBD62	KBR61	KBR62	KDXGL7
15b	K740	X8	KDX8	KBS88	KBD71	KBD72	KBR71	KBR72	KDXGL8

Figure 10-10 Test 13310



Test 13320

Test X-Bus Disconnect Relays can be Opened

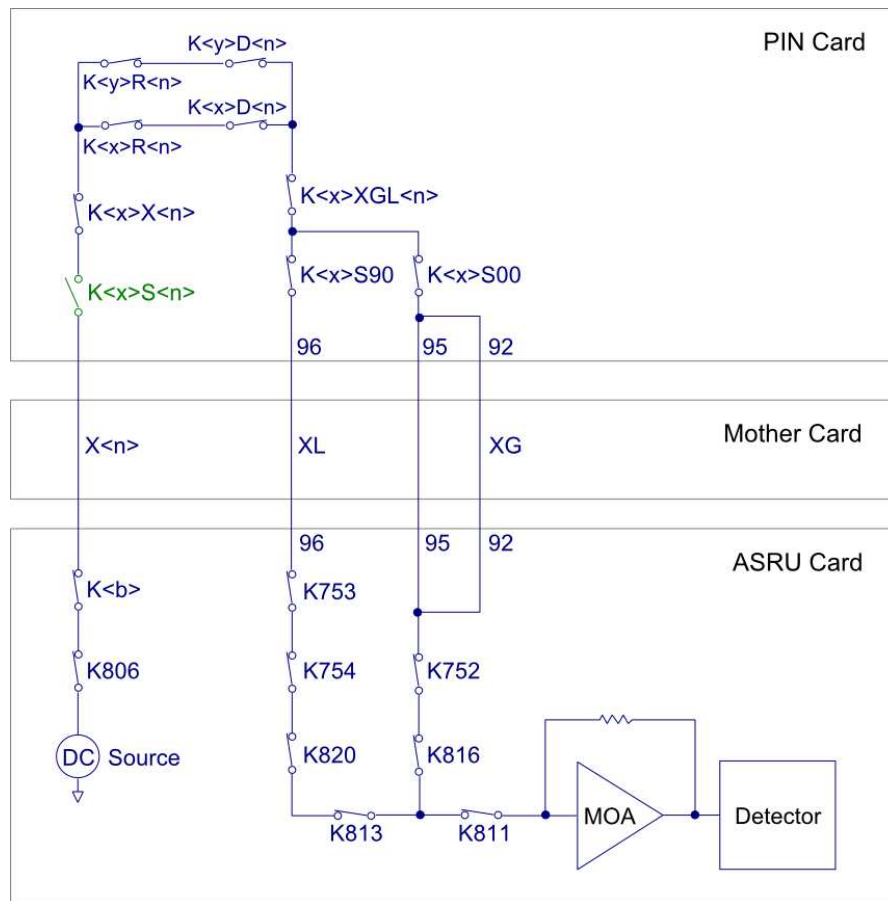
This test verifies that the X-bus disconnect relays can be opened. A test failure is caused when the relay being tested fails to open. The relay being tested is shown in bold, by subtest, in the table below. Test 13320 is dependent on functioning XGL-bus, X-bus, and fixture interface (MINT) pin (MUX) relays.

Figure 10-11 on page 10-41 shows the measurement path.

Table 10-17

Subtest	X<n>	K	K<x>S<n>	K<x>X<n>	K<x>D<n>	K<y>D<n>	K<x>R<n>	K<y>R<n>	K<x>XGL<n>
Page A									
0a	X1	K733	KAS11	KAX1	KAD1	KAD2	KAR1	KAR2	KAXGL1
1a	X2	K734	KAS22	KAX2	KAD11	KAD12	KAR11	KAR12	KAXGL2
2a	X3	K735	KAS33	KAX3	KAD21	KAD22	KAR21	KAR22	KAXGL3
3a	X4	K736	KAS44	KAX4	KAD31	KAD32	KAR31	KAR32	KAXGL4
4a	X5	K737	KAS55	KAX5	KAD41	KAD42	KAR41	KAR42	KAXGL5
5a	X6	K738	KAS66	KAX6	KAD51	KAD52	KAR51	KAR52	KAXGL6
6a	X7	K739	KAS77	KAX7	KAD61	KAD62	KAR61	KAR62	KAXGL7
7a	X8	K740	KAS88	KAX8	KAD71	KAD72	KAR71	KAR72	KAXGL8
Page B									
0b	X1	K733	KBS11	KBX1	KBD1	KBD2	KBR1	KBR2	KBXGL1
1b	X2	K734	KBS22	KBX2	KBD11	KBD12	KBR11	KBR12	KBXGL2
2b	X3	K735	KBS33	KBX3	KBD21	KBD22	KBR21	KBR22	KBXGL3
3b	X4	K736	KBS44	KBX4	KBD31	KBD32	KBR31	KBR32	KBXGL4
4b	X5	K737	KBS55	KBX5	KBD41	KBD42	KBR41	KBR42	KBXGL5
5b	X6	K738	KBS66	KBX6	KBD51	KBD52	KBR51	KBR52	KBXGL6
6b	X7	K739	KBS77	KBX7	KBD61	KBD62	KBR61	KBR62	KBXGL7
7b	X8	K740	KBS88	KBX8	KBD71	KBD72	KBR71	KBR72	KBXGL8

Figure 10-11 Test 13320



Test 13330

Test Driver to XGL-Bus Relays can be Opened

This test verifies that the $K\langle x\rangle XGL$ relays can be opened. A test failure is caused when the relay being tested fails to open. The relay being tested is shown in bold, by subtest, in the table below.

Test 13330 is dependent on functioning X-bus disconnect, X-bus, and fixture interface (MINT) pin (MUX) relays.

Figure 10-12 on page 10-43 shows the measurement path.

Table 10-18

Subtest	$X\langle n\rangle$	$K\langle b\rangle$	$K\langle x\rangle XGL\langle n\rangle$	$K\langle x\rangle S\langle n\rangle$	$K\langle x\rangle X\langle n\rangle$	$K\langle x\rangle D\langle n\rangle$	$K\langle y\rangle D\langle n\rangle$	$K\langle x\rangle R\langle n\rangle$	$K\langle y\rangle R\langle n\rangle$
Page A									
0a	X1	K733	KAXGL1	KAS11	KAX1	KAD1	KAD2	KAR1	KAR2

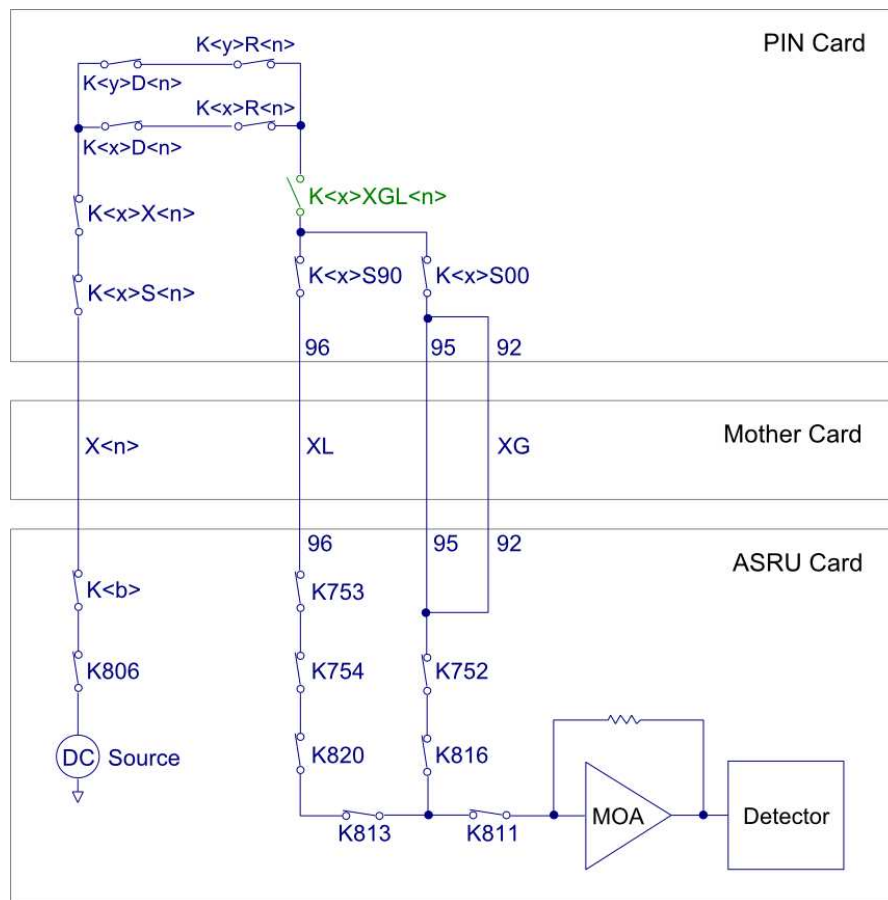
Table 10-18

Subtest	X<n>	K	K<x>XGL<n>	K<x>S<n>	K<x>X<n>	K<x>D<n>	K<y>D<n>	K<x>R<n>	K<y>R<n>
1a	X2	K734	KAXGL2	KAS22	KAX2	KAD11	KAD12	KAR11	KAR12
2a	X3	K735	KAXGL3	KAS33	KAX3	KAD21	KAD22	KAR21	KAR22
3a	X4	K736	KAXGL4	KAS44	KAX4	KAD31	KAD32	KAR31	KAR32
4a	X5	K737	KAXGL5	KAS55	KAX5	KAD41	KAD42	KAR41	KAR42
5a	X6	K738	KAXGL6	KAS66	KAX6	KAD51	KAD52	KAR51	KAR52
6a	X7	K739	KAXGL7	KAS77	KAX7	KAD61	KAD62	KAR61	KAR62
7a	X8	K740	KAXGL8	KAS88	KAX8	KAD71	KAD72	KAR71	KAR72
Page B									
0b	X1	K733	KBXGL1	KBS11	KBX1	KBD1	KBD2	KBR1	KBR2
1b	X2	K734	KBXGL2	KBS22	KBX2	KBD11	KBD12	KBR11	KBR12
2b	X3	K735	KBXGL3	KBS33	KBX3	KBD21	KBD22	KBR21	KBR22
3b	X4	K736	KBXGL4	KBS44	KBX4	KBD31	KBD32	KBR31	KBR32
4b	X5	K737	KBXGL5	KBS55	KBX5	KBD41	KBD42	KBR41	KBR42
5b	X6	K738	KBXGL6	KBS66	KBX6	KBD51	KBD52	KBR51	KBR52
6b	X7	K739	KBXGL7	KBS77	KBX7	KBD61	KBD62	KBR61	KBR62
7b	X8	K740	KBXGL8	KBS88	KBX8	KBD71	KBD72	KBR71	KBR72
Page A									
0a	X1	K733	KCXGL1	KAS11	KCX1	KAD1	KAD2	KAR1	KAR2
1a	X2	K734	KCXGL2	KAS22	KCX2	KAD11	KAD12	KAR11	KAR12
2a	X3	K735	KCXGL3	KAS33	KCX3	KAD21	KAD22	KAR21	KAR22
3a	X4	K736	KCXGL4	KAS44	KCX4	KAD31	KAD32	KAR31	KAR32
4a	X5	K737	KCXGL5	KAS55	KCX5	KAD41	KAD42	KAR41	KAR42
5a	X6	K738	KCXGL6	KAS66	KCX6	KAD51	KAD52	KAR51	KAR52
6a	X7	K739	KCXGL7	KAS77	KCX7	KAD61	KAD62	KAR61	KAR62
7a	X8	K740	KCXGL8	KAS88	KCX8	KAD71	KAD72	KAR71	KAR72
Page B									
0b	X1	K733	KDXGL1	KBS11	KDX1	KBD1	KBD2	KBR1	KBR2
1b	X2	K734	KDXGL2	KBS22	KDX2	KBD11	KBD12	KBR11	KBR12
2b	X3	K735	KDXGL3	KBS33	KDX3	KBD21	KBD22	KBR21	KBR22
3b	X4	K736	KDXGL4	KBS44	KDX4	KBD31	KBD32	KBR31	KBR32

Table 10-18

Subtest	X<n>	K	K<x>XGL<n>	K<x>S<n>	K<x>X<n>	K<x>D<n>	K<y>D<n>	K<x>R<n>	K<y>R<n>
4b	X5	K737	KDXGL5	KBS55	KDX5	KBD41	KBD42	KBR41	KBR42
5b	X6	K738	KDXGL6	KBS66	KDX6	KBD51	KBD52	KBR51	KBR52
6b	X7	K739	KDXGL7	KBS77	KDX7	KBD61	KBD62	KBR61	KBR62
7b	X8	K740	KDXGL8	KBS88	KDX8	KBD71	KBD72	KBR71	KBR72

Figure 10-12 Test 13330



Test 13340

Test XG-Bus and XL Bus Disconnect Relays can be Opened

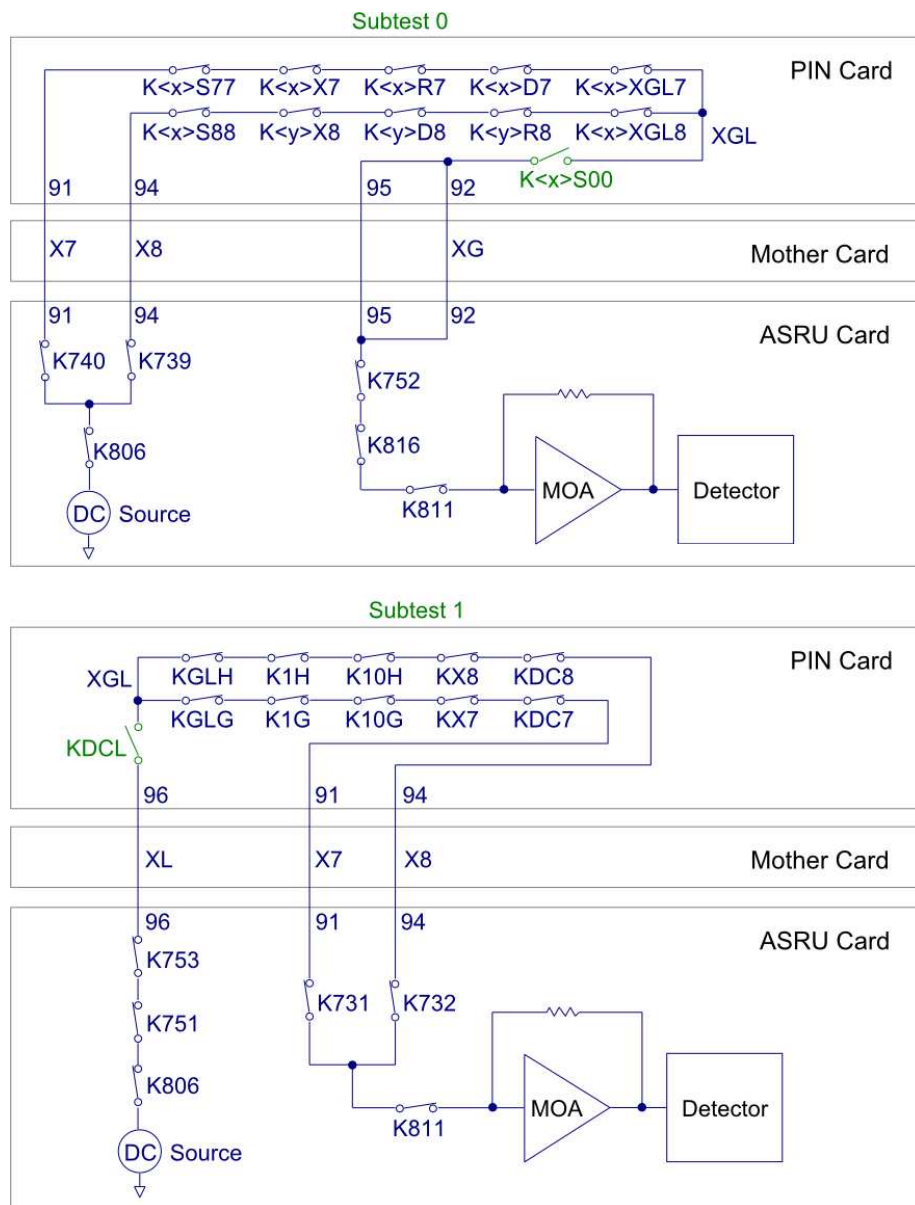
This test verifies that relays K<x>S00 and K<x>S90 can be opened. A test failure is caused when the relay being tested fails to open. The relay being tested is shown in bold, by subtest, in the table below.

Figure 10-13 on page 10-45 shows the measurement paths for subtest 0 and subtest 1.

Table 10-19

Subtest	K<x>S<n>	K<y>S77	K<z>S88	K<x>R61	K<y>R71	K<x>D61	K<y>D71	K<x>X7	K<y>X8	K<x>XGL7	K<y>XGL8
Page A											
0a	KAS00	KAS77	KAS88	KAR61	KAR71	KAD61	KAD71	KAX7	KAX8	KAXGL7	KAXGL8
1a	KAS90	KAS77	KAS88	KAR61	KAR71	KAD61	KAD71	KAX7	KAX8	KAXGL7	KAXGL8
Page B											
0b	KBS00	KBS77	KBS88	KBR61	KBR71	KBD61	KBD71	KBX7	KBX8	KBXGL7	KBXGL8
1b	KBS90	KBS77	KBS88	KBR61	KBR71	KBD61	KBD71	KBX7	KBX8	KBXGL7	KBXGL8

Figure 10-13 Test 13340



Test 13350

Test Receiver to Fixture Interface (MINT) Pin (MUX) Relays can be Opened

This test verifies that K<x>R relays can be opened. A test failure is caused when the relay being tested fails to open. The relay being tested is shown in bold, by subtest, in the table below.

Test 13350 is dependent on functioning K<x>S, K<x>X, K<x>XGL, and K<x>D relays.

Figure 10-14 on page 10-51 shows the subtest path.

Table 10-20

Subtest	K	X<n>	K<x>R<n>	K<x>S<n>	K<x>X<n>	K<x>D<n>	K<x>XGL<n>
Page A							
0a	K733	X1	KAR1	KAS11	KAX1	KAD1	KAXGL1
1a	K733	X1	KAR2	KAS11	KAX1	KAD2	KAXGL1
2a	K733	X1	KAR3	KAS11	KAX1	KAD3	KAXGL1
3a	K733	X1	KAR4	KAS11	KAX1	KAD4	KAXGL1
4a	K733	X1	KAR5	KAS11	KAX1	KAD5	KAXGL1
5a	K733	X1	KAR6	KAS11	KAX1	KAD6	KAXGL1
6a	K734	X2	KAR11	KAS22	KAX2	KAD11	KAXGL2
7a	K734	X2	KAR12	KAS22	KAX2	KAD12	KAXGL2
8a	K734	X2	KAR13	KAS22	KAX2	KAD13	KAXGL2
9a	K734	X2	KAR14	KAS22	KAX2	KAD14	KAXGL2
10a	K734	X2	KAR15	KAS22	KAX2	KAD15	KAXGL2
11a	K734	X2	KAR16	KAS22	KAX2	KAD16	KAXGL2
12a	K735	X3	KAR21	KAS33	KAX3	KAD21	KAXGL3
13a	K735	X3	KAR22	KAS33	KAX3	KAD22	KAXGL3
14a	K735	X3	KAR23	KAS33	KAX3	KAD23	KAXGL3
15a	K735	X3	KAR24	KAS33	KAX3	KAD24	KAXGL3
16a	K735	X3	KAR25	KAS33	KAX3	KAD25	KAXGL3
17a	K735	X3	KAR26	KAS33	KAX3	KAD26	KAXGL3
18a	K736	X4	KAR31	KAS44	KAX4	KAD31	KAXGL4
19a	K736	X4	KAR32	KAS44	KAX4	KAD32	KAXGL4
20a	K736	X4	KAR33	KAS44	KAX4	KAD33	KAXGL4

Table 10-20

Subtest	K	X<n>	K<x>R<n>	K<x>S<n>	K<x>X<n>	K<x>D<n>	K<x>XGL<n>
21a	K736	X4	KAR34	KAS44	KAX4	KAD34	KAXGL4
22a	K736	X4	KAR35	KAS44	KAX4	KAD35	KAXGL4
23a	K736	X4	KAR36	KAS44	KAX4	KAD36	KAXGL4
24a	K737	X5	KAR41	KAS55	KAX5	KAD41	KAXGL5
25a	K737	X5	KAR42	KAS55	KAX5	KAD42	KAXGL5
26a	K737	X5	KAR43	KAS55	KAX5	KAD43	KAXGL5
27a	K737	X5	KAR44	KAS55	KAX5	KAD44	KAXGL5
28a	K737	X5	KAR45	KAS55	KAX5	KAD45	KAXGL5
29a	K737	X5	KAR46	KAS55	KAX5	KAD46	KAXGL5
30a	K738	X6	KAR51	KAS66	KAX6	KAD51	KAXGL6
31a	K738	X6	KAR52	KAS66	KAX6	KAD52	KAXGL6
32a	K738	X6	KAR53	KAS66	KAX6	KAD53	KAXGL6
33a	K738	X6	KAR54	KAS66	KAX6	KAD54	KAXGL6
34a	K738	X6	KAR55	KAS66	KAX6	KAD55	KAXGL6
35a	K738	X6	KAR56	KAS66	KAX6	KAD56	KAXGL6
36a	K739	X7	KAR61	KAS77	KAX7	KAD61	KAXGL7
37a	K739	X7	KAR62	KAS77	KAX7	KAD62	KAXGL7
38a	K739	X7	KAR63	KAS77	KAX7	KAD63	KAXGL7
39a	K739	X7	KAR64	KAS77	KAX7	KAD64	KAXGL7
40a	K739	X7	KAR65	KAS77	KAX7	KAD65	KAXGL7
41a	K739	X7	KAR66	KAS77	KAX7	KAD66	KAXGL7
42a	K740	X8	KAR71	KAS88	KAX8	KAD71	KAXGL8
43a	K740	X8	KAR72	KAS88	KAX8	KAD72	KAXGL8
44a	K740	X8	KAR73	KAS88	KAX8	KAD73	KAXGL8
45a	K740	X8	KAR74	KAS88	KAX8	KAD74	KAXGL8
46a	K740	X8	KAR75	KAS88	KAX8	KAD75	KAXGL8
47a	K740	X8	KAR76	KAS88	KAX8	KAD76	KAXGL8
48a	K733	X1	KAR7	KAS11	KAX1	KAD7	KAXGL1
49a	K733	X1	KAR8	KAS11	KAX1	KAD8	KAXGL1
50a	K733	X1	KAR9	KAS11	KAX1	KAD9	KAXGL1

Table 10-20

Subtest	K	X<n>	K<x>R<n>	K<x>S<n>	K<x>X<n>	K<x>D<n>	K<x>XGL<n>
51a	K734	X2	KAR17	KAS22	KAX2	KAD17	KAXGL2
52a	K734	X2	KAR18	KAS22	KAX2	KAD18	KAXGL2
53a	K734	X2	KAR19	KAS22	KAX2	KAD19	KAXGL2
54a	K735	X3	KAR27	KAS33	KAX3	KAD27	KAXGL3
55a	K735	X3	KAR28	KAS33	KAX3	KAD28	KAXGL3
56a	K735	X3	KAR29	KAS33	KAX3	KAD29	KAXGL3
57a	K736	X4	KAR37	KAS44	KAX4	KAD37	KAXGL4
58a	K736	X4	KAR38	KAS44	KAX4	KAD38	KAXGL4
59a	K736	X4	KAR39	KAS44	KAX4	KAD39	KAXGL4
60a	K737	X5	KAR47	KAS55	KAX5	KAD47	KAXGL5
61a	K737	X5	KAR48	KAS55	KAX5	KAD48	KAXGL5
62a	K737	X5	KAR49	KAS55	KAX5	KAD49	KAXGL5
63a	K738	X6	KAR57	KAS66	KAX6	KAD57	KAXGL6
64a	K738	X6	KAR58	KAS66	KAX6	KAD58	KAXGL6
65a	K738	X6	KAR59	KAS66	KAX6	KAD59	KAXGL6
66a	K739	X7	KAR67	KAS77	KAX7	KAD67	KAXGL7
67a	K739	X7	KAR68	KAS77	KAX7	KAD68	KAXGL7
68a	K739	X7	KAR69	KAS77	KAX7	KAD69	KAXGL7
69a	K740	X8	KAR77	KAS88	KAX8	KAD77	KAXGL8
70a	K740	X8	KAR78	KAS88	KAX8	KAD78	KAXGL8
71a	K740	X8	KAR79	KAS88	KAX8	KAD79	KAXGL8
Page B							
0b	K733	X1	KBR1	KBS11	KBX1	KBD1	KBXGL1
1b	K733	X1	KBR2	KBS11	KBX1	KBD2	KBXGL1
2b	K733	X1	KBR3	KBS11	KBX1	KBD3	KBXGL1
3b	K733	X1	KBR4	KBS11	KBX1	KBD4	KBXGL1
4b	K733	X1	KBR5	KBS11	KBX1	KBD5	KBXGL1
5b	K733	X1	KBR6	KBS11	KBX1	KBD6	KBXGL1
6b	K734	X2	KBR11	KBS22	KBX2	KBD11	KBXGL2
7b	K734	X2	KBR12	KBS22	KBX2	KBD12	KBXGL2

Table 10-20

Subtest	K	X<n>	K<x>R<n>	K<x>S<n>	K<x>X<n>	K<x>D<n>	K<x>XGL<n>
8b	K734	X2	KBR13	KBS22	KBX2	KBD13	KBXGL2
9b	K734	X2	KBR14	KBS22	KBX2	KBD14	KBXGL2
10b	K734	X2	KBR15	KBS22	KBX2	KBD15	KBXGL2
11b	K734	X2	KBR16	KBS22	KBX2	KBD16	KBXGL2
12b	K735	X3	KBR21	KBS33	KBX3	KBD21	KBXGL3
13b	K735	X3	KBR22	KBS33	KBX3	KBD22	KBXGL3
14b	K735	X3	KBR23	KBS33	KBX3	KBD23	KBXGL3
15b	K735	X3	KBR24	KBS33	KBX3	KBD24	KBXGL3
16b	K735	X3	KBR25	KBS33	KBX3	KBD25	KBXGL3
17b	K735	X3	KBR26	KBS33	KBX3	KBD26	KBXGL3
18b	K736	X4	KBR31	KBS44	KBX4	KBD31	KBXGL4
19b	K736	X4	KBR32	KBS44	KBX4	KBD32	KBXGL4
20b	K736	X4	KBR33	KBS44	KBX4	KBD33	KBXGL4
21b	K736	X4	KBR34	KBS44	KBX4	KBD34	KBXGL4
22b	K736	X4	KBR35	KBS44	KBX4	KBD35	KBXGL4
23b	K736	X4	KBR36	KBS44	KBX4	KBD36	KBXGL4
24b	K737	X5	KBR41	KBS55	KBX5	KBD41	KBXGL5
25b	K737	X5	KBR42	KBS55	KBX5	KBD42	KBXGL5
26b	K737	X5	KBR43	KBS55	KBX5	KBD43	KBXGL5
27b	K737	X5	KBR44	KBS55	KBX5	KBD44	KBXGL5
28b	K737	X5	KBR45	KBS55	KBX5	KBD45	KBXGL5
29b	K737	X5	KBR46	KBS55	KBX5	KBD46	KBXGL5
30b	K738	X6	KBR51	KBS66	KBX6	KBD51	KBXGL6
31b	K738	X6	KBR52	KBS66	KBX6	KBD52	KBXGL6
32b	K738	X6	KBR53	KBS66	KBX6	KBD53	KBXGL6
33b	K738	X6	KBR54	KBS66	KBX6	KBD54	KBXGL6
34b	K738	X6	KBR55	KBS66	KBX6	KBD55	KBXGL6
35b	K738	X6	KBR56	KBS66	KBX6	KBD56	KBXGL6
36b	K739	X7	KBR61	KBS77	KBX7	KBD61	KBXGL7
37b	K739	X7	KBR62	KBS77	KBX7	KBD62	KBXGL7

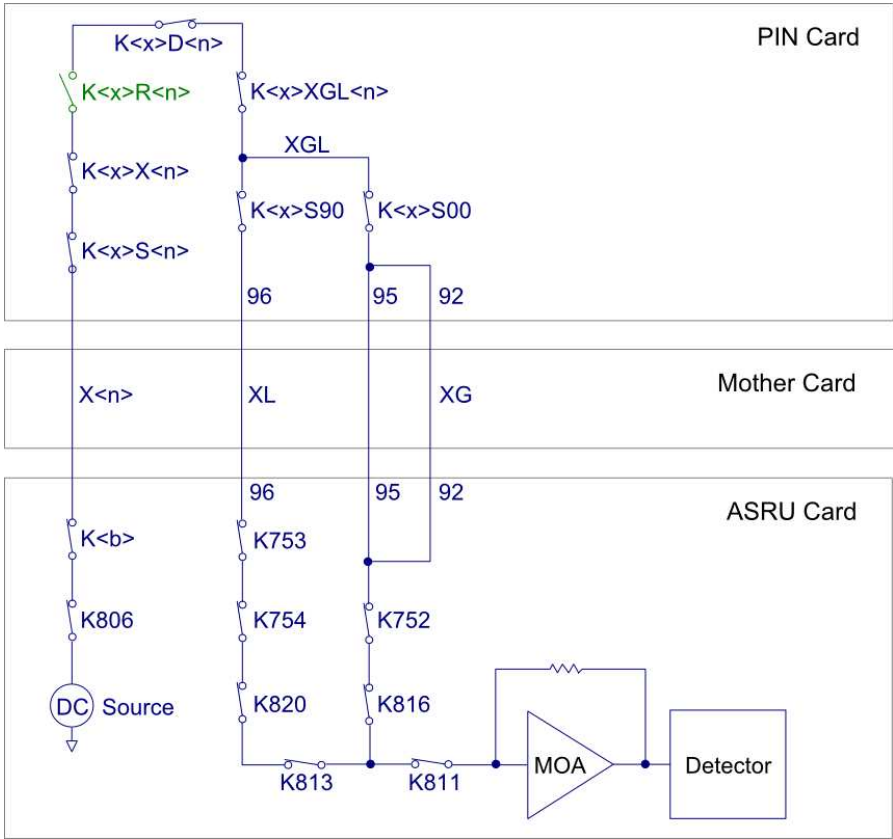
Table 10-20

Subtest	K	X<n>	K<x>R<n>	K<x>S<n>	K<x>X<n>	K<x>D<n>	K<x>XGL<n>
38b	K739	X7	KBR63	KBS77	KBX7	KBD63	KBXGL7
39b	K739	X7	KBR64	KBS77	KBX7	KBD64	KBXGL7
40b	K739	X7	KBR65	KBS77	KBX7	KBD65	KBXGL7
41b	K739	X7	KBR66	KBS77	KBX7	KBD66	KBXGL7
42b	K740	X8	KBR71	KBS88	KBX8	KBD71	KBXGL8
43b	K740	X8	KBR72	KBS88	KBX8	KBD72	KBXGL8
44b	K740	X8	KBR73	KBS88	KBX8	KBD73	KBXGL8
45b	K740	X8	KBR74	KBS88	KBX8	KBD74	KBXGL8
46b	K740	X8	KBR75	KBS88	KBX8	KBD75	KBXGL8
47b	K740	X8	KBR76	KBS88	KBX8	KBD76	KBXGL8
48b	K733	X1	KBR7	KBS11	KBX1	KBD7	KBXGL1
49b	K733	X1	KBR8	KBS11	KBX1	KBD8	KBXGL1
50b	K733	X1	KBR9	KBS11	KBX1	KBD9	KBXGL1
51b	K734	X2	KBR17	KBS22	KBX2	KBD17	KBXGL2
52b	K734	X2	KBR18	KBS22	KBX2	KBD18	KBXGL2
53b	K734	X2	KBR19	KBS22	KBX2	KBD19	KBXGL2
54b	K735	X3	KBR27	KBS33	KBX3	KBD27	KBXGL3
55b	K735	X3	KBR28	KBS33	KBX3	KBD28	KBXGL3
56b	K735	X3	KBR29	KBS33	KBX3	KBD29	KBXGL3
57b	K736	X4	KBR37	KBS44	KBX4	KBD37	KBXGL4
58b	K736	X4	KBR38	KBS44	KBX4	KBD38	KBXGL4
59b	K736	X4	KBR39	KBS44	KBX4	KBD39	KBXGL4
60b	K737	X5	KBR47	KBS55	KBX5	KBD47	KBXGL5
61b	K737	X5	KBR48	KBS55	KBX5	KBD48	KBXGL5
62b	K737	X5	KBR49	KBS55	KBX5	KBD49	KBXGL5
63b	K738	X6	KBR57	KBS66	KBX6	KBD57	KBXGL6
64b	K738	X6	KBR58	KBS66	KBX6	KBD58	KBXGL6
65b	K738	X6	KBR59	KBS66	KBX6	KBD59	KBXGL6
66b	K739	X7	KBR67	KBS77	KBX7	KBD67	KBXGL7
67b	K739	X7	KBR68	KBS77	KBX7	KBD68	KBXGL7

Table 10-20

Subtest	K	X<n>	K<x>R<n>	K<x>S<n>	K<x>X<n>	K<x>D<n>	K<x>XGL<n>
68b	K739	X7	KBR69	KBS77	KBX7	KBD69	KBXGL7
69b	K740	X8	KBR77	KBS88	KBX8	KBD77	KBXGL8
70b	K740	X8	KBR78	KBS88	KBX8	KBD78	KBXGL8
71b	K740	X8	KBR79	KBS88	KBX8	KBD79	KBXGL8

Figure 10-14 Test 13350



Test 13360

Test Driver to Fixture Interface (MINT) Pin (MUX) Relays can be Opened

This test verifies that K<x>D relays can be opened. A test failure is caused when the relay being tested fails to open. The relay being tested is shown in bold, by subtest, in the table below.

Test 13360 is dependent on functioning X-bus, X-bus disconnect, XGL-bus, and receiver (MINT) pin (MUX) relays.

Figure 10-15 on page 10-57 shows the test path.

Table 10-21

Subtest	K	X<n>	K<x>D<n>	K<x>S<n>	K<x>X<n>	K<x>R<n>	K<x>XGL<n>
Page A							
0a	K733	X1	KAD1	KAS11	KAX1	KAR1	KAXGL1
1a	K733	X1	KAD2	KAS11	KAX1	KAR2	KAXGL1
2a	K733	X1	KAD3	KAS11	KAX1	KAR3	KAXGL1
3a	K733	X1	KAD4	KAS11	KAX1	KAR4	KAXGL1
4a	K733	X1	KAD5	KAS11	KAX1	KAR5	KAXGL1
5a	K733	X1	KAD6	KAS11	KAX1	KAR6	KAXGL1
6a	K734	X2	KAD11	KAS22	KAX2	KAR11	KAXGL2
7a	K734	X2	KAD12	KAS22	KAX2	KAR12	KAXGL2
8a	K734	X2	KAD13	KAS22	KAX2	KAR13	KAXGL2
9a	K734	X2	KAD14	KAS22	KAX2	KAR14	KAXGL2
10a	K734	X2	KAD15	KAS22	KAX2	KAR15	KAXGL2
11a	K734	X2	KAD16	KAS22	KAX2	KAR16	KAXGL2
12a	K735	X3	KAD21	KAS33	KAX3	KAR21	KAXGL3
13a	K735	X3	KAD22	KAS33	KAX3	KAR22	KAXGL3
14a	K735	X3	KAD23	KAS33	KAX3	KAR23	KAXGL3
15a	K735	X3	KAD24	KAS33	KAX3	KAR24	KAXGL3
16a	K735	X3	KAD25	KAS33	KAX3	KAR25	KAXGL3
17a	K735	X3	KAD26	KAS33	KAX3	KAR26	KAXGL3
18a	K736	X4	KAD31	KAS44	KAX4	KAR31	KAXGL4
19a	K736	X4	KAD32	KAS44	KAX4	KAR32	KAXGL4
20a	K736	X4	KAD33	KAS44	KAX4	KAR33	KAXGL4

Table 10-21

Subtest	K	X<n>	K<x>D<n>	K<x>S<n>	K<x>X<n>	K<x>R<n>	K<x>XGL<n>
21a	K736	X4	KAD34	KAS44	KAX4	KAR34	KAXGL4
22a	K736	X4	KAD35	KAS44	KAX4	KAR35	KAXGL4
23a	K736	X4	KAD36	KAS44	KAX4	KAR36	KAXGL4
24a	K737	X5	KAD41	KAS55	KAX5	KAR41	KAXGL5
25a	K737	X5	KAD42	KAS55	KAX5	KAR42	KAXGL5
26a	K737	X5	KAD43	KAS55	KAX5	KAR43	KAXGL5
27a	K737	X5	KAD44	KAS55	KAX5	KAR44	KAXGL5
28a	K737	X5	KAD45	KAS55	KAX5	KAR45	KAXGL5
29a	K737	X5	KAD46	KAS55	KAX5	KAR46	KAXGL5
30a	K738	X6	KAD51	KAS66	KAX6	KAR51	KAXGL6
31a	K738	X6	KAD52	KAS66	KAX6	KAR52	KAXGL6
32a	K738	X6	KAD53	KAS66	KAX6	KAR53	KAXGL6
33a	K738	X6	KAD54	KAS66	KAX6	KAR54	KAXGL6
34a	K738	X6	KAD55	KAS66	KAX6	KAR55	KAXGL6
35a	K738	X6	KAD56	KAS66	KAX6	KAR56	KAXGL6
36a	K739	X7	KAD61	KAS77	KAX7	KAR61	KAXGL7
37a	K739	X7	KAD62	KAS77	KAX7	KAR62	KAXGL7
38a	K739	X7	KAD63	KAS77	KAX7	KAR63	KAXGL7
39a	K739	X7	KAD64	KAS77	KAX7	KAR64	KAXGL7
40a	K739	X7	KAD65	KAS77	KAX7	KAR65	KAXGL7
41a	K739	X7	KAD66	KAS77	KAX7	KAR66	KAXGL7
42a	K740	X8	KAD71	KAS88	KAX8	KAR71	KAXGL8
43a	K740	X8	KAD72	KAS88	KAX8	KAR72	KAXGL8
44a	K740	X8	KAD73	KAS88	KAX8	KAR73	KAXGL8
45a	K740	X8	KAD74	KAS88	KAX8	KAR74	KAXGL8
46a	K740	X8	KAD75	KAS88	KAX8	KAR75	KAXGL8
47a	K740	X8	KAD76	KAS88	KAX8	KAR76	KAXGL8
48a	K733	X1	KAD7	KAS11	KAX1	KAR7	KAXGL1
49a	K733	X1	KAD8	KAS11	KAX1	KAR8	KAXGL1
50a	K733	X1	KAD9	KAS11	KAX1	KAR9	KAXGL1

Table 10-21

Subtest	K	X<n>	K<x>D<n>	K<x>S<n>	K<x>X<n>	K<x>R<n>	K<x>XGL<n>
51a	K734	X2	KAD17	KAS22	KAX2	KAR17	KAXGL2
52a	K734	X2	KAD18	KAS22	KAX2	KAR18	KAXGL2
53a	K734	X2	KAD19	KAS22	KAX2	KAR19	KAXGL2
54a	K735	X3	KAD27	KAS33	KAX3	KAR27	KAXGL3
55a	K735	X3	KAD28	KAS33	KAX3	KAR28	KAXGL3
56a	K735	X3	KAD29	KAS33	KAX3	KAR29	KAXGL3
57a	K736	X4	KAD37	KAS44	KAX4	KAR37	KAXGL4
58a	K736	X4	KAD38	KAS44	KAX4	KAR38	KAXGL4
59a	K736	X4	KAD39	KAS44	KAX4	KAR39	KAXGL4
60a	K737	X5	KAD47	KAS55	KAX5	KAR47	KAXGL5
61a	K737	X5	KAD48	KAS55	KAX5	KAR48	KAXGL5
62a	K737	X5	KAD49	KAS55	KAX5	KAR49	KAXGL5
63a	K738	X6	KAD57	KAS66	KAX6	KAR57	KAXGL6
64a	K738	X6	KAD58	KAS66	KAX6	KAR58	KAXGL6
65a	K738	X6	KAD59	KAS66	KAX6	KAR59	KAXGL6
66a	K739	X7	KAD67	KAS77	KAX7	KAR67	KAXGL7
67a	K739	X7	KAD68	KAS77	KAX7	KAR68	KAXGL7
68a	K739	X7	KAD69	KAS77	KAX7	KAR69	KAXGL7
69a	K740	X8	KAD77	KAS88	KAX8	KAR77	KAXGL8
70a	K740	X8	KAD78	KAS88	KAX8	KAR78	KAXGL8
71a	K740	X8	KAD79	KAS88	KAX8	KAR79	KAXGL8
Page B							
0b	K733	X1	KBD1	KBS11	KBX1	KBR1	KBXGL1
1b	K733	X1	KBD2	KBS11	KBX1	KBR2	KBXGL1
2b	K733	X1	KBD3	KBS11	KBX1	KBR3	KBXGL1
3b	K733	X1	KBD4	KBS11	KBX1	KBR4	KBXGL1
4b	K733	X1	KBD5	KBS11	KBX1	KBR5	KBXGL1
5b	K733	X1	KBD6	KBS11	KBX1	KBR6	KBXGL1
6b	K734	X2	KBD11	KBS22	KBX2	KBR11	KBXGL2
7b	K734	X2	KBD12	KBS22	KBX2	KBR12	KBXGL2

Table 10-21

Subtest	K	X<n>	K<x>D<n>	K<x>S<n>	K<x>X<n>	K<x>R<n>	K<x>XGL<n>
8b	K734	X2	KBD13	KBS22	KBX2	KBR13	KBXGL2
9b	K734	X2	KBD14	KBS22	KBX2	KBR14	KBXGL2
10b	K734	X2	KBD15	KBS22	KBX2	KBR15	KBXGL2
11b	K734	X2	KBD16	KBS22	KBX2	KBR16	KBXGL2
12b	K735	X3	KBD21	KBS33	KBX3	KBR21	KBXGL3
13b	K735	X3	KBD22	KBS33	KBX3	KBR22	KBXGL3
14b	K735	X3	KBD23	KBS33	KBX3	KBR23	KBXGL3
15b	K735	X3	KBD24	KBS33	KBX3	KBR24	KBXGL3
16b	K735	X3	KBD25	KBS33	KBX3	KBR25	KBXGL3
17b	K735	X3	KBD26	KBS33	KBX3	KBR26	KBXGL3
18b	K736	X4	KBD31	KBS44	KBX4	KBR31	KBXGL4
19b	K736	X4	KBD32	KBS44	KBX4	KBR32	KBXGL4
20b	K736	X4	KBD33	KBS44	KBX4	KBR33	KBXGL4
21b	K736	X4	KBD34	KBS44	KBX4	KBR34	KBXGL4
22b	K736	X4	KBD35	KBS44	KBX4	KBR35	KBXGL4
23b	K736	X4	KBD36	KBS44	KBX4	KBR36	KBXGL4
24b	K737	X5	KBD41	KBS55	KBX5	KBR41	KBXGL5
25b	K737	X5	KBD42	KBS55	KBX5	KBR42	KBXGL5
26b	K737	X5	KBD43	KBS55	KBX5	KBR43	KBXGL5
27b	K737	X5	KBD44	KBS55	KBX5	KBR44	KBXGL5
28b	K737	X5	KBD45	KBS55	KBX5	KBR45	KBXGL5
29b	K737	X5	KBD46	KBS55	KBX5	KBR46	KBXGL5
30b	K738	X6	KBD51	KBS66	KBX6	KBR51	KBXGL6
31b	K738	X6	KBD52	KBS66	KBX6	KBR52	KBXGL6
32b	K738	X6	KBD53	KBS66	KBX6	KBR53	KBXGL6
33b	K738	X6	KBD54	KBS66	KBX6	KBR54	KBXGL6
34b	K738	X6	KBD55	KBS66	KBX6	KBR55	KBXGL6
35b	K738	X6	KBD56	KBS66	KBX6	KBR56	KBXGL6
36b	K739	X7	KBD61	KBS77	KBX7	KBR61	KBXGL7
37b	K739	X7	KBD62	KBS77	KBX7	KBR62	KBXGL7

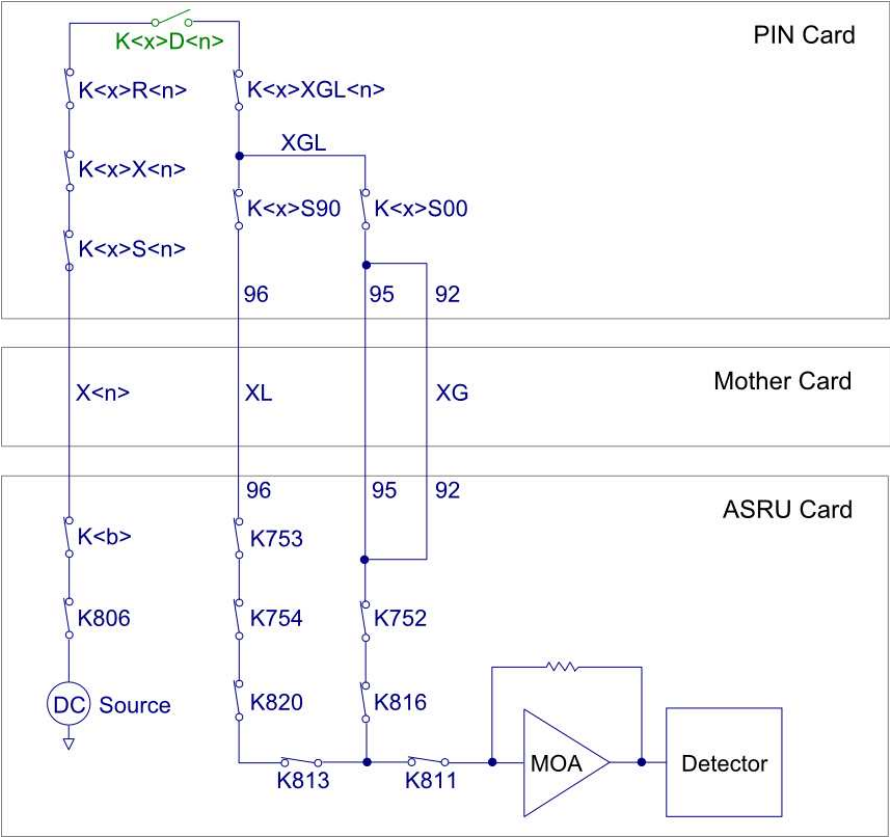
Table 10-21

Subtest	K	X<n>	K<x>D<n>	K<x>S<n>	K<x>X<n>	K<x>R<n>	K<x>XGL<n>
38b	K739	X7	KBD63	KBS77	KBX7	KBR63	KBXGL7
39b	K739	X7	KBD64	KBS77	KBX7	KBR64	KBXGL7
40b	K739	X7	KBD65	KBS77	KBX7	KBR65	KBXGL7
41b	K739	X7	KBD66	KBS77	KBX7	KBR66	KBXGL7
42b	K740	X8	KBD71	KBS88	KBX8	KBR71	KBXGL8
43b	K740	X8	KBD72	KBS88	KBX8	KBR72	KBXGL8
44b	K740	X8	KBD73	KBS88	KBX8	KBR73	KBXGL8
45b	K740	X8	KBD74	KBS88	KBX8	KBR74	KBXGL8
46b	K740	X8	KBD75	KBS88	KBX8	KBR75	KBXGL8
47b	K740	X8	KBD76	KBS88	KBX8	KBR76	KBXGL8
48b	K733	X1	KBD7	KBS11	KBX1	KBR7	KBXGL1
49b	K733	X1	KBD8	KBS11	KBX1	KBR8	KBXGL1
50b	K733	X1	KBD9	KBS11	KBX1	KBR9	KBXGL1
51b	K734	X2	KBD17	KBS22	KBX2	KBR17	KBXGL2
52b	K734	X2	KBD18	KBS22	KBX2	KBR18	KBXGL2
53b	K734	X2	KBD19	KBS22	KBX2	KBR19	KBXGL2
54b	K735	X3	KBD27	KBS33	KBX3	KBR27	KBXGL3
55b	K735	X3	KBD28	KBS33	KBX3	KBR28	KBXGL3
56b	K735	X3	KBD29	KBS33	KBX3	KBR29	KBXGL3
57b	K736	X4	KBD37	KBS44	KBX4	KBR37	KBXGL4
58b	K736	X4	KBD38	KBS44	KBX4	KBR38	KBXGL4
59b	K736	X4	KBD39	KBS44	KBX4	KBR39	KBXGL4
60b	K737	X5	KBD47	KBS55	KBX5	KBR47	KBXGL5
61b	K737	X5	KBD48	KBS55	KBX5	KBR48	KBXGL5
62b	K737	X5	KBD49	KBS55	KBX5	KBR49	KBXGL5
63b	K738	X6	KBD57	KBS66	KBX6	KBR57	KBXGL6
64b	K738	X6	KBD58	KBS66	KBX6	KBR58	KBXGL6
65b	K738	X6	KBD59	KBS66	KBX6	KBR59	KBXGL6
66b	K739	X7	KBD67	KBS77	KBX7	KBR67	KBXGL7
67b	K739	X7	KBD68	KBS77	KBX7	KBR68	KBXGL7

Table 10-21

Subtest	K	X<n>	K<x>D<n>	K<x>S<n>	K<x>X<n>	K<x>R<n>	K<x>XGL<n>
68b	K739	X7	KBD69	KBS77	KBX7	KBR69	KBXGL7
69b	K740	X8	KBD77	KBS88	KBX8	KBR77	KBXGL8
70b	K740	X8	KBD78	KBS88	KBX8	KBR78	KBXGL8
71b	K740	X8	KBD79	KBS88	KBX8	KBR79	KBXGL8

Figure 10-15 Test 13360



Test 13362

Test General Purpose Relays can be Opened

This test verifies that the KGP relays can be opened. A test failure is caused when the relay being tested fails to open. The relay being tested is shown in bold, by subtest, in the table below.

Table 10-22

Subtest	KGP<n>
Side A	
0a	KGP1
1a	KGP2
Side B	
0b	KGP1
1b	KGP2

Test 13370

Test Receiver Channel Relays can be Opened

This test verifies that the K<x>R relays can be opened. A test failure is caused when the relay being tested fails to open. The relay being tested is shown in bold, by subtest, in the table below. Test 13370 sets the receiver references (RHI and RLO) to +2.0 and -2.0 volts, enables the receiver's pull-up, opens the relay, and then measures the receiver's input level. A 10-kohm path to ground ensures that the test will pass if the path is open; it eliminates the possibility of a drift value that fails.

Test 13370 requires the proper operation of X-bus, X-bus disconnect, XGL-bus, and fixture interface (MINT) pin (MUX) relays.

Figure 10-16 on page 10-60 shows the measurement path.

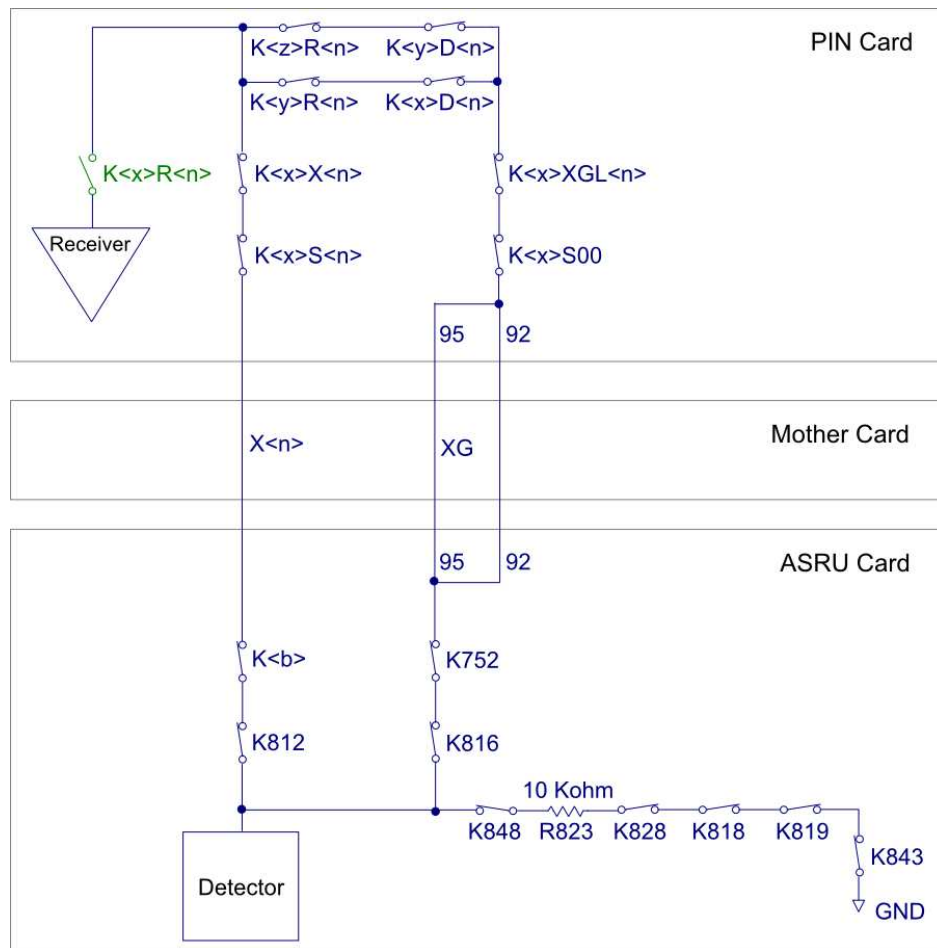
Table 10-23

Subtest	K	K<x>R<n>	K<y>R<n>	K<z>R<n>	K<x>XGL<n>	K<x>S<n>	K<x>X<n>	K<x>D<n>	K<y>D<n>
Page A									
0a	K725	KAR00	KAR1	KAR2	KAXGL1	KAS11	KAX1	KAD1	KAD2
1a	K726	KAR10	KAR11	KAR12	KAXGL2	KAS22	KAX2	KAD11	KAD12
2a	K727	KAR20	KAR21	KAR22	KAXGL3	KAS33	KAX3	KAD21	KAD22
3a	K728	KAR30	KAR31	KAR32	KAXGL4	KAS44	KAX4	KAD31	KAD32
4a	K729	KAR40	KAR41	KAR42	KAXGL5	KAS55	KAX5	KAD41	KAD42

Table 10-23

Subtest	K	K<x>R<n>	K<y>R<n>	K<z>R<n>	K<x>XGL<n>	K<x>S<n>	K<x>X<n>	K<x>D<n>	K<y>D<n>
5a	K730	KAR50	KAR51	KAR52	KAXGL6	KAS66	KAX6	KAD51	KAD52
6a	K731	KAR60	KAR61	KAR62	KAXGL7	KAS77	KAX7	KAD61	KAD62
7a	K732	KAR70	KAR71	KAR72	KAXGL8	KAS88	KAX8	KAD71	KAD72
Page B									
0b	K725	KBR00	KBR1	KBR2	KBXGL1	KBS11	KBX1	KBD1	KBD2
1b	K726	KBR10	KBR11	KBR12	KBXGL2	KBS22	KBX2	KBD11	KBD12
2b	K727	KBR20	KBR21	KBR22	KBXGL3	KBS33	KBX3	KBD21	KBD22
3b	K728	KBR30	KBR31	KBR32	KBXGL4	KBS44	KBX4	KBD31	KBD32
4b	K729	KBR40	KBR41	KBR42	KBXGL5	KBS55	KBX5	KBD41	KBD42
5b	K730	KBR50	KBR51	KBR52	KBXGL6	KBS66	KBX6	KBD51	KBD52
6b	K731	KBR60	KBR61	KBR62	KBXGL7	KBS77	KBX7	KBD61	KBD62
7b	K732	KBR70	KBR71	KBR72	KBXGL8	KBS88	KBX8	KBD71	KBD72
Page A									
8a	K725	KCR00	KAR1	KAR2	KCXGL1	KAS11	KCX1	KAD1	KAD2
9a	K726	KCR10	KAR11	KAR12	KCXGL2	KAS22	KCX2	KAD11	KAD12
10a	K727	KCR20	KAR21	KAR22	KCXGL3	KAS33	KCX3	KAD21	KAD22
11a	K728	KCR30	KAR31	KAR32	KCXGL4	KAS44	KCX4	KAD31	KAD32
12a	K729	KCR40	KAR41	KAR42	KCXGL5	KAS55	KCX5	KAD41	KAD42
13a	K730	KCR50	KAR51	KAR52	KCXGL6	KAS66	KCX6	KAD51	KAD52
14a	K731	KCR60	KAR61	KAR62	KCXGL7	KAS77	KCX7	KAD61	KAD62
15a	K732	KCR70	KAR71	KAR72	KCXGL8	KAS88	KCX8	KAD71	KAD72
Page B									
8b	K725	KDR00	KBR1	KBR2	KDXGL1	KBS11	KDX1	KBD1	KBD2
9b	K726	KDR10	KBR11	KBR12	KDXGL2	KBS22	KDX2	KBD11	KBD12
10b	K727	KDR20	KBR21	KBR22	KDXGL3	KBS33	KDX3	KBD21	KBD22
11b	K728	KDR30	KBR31	KBR32	KDXGL4	KBS44	KDX4	KBD31	KBD32
12b	K729	KDR40	KBR41	KBR42	KDXGL5	KBS55	KDX5	KBD41	KBD42
13b	K730	KDR50	KBR51	KBR52	KDXGL6	KBS66	KDX6	KBD51	KBD52
14b	K731	KDR60	KBR61	KBR62	KDXGL7	KBS77	KDX7	KBD61	KBD62
15b	K732	KDR70	KBR71	KBR72	KDXGL8	KBS88	KDX8	KBD71	KBD72

Figure 10-16 Test 13370



Test 13372

Test Driver to Receiver Relays can be Opened.

This test verifies that the $K<x>C$ relays can be opened. A test failure is caused when the relay being tested fails to open. The relay being tested is shown in bold, by subtest, in the table below.

This test can be executed with or without the Pin Verification Fixture. Requires proper operation of: ASRU, Disconnect relays, X-bus relays, Driver relays, Receiver relays.

Figure 10-17 on page 10-62 shows the measurement path. It tests the same path as Test 13272.

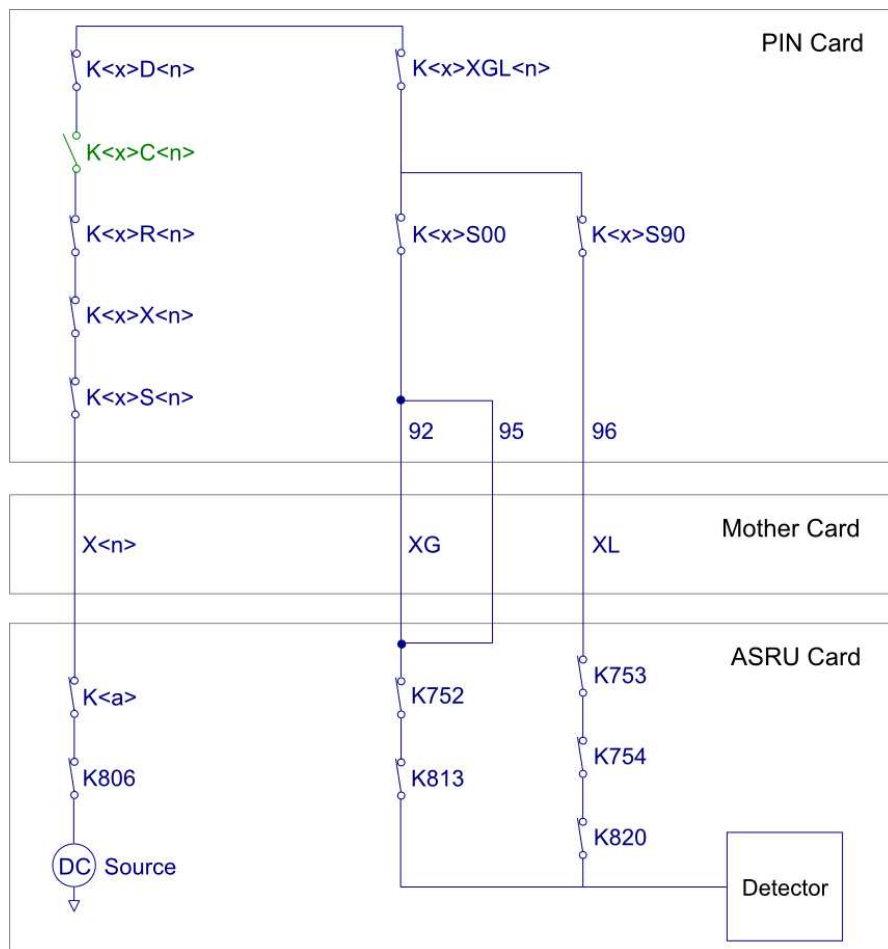
Table 10-24

Subtest	K<x>C<n>	K<n>	K<x>S<n>	K<x>X<n>	K<x>R<n>	K<x>D<n>	K<x>XGL<n>
Page A							
0a	KAC0	K733	KAS11	KAX1	KAR00	KAD00	KAXGL1
1a	KAC1	K734	KAS22	KAX2	KAR10	KAD10	KAXGL2
2a	KAC2	K735	KAS33	KAX3	KAR20	KAD20	KAXGL3
3a	KAC3	K746	KAS44	KAX4	KAR30	KAD30	KAXGL4
4a	KAC4	K737	KAS55	KAX5	KAR40	KAD40	KAXGL5
5a	KAC5	K738	KAS66	KAX6	KAR50	KAD50	KAXGL6
6a	KAC6	K739	KAS77	KAX7	KAR60	KAD60	KAXGL7
7a	KAC7	K740	KAS88	KAX8	KAR70	KAD70	KAXGL8
Page B							
0b	KBC0	K733	KBS11	KBX1	KBR00	KBD00	KBXGL1
1b	KBC1	K734	KBS22	KBX2	KBR10	KBD10	KBXGL2
2b	KBC2	K735	KBS33	KBX3	KBR20	KBD20	KBXGL3
3b	KBC3	K746	KBS44	KBX4	KBR30	KBD30	KBXGL4
4b	KBC4	K737	KBS55	KBX5	KBR40	KBD40	KBXGL5
5b	KBC5	K738	KBS66	KBX6	KBR50	KBD50	KBXGL6
6b	KBC6	K739	KBS77	KBX7	KBR60	KBD60	KBXGL7
7b	KBC7	K740	KBS88	KBX8	KBR70	KBD70	KBXGL8
Page A							
8a	KCC0	K733	KAS11	KCX1	KAR00	KCD00	KCXGL1
9a	KCC1	K734	KAS22	KCX2	KAR10	KCD10	KCXGL2
10a	KCC2	K735	KAS33	KCX3	KAR20	KCD20	KCXGL3
11a	KCC3	K746	KAS44	KCX4	KAR30	KCD30	KCXGL4
12a	KCC4	K737	KAS55	KCX5	KAR40	KCD40	KCXGL5
13a	KCC5	K738	KAS66	KCX6	KAR50	KCD50	KCXGL6
14a	KCC6	K739	KAS77	KCX7	KAR60	KCD60	KCXGL7
15a	KCC7	K740	KAS88	KCX8	KAR70	KCD70	KCXGL8

Table 10-24

Subtest	K<x>C<n>	K<n>	K<x>S<n>	K<x>X<n>	K<x>R<n>	K<x>D<n>	K<x>XGL<n>
Page B							
8b	KDC0	K733	KBS11	KDX1	KBR00	KDD00	KDXGL1
9b	KDC1	K734	KBS22	KDX2	KBR10	KDD10	KDXGL2
10b	KDC2	K735	KBS33	KDX3	KBR20	KDD20	KDXGL3
11b	KDC3	K746	KBS44	KDX4	KBR30	KDD30	KDXGL4
12b	KDC4	K737	KBS55	KDX5	KBR40	KDD40	KDXGL5
13b	KDC5	K738	KBS66	KDX6	KBR50	KDD50	KDXGL6
14b	KDC6	K739	KBS77	KDX7	KBR60	KDD60	KDXGL7
15b	KDC7	K740	KBS88	KDX8	KBR70	KDD70	KDXGL8

Figure 10-17 Test 13372



Test 13374

Test Driver to XL-Bus Relays can be Opened.

This test verifies that the K<x>XL relays can be opened. A test failure is caused when the relay being tested fails to open. The relay being tested is shown in bold, by subtest, in the table below. This test can be executed with or without the Pin Verification Fixture.

Figure 10-18 on page 10-65 shows the measurement path.

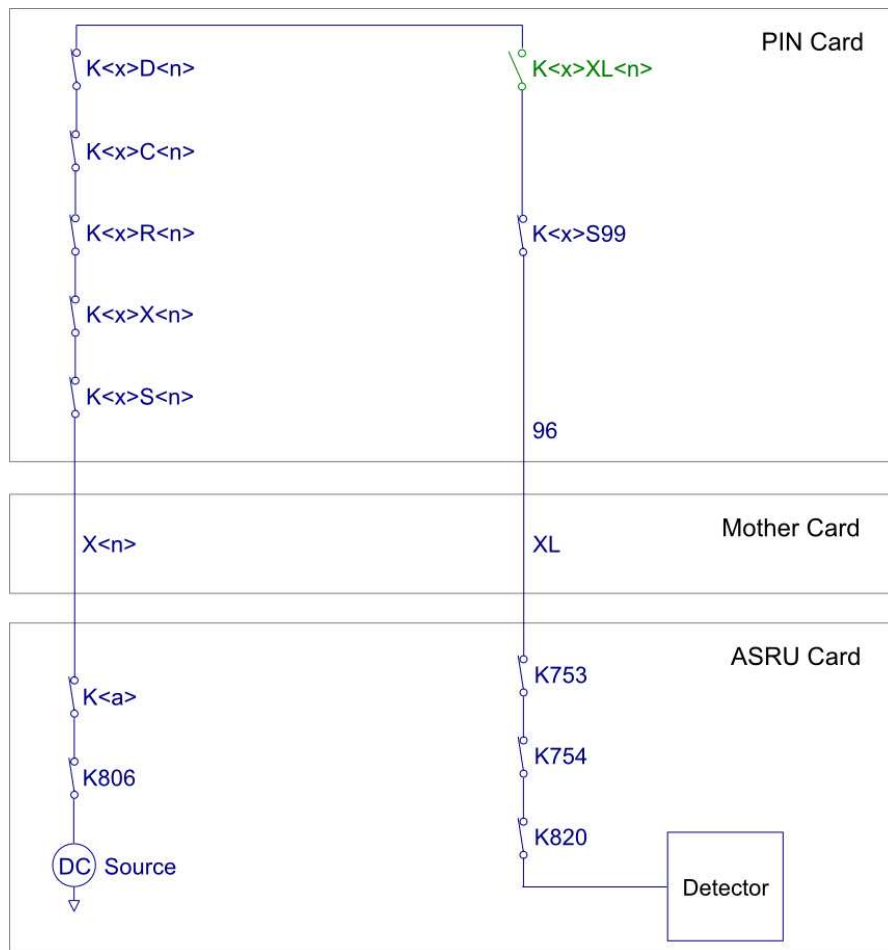
Table 10-25

Subtest	K<a>	K<x>XL<n>	K<x>S<n>	K<x>X<n>	K<x>R<n>	K<x>C<n>	K<x>D<n>
Page A							
0a	K733	KAXL1	KAS11	KAX1	KAR00	KAC0	KAD00
1a	K734	KAXL2	KAS22	KAX2	KAR10	KAC1	KAD10
2a	K735	KAXL3	KAS33	KAX3	KAR20	KAC2	KAD20
3a	K746	KAXL4	KAS44	KAX4	KAR30	KAC3	KAD30
4a	K737	KAXL5	KAS55	KAX5	KAR40	KAC4	KAD40
5a	K738	KAXL6	KAS66	KAX6	KAR50	KAC5	KAD50
6a	K739	KAXL7	KAS77	KAX7	KAR60	KAC6	KAD60
7a	K740	KAXL8	KAS88	KAX8	KAR70	KAC7	KAD70
Page B							
0b	K733	KBXL1	KBS11	KBX1	KBR00	KBC0	KBD00
1b	K734	KBXL2	KBS22	KBX2	KBR10	KBC1	KBD10
2b	K735	KBXL3	KBS33	KBX3	KBR20	KBC2	KBD20
3b	K746	KBXL4	KBS44	KBX4	KBR30	KBC3	KBD30
4b	K737	KBXL5	KBS55	KBX5	KBR40	KBC4	KBD40
5b	K738	KBXL6	KBS66	KBX6	KBR50	KBC5	KBD50
6b	K739	KBXL7	KBS77	KBX7	KBR60	KBC6	KBD60
7b	K740	KBXL8	KBS88	KBX8	KBR70	KBC7	KBD70
Page A							
8a	K733	KCXL1	KAS11	KCX1	KAR00	KCC0	KAD00
9a	K734	KCXL2	KAS22	KCX2	KAR10	KCC1	KAD10
10a	K735	KCXL3	KAS33	KCX3	KAR20	KCC2	KAD20
11a	K746	KCXL4	KAS44	KCX4	KAR30	KCC3	KAD30

Table 10-25

Subtest	K<a>	K<x>XL<n>	K<x>S<n>	K<x>X<n>	K<x>R<n>	K<x>C<n>	K<x>D<n>
12a	K737	KCXL5	KAS55	KCX5	KAR40	KCC4	KAD40
13a	K738	KCXL6	KAS66	KCX6	KAR50	KCC5	KAD50
14a	K739	KCXL7	KAS77	KCX7	KAR60	KCC6	KAD60
15a	K740	KCXL8	KAS88	KCX8	KAR70	KCC7	KAD70
Page B							
8b	K733	KDXL1	KBS11	KDX1	KBR00	KDC0	KBD00
9b	K734	KDXL2	KBS22	KDX2	KBR10	KDC1	KBD10
10b	K735	KDXL3	KBS33	KDX3	KBR20	KDC2	KBD20
11b	K746	KDXL4	KBS44	KDX4	KBR30	KDC3	KBD30
12b	K737	KDXL5	KBS55	KDX5	KBR40	KDC4	KBD40
13b	K738	KDXL6	KBS66	KDX6	KBR50	KDC5	KBD50
14b	K739	KDXL7	KBS77	KDX7	KBR60	KDC6	KBD60
15b	K740	KDXL8	KBS88	KDX8	KBR70	KDC7	KBD70

Figure 10-18 Test 13374



Test 13376

Test X-Bus Disconnect Relays can be Opened.

This test verifies that the K<x>S relays can be opened. A test failure is caused when the relay being tested fails to open. The relay being tested is shown in bold, by subtest, in the table below.

This test can be executed with or without the Pin Verification Fixture.

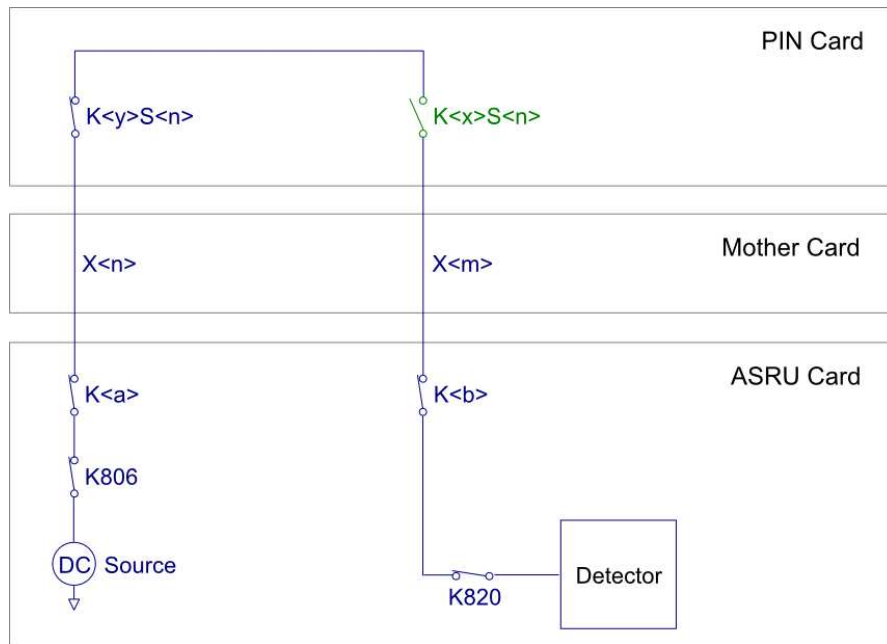
A pair of disconnect relays create a path in and out of the Pin card. One X-bus pin is connected to the ASRU source via the S-bus, another X-bus pin is connected to the ASRU detector (via the L-bus), and a resistor measurement performed.

Figure 10-19 shows the measurement path. It uses the same test path as Test 13276.

Table 10-26

Subtest	K<y>S<n>	K<x>S<n>	K<a>	K
Page A				
0a	KAS11	KAS31	K733	K719
1a	KAS22	KAS42	K734	K720
2a	KAS33	KAS53	K735	K721
3a	KAS44	KAS64	K736	K722
4a	KAS55	KAS75	K737	K723
5a	KAS66	KAS86	K738	K724
6a	KAS77	KAS17	K739	K717
7a	KAS88	KAS28	K740	K718
Page B				
0b	KBS11	KBS31	K733	K719
1b	KBS22	KBS42	K734	K720
2b	KBS33	KBS53	K735	K721
3b	KBS44	KBS64	K736	K722
4b	KBS55	KBS75	K737	K723
5b	KBS66	KBS86	K738	K724
6b	KBS77	KBS17	K739	K717
7b	KBS88	KBS28	K740	K718

Figure 10-19 Test 13376



Test 13378

Test Ground-Bounce Relays can be Opened.

This test verifies that the KBV relays can be opened. A test failure is caused when the relay being tested fails to open. The relay being tested is shown in bold, by subtest, in the table below.

This test is executed only *without* the Pin Verification Fixture. It requires the proper operation of: ASRU, Disconnect relays, X-bus relays, and Channel MUX relays. The signal path is the same as in Test 13278, but it tests for 5 Vdc because KBV is open.

Figure 10-20 on page 10-69 shows the measurement path.

Table 10-27

Subtest	KBV<n>	K<x>D<n>	K<x>R<n>	K<x>X<n>	K<x>XGL<n>	K<y>D<n>	K<n>
Page B							
0	KBV11	KBD11	KBR11	KBX2	KBXGL2	KBS22	K726
1	KBV12	KBD12	KBR12	KBX2	KBXGL2	KBS22	K726
2	KBV13	KBD13	KBR13	KBX2	KBXGL2	KBS22	K726
3	KBV14	KBD14	KBR14	KBX2	KBXGL2	KBS22	K726
4	KBV15	KBD15	KBR15	KBX2	KBXGL2	KBS22	K726

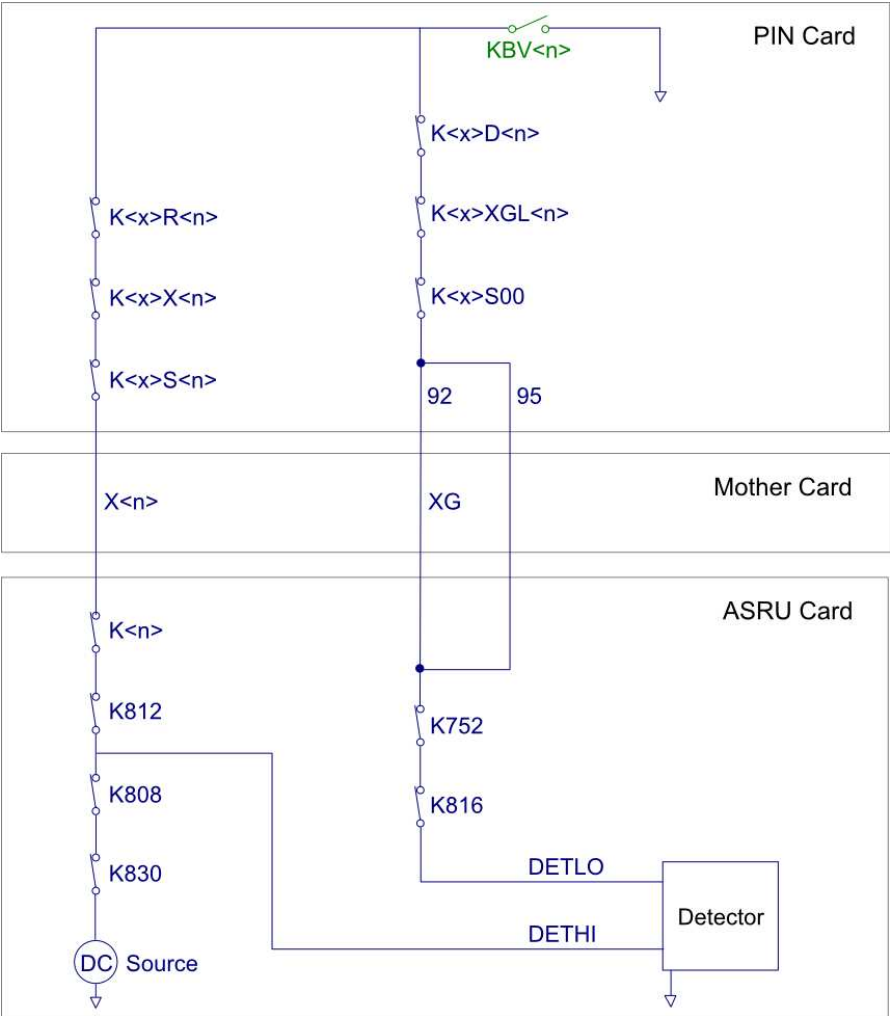
Table 10-27

Subtest	KBV<n>	K<x>D<n>	K<x>R<n>	K<x>X<n>	K<x>XGL<n>	K<y>D<n>	K<n>
5	KBV16	KBD16	KBR16	KBX2	KBXGL2	KBS22	K726
6	KBV17	KBD17	KBR17	KBX2	KBXGL2	KBS22	K726
7	KBV18	KBD18	KBR18	KBX2	KBXGL2	KBS22	K726
8	KBV19	KBD19	KBR19	KBX2	KBXGL2	KBS22	K726
9	KBV31	KBD31	KBR31	KBX4	KBXGL4	KBS44	K728
10	KBV32	KBD32	KBR32	KBX4	KBXGL4	KBS44	K728
11	KBV33	KBD33	KBR33	KBX4	KBXGL4	KBS44	K728
12	KBV34	KBD34	KBR34	KBX4	KBXGL4	KBS44	K728
13	KBV35	KBD35	KBR35	KBX4	KBXGL4	KBS44	K728
14	KBV36	KBD36	KBR36	KBX4	KBXGL4	KBS44	L728
15	KBV37	KBD37	KBR37	KBX4	KBXGL4	KBS44	K728
16	KBV38	KBD38	KBR38	KBX4	KBXGL4	KBS44	K728
17	KBV39	KBD39	KBR39	KBX4	KBXGL4	KBS44	K728
18	KBV41	KBD41	KBR41	KBX5	KBXGL5	KBS55	K729
19	KBV42	KBD42	KBR42	KBX5	KBXGL5	KBS55	K729
20	KBV43	KBD43	KBR43	KBX5	KBXGL5	KBS55	K729
21	KBV44	KBD44	KBR44	KBX5	KBXGL5	KBS55	K729
22	KBV45	KBD45	KBR45	KBX5	KBXGL5	KBS55	K729
23	KBV46	KBD46	KBR46	KBX5	KBXGL5	KBS55	K729
24	KBV47	KBD47	KBR47	KBX5	KBXGL5	KBS55	K729
25	KBV48	KBD48	KBR48	KBX5	KBXGL5	KBS55	K729
26	KBV49	KBD49	KBR49	KBX5	KBXGL5	KBS55	K729
27	KBV61	KBD51	KBR61	KBX7	KBXGL7	KBS77	K731
28	KBV62	KBD62	KBR62	KBX7	KBXGL7	KBS77	K731
29	KBV63	KBD63	KBR63	KBX7	KBXGL7	KBS77	K731
30	KBV64	KBD64	KBR64	KBX7	KBXGL7	KBS77	K731
31	KBV65	KBD65	KBR65	KBX7	KBXGL7	KBS77	K731
32	KBV66	KBD66	KBR66	KBX7	KBXGL7	KBS77	K731
33	KBV67	KBD67	KBR67	KBX7	KBXGL7	KBS77	K731

Table 10-27

Subtest	KBV<n>	K<x>D<n>	K<x>R<n>	K<x>X<n>	K<x>XGL<n>	K<y>D<n>	K<n>
34	KBV68	KBD68	KBR68	KBX7	KBXGL7	KBS77	K731
35	KBV69	KBD69	KBR69	KBX7	KBXGL7	KBS77	K731

Figure 10-20 Test 13378



Test 13380

Test Driver Channel Relays can be Opened

This test verifies that K<x>P relays can be opened. A test failure is caused when the relay being tested fails to open. The relay being tested is shown in bold, by subtest, in the table below.

Test 13380 sets the driver high (DHI = +3.5 volts and DLO = -3.5 volts), opens the driver channel relay, and then measures the driver output level. A 10-kohm path to ground ensures that the test will fail if the path is shorted and it eliminates the possibility of a drift value.

Test 13380 requires the proper operation of X-bus, X-bus disconnect, XGL-bus, and fixture interface (MINT) pin (MUX) relays.

Figure 10-21 on page 10-72 shows the measurement path.

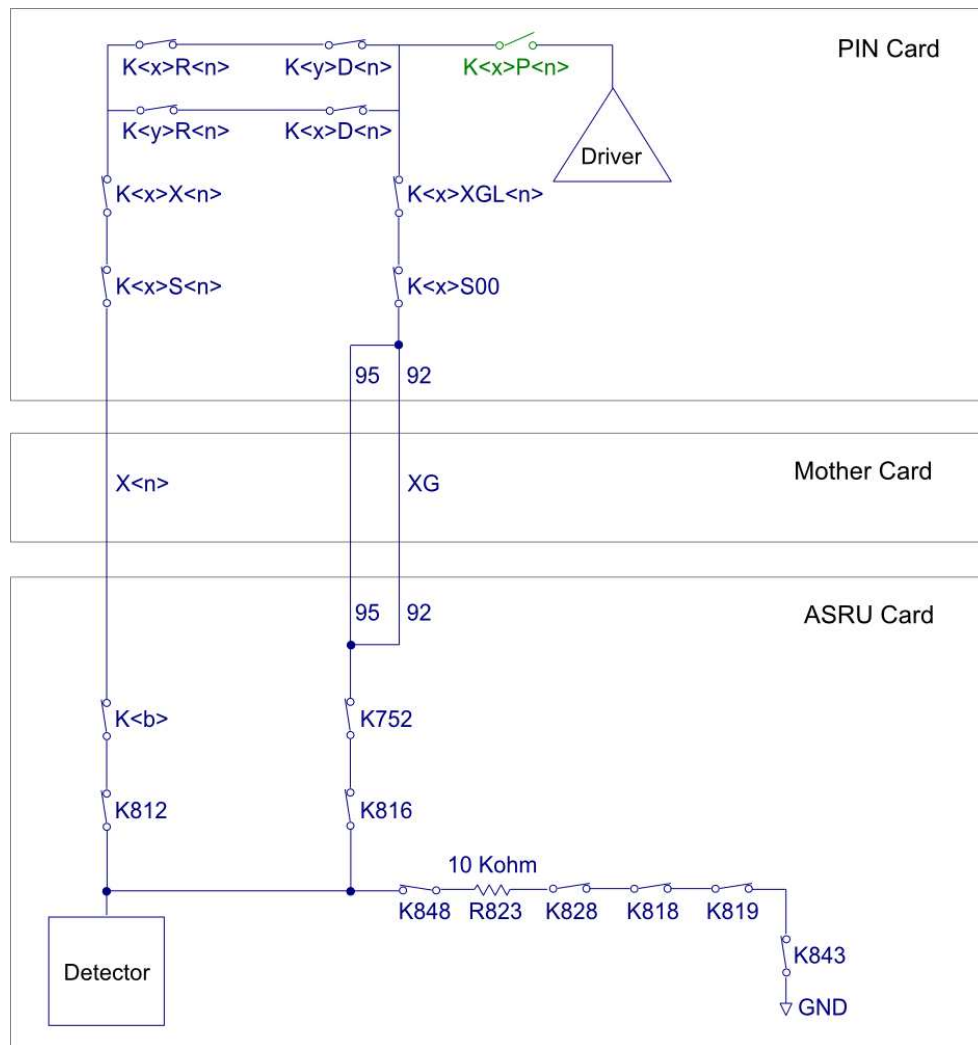
Table 10-28

Subtest	K<x>P<n>	K	K<x>XGL<n>	K<x>S<n>	K<x>X<n>	K<x>D<n>	K<y>D<n>	K<x>R<n>	K<y>R<n>
Page A									
0a	KAP1	K725	KAXGL1	KAS11	KAX1	KAD1	KAD2	KAR1	KAR2
1a	KAP2	K726	KAXGL2	KAS22	KAX2	KAD11	KAD12	KAR11	KAR12
2a	KAP3	K727	KAXGL3	KAS33	KAX3	KAD21	KAD22	KAR21	KAR22
3a	KAP4	K728	KAXGL4	KAS44	KAX4	KAD31	KAD32	KAR31	KAR32
4a	KAP5	K729	KAXGL5	KAS55	KAX5	KAD41	KAD42	KAR41	KAR42
5a	KAP6	K730	KAXGL6	KAS66	KAX6	KAD51	KAD52	KAR51	KAR52
6a	KAP7	K731	KAXGL7	KAS77	KAX7	KAD61	KAD62	KAR61	KAR62
7a	KAP8	K732	KAXGL8	KAS88	KAX8	KAD71	KAD72	KAR71	KAR72
Page B									
0b	KBP1	K725	KBXGL1	KBS11	KBX1	KBD1	KBD2	KBR1	KBR2
1b	KBP2	K726	KBXGL2	KBS22	KBX2	KBD11	KBD12	KBR11	KBR12
2b	KBP3	K727	KBXGL3	KBS33	KBX3	KBD21	KBD22	KBR21	KBR22
3b	KBP4	K728	KBXGL4	KBS44	KBX4	KBD31	KBD32	KBR31	KBR32
4b	KBP5	K729	KBXGL5	KBS55	KBX5	KBD41	KBD42	KBR41	KBR42
5b	KBP6	K730	KBXGL6	KBS66	KBX6	KBD51	KBD52	KBR51	KBR52
6b	KBP7	K731	KBXGL7	KBS77	KBX7	KBD61	KBD62	KBR61	KBR62
7b	KBP8	K732	KBXGL8	KBS88	KBX8	KBD71	KBD72	KBR71	KBR72

Table 10-28

Subtest	K<x>P<n>	K	K<x>XGL<n>	K<x>S<n>	K<x>X<n>	K<x>D<n>	K<y>D<n>	K<x>R<n>	K<y>R<n>
Page A									
8a	KCP1	K725	KCXGL1	KAS11	KCX1	KAD1	KAD2	KAR1	KAR2
9a	KCP2	K726	KCXGL2	KAS22	KCX2	KAD11	KAD12	KAR11	KAR12
10a	KCP3	K727	KCXGL3	KAS33	KCX3	KAD21	KAD22	KAR21	KAR22
11a	KCP4	K728	KCXGL4	KAS44	KCX4	KAD31	KAD32	KAR31	KAR32
12a	KCP5	K729	KCXGL5	KAS55	KCX5	KAD41	KAD42	KAR41	KAR42
13a	KCP6	K730	KCXGL6	KAS66	KCX6	KAD51	KAD52	KAR51	KAR52
14a	KCP7	K731	KCXGL7	KAS77	KCX7	KAD61	KAD62	KAR61	KAR62
15a	KCP8	K732	KCXGL8	KAS88	KCX8	KAD71	KAD72	KAR71	KAR72
Page B									
8b	KDP1	K725	KDXGL1	KBS11	KDX1	KBD1	KBD2	KBR1	KBR2
9b	KDP2	K726	KDXGL2	KBS22	KDX2	KBD11	KBD12	KBR11	KBR12
10b	KDP3	K727	KDXGL3	KBS33	KDX3	KBD21	KBD22	KBR21	KBR22
11b	KDP4	K728	KDXGL4	KBS44	KDX4	KBD31	KBD32	KBR31	KBR32
12b	KDP5	K729	KDXGL5	KBS55	KDX5	KBD41	KBD42	KBR41	KBR42
13b	KDP6	K730	KDXGL6	KBS66	KDX6	KBD51	KBD52	KBR51	KBR52
14b	KDP7	K731	KDXGL7	KBS77	KDX7	KBD61	KBD62	KBR61	KBR62
15b	KDP8	K732	KDXGL8	KBS88	KDX8	KBD71	KBD72	KBR71	KBR72

Figure 10-21 Test 13380



Format Chip

- Test 13410
- Test 13411
- Test 13412
- Test 13413
- Test 13414
- Test 13415
- Test 13416
- Test 13417
- Test 13419
- Test 13420
- Test 13421
- Test 13422
- Test 13423
- Test 13424
- Test 13434
- Test 13435
- Test 13436
- Test 13437
- Test 13438

Test 13410

Verify Driver Data from ADRV and Format Chip

This test verifies that the format chip can drive and receive data on each channel.

Subtests are grouped in sections of 16. Of the 16 subtests for each channel, eight use the ADRV0 and ADRV1 lines from the Module Control Card to set driver data on the Pin Card; the other eight use data from the format chip's flip-flops, FF1 and FF2. After driving the data, each subtest reads 1's and 0's from the receiver GTL and GTH lines. The receiver data are returned to the Module Control Card via the ARCV0 line.

Test 13410 runs 16 types of subtests as shown in the table below. Each subtest type repeats every 16 subtests.

Table 10-29

Subtest	Function
0	Send a 1 from ADRV0 and check receiver GTH data: Channel <c>
1	Send a 1 from ADRV0 and check receiver GTL data: Channel <c>
2	Send a 0 from ADRV0 and check receiver GTH data: Channel <c>
3	Send a 0 from ADRV0 and check receiver GTL data: Channel <c>
4	Send a 1 from ADRV1 and check receiver GTH data: Channel <c>
5	Send a 1 from ADRV1 and check receiver GTL data: Channel <c>
6	Send a 0 from ADRV1 and check receiver GTH data: Channel <c>
7	Send a 0 from ADRV1 and check receiver GTL data: Channel <c>
8	Send a 1 from FF1 and check receiver GTH data: Channel <c>
9	Send a 1 from FF1 and check receiver GTL data: Channel <c>
10	Send a 0 from FF1 and check receiver GTH data: Channel <c>
11	Send a 0 from FF1 and check receiver GTL data: Channel <c>
12	Send a 1 from FF2 and check receiver GTH data: Channel <c>
13	Send a 1 from FF2 and check receiver GTL data: Channel <c>
14	Send a 0 from FF2 and check receiver GTH data: Channel <c>
15	Send a 0 from FF2 and check receiver GTL data: Channel <c>

Test 13411

Verify Driver Three-State from ADRV, Format Chip, or CPU

This test checks the ability to three-state the drivers.

Subtests are grouped in sections of 10. Each group of subtests tests the three-stating of the drivers by five methods. The first two subtests verify the three-stating via the ADRV0 line from Module Control Card. The next two subtests verify three-stating via ADRV1. The third and fourth pairs of subtests verify three-stating via the format chip's three-state flip-flops. The fifth pair verifies the master three-state (MTSP) set by the Module Control Card.

All the odd subtests read GTH; the even subtests read GTL. Receiver data are returned to the Module Control Card on ADRV0. Since all subtests verify the driver can be three-stated, all results are expected to be 0.

Test 13411 runs 10 types of subtests, affecting each channel. Each subtest type repeats every 10 subtests.

Test 13412

Verify Receiver Data from ARCV

This test verifies receiver response. The drive data are set by ADRV0 and ADRV1. Receiver data are returned to the Module Control Card via ARCV0 and ARCV1.

Subtests divide into groups of eight subtests. The first pair of subtests uses ADRV0 to produce a 1 for the driver data and ARCV0 to return the response. The second pair uses ADRV0 to produce a driver 0 and returns the response on ARCV0. The third and fourth pairs use ADRV1 instead of ADRV0 for driver data and ARCV1 instead of ARCV0 for the receiver return path. Half of the subtests check GTH; the other half check GTL.

Test 13412 runs eight types of subtests. Each subtest type repeats every eight subtests.

Test 13413

Verify GTH and GTL from ARCV

This test checks the GTH and GTL signals from ARCV by using various receiver levels.

The 24 subtests for each channel are divided into two groups of 12. One group uses ADRV0 to drive data and ARCV0 to return the GTH and GTL data; the other group uses ADRV1 and ARCV1.

Six subtests are run with low receiver levels; the other six are run with high receiver levels. Of each group of six, two subtests have the driver force a true low. The next two drive to a level (an invalid mid-level) between the receiver high and low. The final two subtests drive a valid high. Even subtests measure GTH; odd subtests measure GTL.

Test 13414

Verify Driver / Receiver Data

This test checks the functioning of the drivers and receivers by running three sequencer programs that use the driver and receiver states 1, 0, K (keep), T (toggle), X (receiver don't care), Z (driver three-state), enable/disable, and NOP. After each program is run, test 13414 checks the sequencer status and the P/F log contents.

Table 10-30

Subtest	Function
0	Check sequencer status with enable pull-down
1-8	Check fail log data with enable pull-down: Channel A through H
9	Check sequencer status with enable pull-up
10-17	Check fail log data with enable pull-up: Channel A through H
18	Check sequencer status with NOP
19-26	Check fail log data with NOP: Channel A through H

Test 13415

Verify Driver Duty Cycle

This test checks the duty cycle (symmetry) of each channel's driver waveform. The TIC (time interval counter) measures vector pair timing, and then Test 13415 calculates the duty cycle for each channel.

Test 13416

State Capture Enable Test - Receiver Response

This test verifies the operation of the format chip's hold register and SC (State Capture) pointer.

Test 13417

Verify Sequencer Halt on Failure

This test verifies that data stored in the Pass/Fail log on each format chip can be used to halt the sequencer. The sequencer is set to halt on a failure (the same as Test 13414), but this test produces failures in one channel at a time using eight different sequencer programs. As each channel produces a failure, Test 13417 checks the status of the sequencer to verify that it halted on a failure.

Test 13419

Verify ARCV Signals

This test verifies the format chip's ARCV signals. Test 13419 runs sequencer programs that set a driver level and select various signals; the Module Control Card then reads the ARCV lines.

Test 13420

Verify Driver Tap Delay Accuracy

This test verifies the format chips' driver delay lines.

Test 13420 sets the TCLK to 625.0 kHz and routes it to TIC channel B to be used as a reference. The drivers are connected to the Module Control Card's TIC channel A. Test 13420 measures the delay for each driver channel, tap delay, and format chip delay line.

The subtests divide into groups of 16 subtests. Of the 16 subtests for each channel, the first eight measure delays on delay line A; the other eight check delay line B. Subtests within each group of subtests correspond to different delay times.

Test 13421

Verify Receiver Tap Delay Accuracy

This test verifies the format chip's receiver delay lines.

Test 13421 sets the TCLK to 625.0 kHz and routes it to TIC channel B to be used as a reference. The receivers are connected to the Module Control Card's TIC channel A. Test 13421 measures the delay for each receiver channel, tap delay, and format chip delay line.

The subtests divide into groups of eight subtests. Each group of eight subtests corresponds to eight different delay times. The first subtests check delay line A (using ARCV0); the remaining subtests check delay line B (using ARCV1).

Test 13422

Verify Three-State of ARCV Signal

This test verifies the format chip's ability to three-state its ARCV0 and ARCV1 lines. The sequencer program enables each format chip to drive its ARCV lines and disable the other format chips' ARCV outputs. The disabled format chips are set to the opposite data state of the active chip.

Subtests are divided into groups of 16. The first group tests ARCV0; the second tests ARCV1. The groups of 16 divide into four subtests. The four subtests for each of the sets select GTH or GTL and drive either a 0 or a 1.

Table 10-31

Subtest	Function
0	Select GTH, drive 1, and check ARCV: Channel <c>
1	Select GTL, drive 1, and check ARCV: Channel <c>
2	Select GTH, drive 0, and check ARCV: Channel <c>
3	Select GTL, drive 0, and check ARCV: Channel <c>

Test 13423

Verify State Capture Data

This test verifies the format chip's state capture data. Test 13423 connects all the drivers to their receivers and then runs a sequencer program.

The first set of subtests reads the hold registers and state capture RAM. The next set of subtests perform the same function as the first subtests but check the hold registers and state capture RAM after the sequencer run.

Test 13424

Verify Driver at 20 MHz

This test measures the output frequency of each driver at 20 MHz. The drivers are run via the ADRV lines and are measured with the TIC on Module Control Card. Driver data are multiplexed from the Module Control Card DUTCLK generator on ADRV0 and ADRV1.

Test 13434

Verify Driver and Receiver Data

This test is a fast-mode¹ version of Test 13414. The following functions are verified for the driver and receiver data in fast-mode: 1, 0, keep, toggle, enable/disable, and NOP (no operation).

Test 13435

Verify FAIL Pipe Enable/Disable²

This test verifies that the FAIL pipe enable/disable bit from the I/O chip is functional.

1. When the pattern rate of the system is greater than 12 MP/s, piping circuitry is activated which puts the system in what is called fast-mode. All systems which operating at 20 MP/s run in fast-mode.
2. The pipe is a sequence of registers in control signal paths between cards. These registers regulate the flow of data passed between cards in systems running faster than 12 MP/s. The enable/disable lines select either a piped or non-piped output of their respective data lines to the Mother Card.

Test 13436

Verify ARCV0 Pipe Enable / Disable

This test verifies that the ARCV0 pipe enable/disable bit from the I/O chip is functional.

Test 13437

Verify ARCV1 Pipe Enable / Disable

This test verifies that the ARCV1 pipe enable/disable bit from the I/O chip is functional.

Test 13438

Check FAIL, ARCV0, and ARCV1 Pipe Enable / Disable Interaction

This test verifies that the FAIL, ARCV0, and ARCV1 pipe enable/disable bits are independent (not shorted together) and functional.

Driver

- Test 13439
- Test 13450
- Test 13519
- Test 13529
- Test 13530
- Test 13539
- Test 13540
- Test 13541
- Test 13559
- Test 13560
- Test 13596
- Test 13598
- Test 13601

Test 13439

Verify Driver Level

This test checks the driver high (DHI) and driver low (DLO) voltage levels on all drivers. The output of the drivers is measured on the ASRU DC detector.

Subtests are divided into groups of 18 subtests per group. Within each group of 18 subtests, the first nine subtests measure driver high levels, and the second nine subtests measure driver low levels.

Test 13450

Check Receiver Ringing Clamp Enable and Disable

This test checks bits on the I/O chip that enable the receiver ringing clamps for all channels. Each clamp is tested for enable and disable, and simultaneous enable and disable.

Test 13519

Verify Driver Timing Accuracy

This test checks driver timing accuracy by using two delay lines and eight delay times: -30, -10, 0, 10, 30, 50, 70, and 100 nanoseconds.

Test 13529

Verify Driver and Receiver at 12 MP/s

This test verifies that the drivers and receivers are working by running three sequencer programs and checking the HybridPlus Pin Card status and fail log flag.

Test 13530

Driver Receiver Working Test for 317X Systems

This is the same test as Test 13529, except the test pattern rate is 6 MP/s.

This test verifies that the drivers and receivers are working by running three sequencer programs and checking the HybridPlus Pin Card status and fail log flag.

Test 13539

Verify Driver and Receiver

This test is a fast-mode version of Test 13529 with the receiver ringing clamp circuit disabled.

Test 13540

Verify Driver and Receiver with Clamp Circuit

This test is a fast-mode version of Test 13529 with the receiver ringing clamp circuit enabled.

Test 13541

Verify Driver and Receiver with Ground-Bounce Disable Off

This test is the same as Test 13539 with the ground-bounce disable off.

Test 13559

Verify Driver Frequency at 6.25 MP/s

This test uses 16 subtests to verify that the Pin Card drivers operate at 6.25 MHz (12 MP/s). Even subtests check the sequencer status, and odd subtests measure the driver frequency for each channel.

Test 13560

Verify Driver Frequency at 10 MHz

Requires: 20 MP/s system

This test verifies that the drivers for the Hybrid32-20 Pin Card can operate at 10 MHz (20 MP/s).

Test 13596

Verify Driver Enable and Disable

This test verifies the driver enable and disable functions. The subtests are divided into groups of nine subtests, each group representing results from a sequencer program. The groups of nine consist of one sequencer status check and fail log flag checks for each driver. Of the five sequencer programs, only the first contains no failures.

Test 13598

Verify Driver Enable and Disable

This test is a fast-mode version of Test 13596.

Test 13601

Driver Overvoltage

This test checks the driver's ability to respond to overvoltage conditions. The ASRU card applies four voltages (+5, +10, -3.5 and -8 volts) and checks the pin card status for overvoltage detection.

Receiver

- Test 13619
- Test 13629
- Test 13648
- Test 13651
- Test 13659
- Test 13668
- Test 13678
- Test 13679
- Test 13680
- Test 13689

Test 13619

Verify Receiver Timing

This test verifies receiver timing at different delay settings: -10, 10, 30, 70, and 100 nanoseconds. The subtests are grouped in sets of six subtests. These six subtests measure (via the Module Control Card TIC) receiver channel delay at one of six different delay settings. The sets represent delay lines A and B for all channels.

Test 13629

Verify Receiver Sense Range

This test calculates the sense level for each receiver channel by measuring the source voltage (from the ASRU Card) before and after a sequencer run and then checking the Pin Card's state capture RAM for the sense level. Each receiver is tested four ways: at +5.0 volts on the rising edge, at +5.0 volts on the falling edge, at -3.5 volts on the rising edge, and at -3.5 volts on the falling edge.

Test 13648

Verify Receiver Overvoltage

This test verifies the cards overvoltage range: -14.4 volts to 13.8 volts.

Test 13651

Verify Receiver Pull Up / Down Test

This test is similar to Test 13650, with the addition of closing the 10-kohm resistor from Xg to ground. This is needed for receiver input loading.

Test 13659

Verify Receiver Pull-Up and Pull-Down Current

This test verifies the receiver pull-up and pull-down current. It first tests the receivers' pull-up hardware sourcing current then the receivers' pull-down hardware sinking current.

Test 13668

Verify Receiver Level Accuracy

This test checks receiver level accuracy at +2.0 volts and +0.8 volts.

First the rising-edge and falling-edge receiver levels are used to calculate the receivers' hysteresis. Then the receiver pull-ups and pull-downs are enabled to calculate the rising-edge levels and the falling-edge levels.

Test 13678

Verify Receiver Frequency

This test checks the receivers at 6.25 MHz. The even subtests read the sequencer status, and the odd subtests measure the frequency for each receiver.

Test 13679

Verify Receiver Enable and Disable

This test verifies the ability to enable and disable the receivers. The subtests are grouped in sets of nine, each set representing results from a sequencer program. The groups of nine consist of one sequencer status check and fail log flag checks for each receiver.

Test 13680

Receiver Enable / Disable for 317X Systems

This is the same as Test 13679. The pattern rate is 6.66 MHz.

This test verifies the ability to enable and disable the receivers. The subtests are grouped in sets of nine, each set representing results from a sequencer program. The group of nine consists of one sequencer status check and fail log flag checks for each receiver.

Test 13689

Verify Receiver Enable and Disable

This test is a fast-mode version of Test 13679.

Timing

- Test 13734
- Test 13758
- Test 13759

Test 13734

Confirm Driver and Receiver at Speed

This confirmation test verifies that the Hybrid32 Pin Card drivers and receivers operate at 3.33 MHz for the 3073 system.

Test 13758

Verify Receiver Frequency

This test checks the receivers at 3.33 MHz. The even subtests read the sequencer status, and the odd subtests measure the frequency for each receiver.

Test 13759

Verify Driver Frequency at 3.33 MHz

This test verifies the Pin Card drivers on the 3073 systems operate at 3.33 MHz. The even subtests check the sequencer status, and odd subtests measure the driver frequency for each channel.

Other Driver

- Test 13770
- Test 13818
- Test 13822
- Test 13839
- Test 13842
- Test 13860

Test 13770

Driver Three-State Leakage Current

This test checks the three-state leakage current of all channel drivers at both -2 volts and +3 volts.

Test 13818

Output Impedance

This test verifies the output impedance of each channel's driver. All the channels will be measured while driving high first, followed by the channels driving low.

Table 10-32

Subtest	Function
Side A	
0a-7a	Checks the source impedance on channels 0-7
8a-15a	Checks the sink impedance on channels 0-7
16a-23a	Checks the source impedance on channels 8-15
24a-31a	Checks the sink impedance on channels 8-15
Side B	
0b-7b	Checks the source impedance on channels 0-7
8b-15b	Checks the sink impedance on channels 0-7
16b-23b	Checks the source impedance on channels 8-15
24b-31b	Checks the sink impedance on channels 8-15

Test 13822

Driver Slew Rate Rising Edge

This test verifies the several rising edge slew rates for each channel's driver.

Table 10-33

Subtest	Function	Subtest	Function
Side A		Side B	
0a-10a	Check channel 0 side a slew rates	0b-10b	Check chbnnel 0 side b slew rbtes
11a-22a	Check channel 1 side a slew rates	11b-22b	Check chbnnel 1 side b slew rbtes
23a-34a	Check channel 2 side a slew rates	23b-34b	Check chbnnel 2 side b slew rbtes
35a-46a	Check channel 3 side a slew rates	35b-46b	Check chbnnel 3 side b slew rbtes
47a-58a	Check channel 4 side a slew rates	47b-58b	Check chbnnel 4 side b slew rbtes
59a-70a	Check channel 5 side a slew rates	59b-70b	Check chbnnel 5 side b slew rbtes
71a-82a	Check channel 6 side a slew rates	71b-82b	Check chbnnel 6 side b slew rbtes
83a-94a	Check channel 7 side a slew rates	83b-94b	Check chbnnel 7 side b slew rbtes
95a-106a	Check channel 8 side a slew rates	95b-106b	Check chbnnel 8 side b slew rbtes
106a-117a	Check channel 9 side a slew rates	106b-117b	Check chbnnel 9 side b slew rbtes
118a-129a	Check channel 10 side a slew rates	118b-129b	Check chbnnel 10 side b slew rbtes
130a-141a	Check channel 11 side a slew rates	130b-141b	Check chbnnel 11 side b slew rbtes
142a-153a	Check channel 12 side a slew rates	142b-153b	Check chbnnel 12 side b slew rbtes
154a-165a	Check channel 13 side a slew rates	154b-165b	Check chbnnel 13 side b slew rbtes
166a-177a	Check channel 14 side a slew rates	166b-177b	Check chbnnel 14 side b slew rbtes
178a-189a	Check channel 15 side a slew rates	178b-189b	Check chbnnel 15 side b slew rbtes

Test 13839

CRC Data Acquisition

This test verifies the CRC (cyclic redundancy check) circuitry. After reading the CRC register for each channel, Test 13839 runs a sequencer program and rechecks the card status, P/F log contents, and the CRC register.

Test 13842

Pin Driver Module Reset

This test checks the pin driver module reset by evaluating GTH and GTL for each channel before and after the reset command.

Test 13860

Driver Current

This test is the same as Test 13859, except for different current levels. It now tests 700 milliamps for 2 milliseconds and 50 milliamps for 100 milliseconds. These values should not trip the over-temperature switch.

Receiver Bias Current

Test 13970

Receiver Input Bias

This test verifies receiver input bias current. Test 13970 calculates the bias current for each receiver by setting the MOA bias level to one of three values and comparing the MOA's voltages when the receiver is disconnected and connected.

Relay with Fixture: Tests 13971-13976

- Test 13971
- Test 13972
- Test 13974
- Test 13975
- Test 13976

Test 13971

Test Pairs of X-Bus Disconnect and Receiver to X-Bus Relays can be Closed

Requires: Pin Verification Fixture

This test verifies that pairs of K<x>S and K<x>X relays can be closed. A test failure is caused when either of the relays being tested fail to close. The relays being tested are shown in bold, by subtest, in the table below.

Test 13210 tests the same relays but does not contain the redundant path through the Pin Verification Fixture. With this redundant path, test 13971 can isolate K<x>S and K<x>X failures from K<x>XGL failures. Because the K<x>S and K<x>X relays are in series, this test cannot isolate a K<x>S relay that fails to close from a K<x>X relay that fails to close.

Figure 10-22 on page 10-94 shows the measurement path.

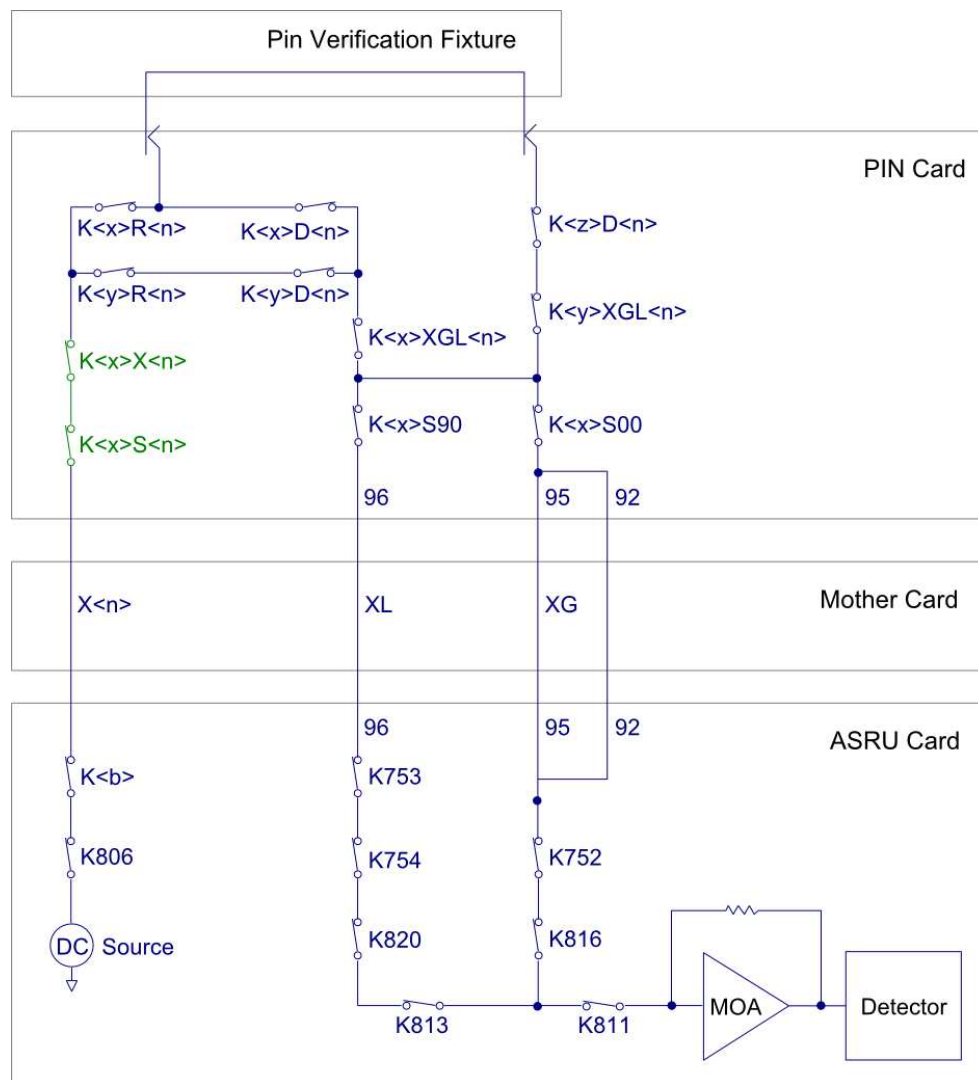
Table 10-34

Subtest	K	X<n>	K<x>S<n>	K<x>X<n>	K<x>D<n>	K<y>D<n>	K<y>D<n>	K<x>R<n>	K<y>R<n>	K<x>XGL<n>	K<y>XGL<n>
Page A											
0a	K733	X1	KAS11	KAX1	KAD1	KAD2	KAD11	KAR1	KAR2	KAXGL1	KAXGL2
1a	K734	X2	KAS22	KAX2	KAD11	KAD12	KAD21	KAR11	KAR12	KAXGL2	KAXGL3
2a	K735	X3	KAS33	KAX3	KAD21	KAD22	KAD31	KAR21	KAR22	KAXGL3	KAXGL4
3a	K736	X4	KAS44	KAX4	KAD31	KAD32	KAD41	KAR31	KAR32	KAXGL4	KAXGL5
4a	K737	X5	KAS55	KAX5	KAD41	KAD42	KAD51	KAR41	KAR42	KAXGL5	KAXGL6
5a	K738	X6	KAS66	KAX6	KAD51	KAD52	KAD61	KAR51	KAR52	KAXGL6	KAXGL7
6a	K739	X7	KAS77	KAX7	KAD61	KAD62	KAD71	KAR61	KAR62	KAXGL7	KAXGL8
7a	K740	X8	KAS88	KAX8	KAD71	KAD72	KAD1	KAR71	KAR72	KAXGL8	KAXGL1
Page B											
0b	K733	X1	KBS11	KBX1	KBD1	KBD2	KBD11	KBR1	KBR2	KBXGL1	KBXGL2
1b	K734	X2	KBS22	KBX2	KBD11	KBD12	KBD21	KBR11	KBR12	KBXGL2	KBXGL3
2b	K735	X3	KBS33	KBX3	KBD21	KBD22	KBD31	KBR21	KBR22	KBXGL3	KBXGL4
3b	K736	X4	KBS44	KBX4	KBD31	KBD32	KBD41	KBR31	KBR32	KBXGL4	KBXGL5
4b	K737	X5	KBS55	KBX5	KBD41	KBD42	KBD51	KBR41	KBR42	KBXGL5	KBXGL6
5b	K738	X6	KBS66	KBX6	KBD51	KBD52	KBD61	KBR51	KBR52	KBXGL6	KBXGL7
6b	K739	X7	KBS77	KBX7	KBD61	KBD62	KBD71	KBR61	KBR62	KBXGL7	KBXGL8
7a	K740	X8	KBS88	KBX8	KBD71	KBD72	KBD1	KBR71	KBR72	KBXGL8	KBXGL1

Table 10-34

Subtest	K	X<n>	K<x>S<n>	K<x>X<n>	K<x>D<n>	K<y>D<n>	K<y>D<n>	K<x>R<n>	K<y>R<n>	K<x>XGL<n>	K<y>XGL<n>
Page A											
8a	K733	X1	KAS11	KCX1	KAD1	KAD2	KAD11	KAR1	KAR2	KCXGL1	KCXGL2
9a	K734	X2	KAS22	KCX2	KAD11	KAD12	KAD21	KAR11	KAR12	KCXGL2	KCXGL3
10a	K735	X3	KAS33	KCX3	KAD21	KAD22	KAD31	KAR21	KAR22	KCXGL3	KCXGL4
11a	K736	X4	KAS44	KCX4	KAD31	KAD32	KAD41	KAR31	KAR32	KCXGL4	KCXGL5
12a	K737	X5	KAS55	KCX5	KAD41	KAD42	KAD51	KAR41	KAR42	KCXGL5	KCXGL6
13a	K738	X6	KAS66	KCX6	KAD51	KAD52	KAD61	KAR51	KAR52	KCXGL6	KCXGL7
14a	K739	X7	KAS77	KCX7	KAD61	KAD62	KAD71	KAR61	KAR62	KCXGL7	KCXGL8
15a	K740	X8	KAS88	KCX8	KAD71	KAD72	KAD1	KAR71	KAR72	KCXGL8	KCXGL1
Page B											
8b	K733	X1	KBS11	KDX1	KBD1	KBD2	KBD11	KBR1	KBR2	KDXGL1	KDXGL2
9b	K734	X2	KBS22	KDX2	KBD11	KBD12	KBD21	KBR11	KBR12	KDXGL2	KDXGL3
10b	K735	X3	KBS33	KDX3	KBD21	KBD22	KBD31	KBR21	KBR22	KDXGL3	KDXGL4
11b	K736	X4	KBS44	KDX4	KBD31	KBD32	KBD41	KBR31	KBR32	KDXGL4	KDXGL5
12b	K737	X5	KBS55	KDX5	KBD41	KBD42	KBD51	KBR41	KBR42	KDXGL5	KDXGL6
13b	K738	X6	KBS66	KDX6	KBD51	KBD52	KBD61	KBR51	KBR52	KDXGL6	KDXGL7
14b	K739	X7	KBS77	KDX7	KBD61	KBD62	KBD71	KBR61	KBR62	KDXGL7	KDXGL8
15b	K740	X8	KBS88	KDX8	KBD71	KBD72	KBD1	KBR71	KBR72	KDXGL8	KDXGL1

Figure 10-22 Test 13971



Test 13972

Test Driver to XGL-Bus Relays can be Closed

Requires: Pin Verification Fixture

This test verifies that $K<x>XGL$ relays can be closed. Test 13210 tests the same relays but does not contain the redundant path through the Pin Verification Fixture. With this redundant path, Test 13972 can isolate $K<x>XGL$ failures from $K<x>S$ and $K<x>X$ failures. A test failure is caused when the relay being tested fails to close. The relay being tested is shown in bold, by subtest, in the table below.

Figure 10-23 on page 10-97 shows the measurement path.

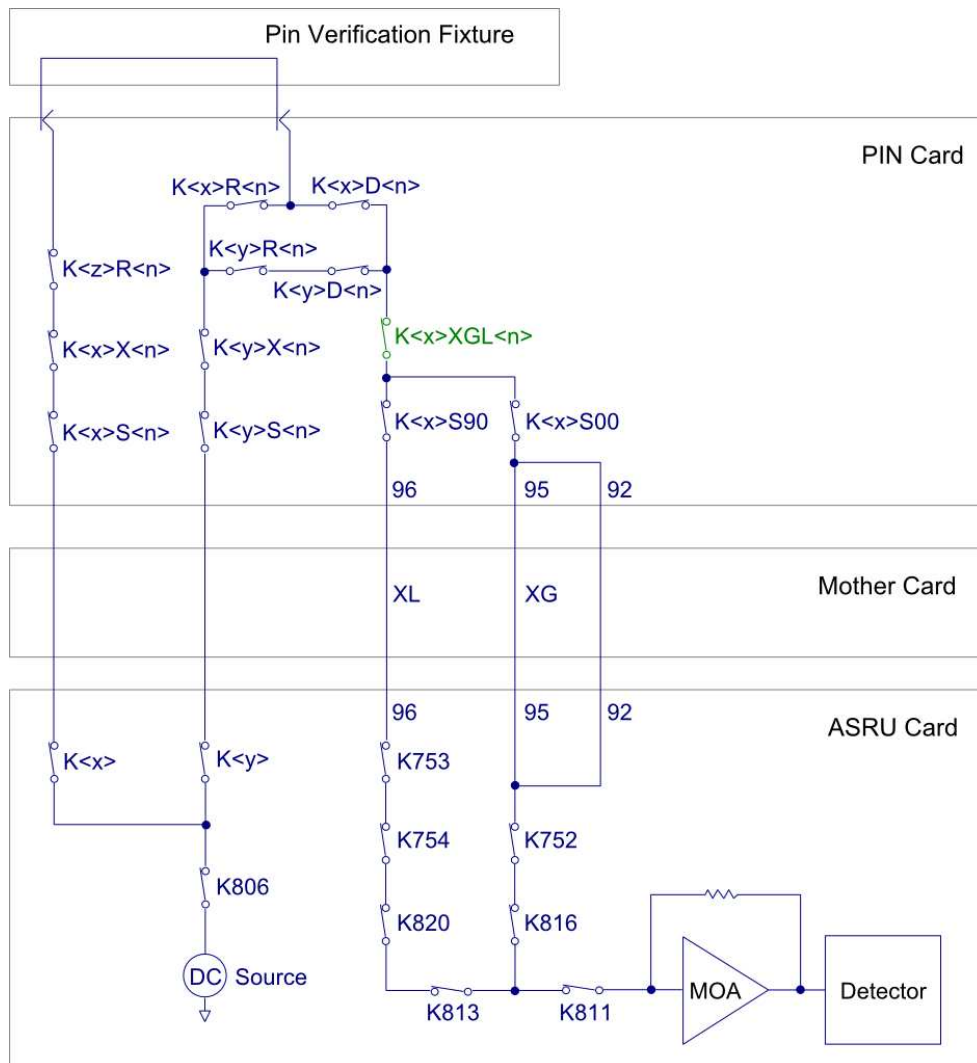
Table 10-35

Subtest	K<x>	K<y>	K<x>S<y>	K<y>S<n>	K<x>X<y>	K<y>X<n>	K<x>R<n>	K<y>R<n>	K<z>R<n>	K<x>D<n>	K<y>D<n>	K<x>XGL<n>
Page A												
0a	K734	K733	KAS22	KAS11	KAX2	KAX1	KAR11	KAR1	KAR2	KAD1	KAD2	KAXGL1
1a	K735	K734	KAS33	KAS22	KAX3	KAX2	KAR21	KAR11	KAR12	KAD11	KAD12	KAXGL2
2a	K736	K735	KAS44	KAS33	KAX4	KAX3	KAR31	KAR21	KAR22	KAD21	KAD22	KAXGL3
3a	K737	K736	KAS55	KAS44	KAX5	KAX4	KAR41	KAR31	KAR32	KAD31	KAD32	KAXGL4
4a	K738	K737	KAS66	KAS55	KAX6	KAX5	KAR51	KAR41	KAR42	KAD41	KAD42	KAXGL5
5a	K739	K738	KAS77	KAS66	KAX7	KAX6	KAR61	KAR51	KAR52	KAD51	KAD52	KAXGL6
6a	K740	K739	KAS88	KAS77	KAX8	KAX7	KAR71	KAR61	KAR62	KAD61	KAD62	KAXGL7
7a	K733	K740	KAS11	KAS88	KAX1	KAX8	KAR1	KAR71	KAR72	KAD71	KAD72	KAXGL8
Page B												
0b	K734	K733	KBS22	KBS11	KBX2	KBX1	KBR11	KBR1	KBR2	KBD1	KBD2	KBXGL1
1b	K735	K734	KBS33	KBS22	KBX3	KBX2	KBR21	KBR11	KBR12	KBD11	KBD12	KBXGL2
2b	K736	K735	KBS44	KBS33	KBX4	KBX3	KBR31	KBR21	KBR22	KBD21	KBD22	KBXGL3
3b	K737	K736	KBS55	KBS44	KBX5	KBX4	KBR41	KBR31	KBR32	KBD31	KBD32	KBXGL4
4b	K738	K737	KBS66	KBS55	KBX6	KBX5	KBR51	KBR41	KBR42	KBD41	KBD42	KBXGL5
5b	K739	K738	KBS77	KBS66	KBX7	KBX6	KBR61	KBR51	KBR52	KBD51	KBD52	KBXGL6
6b	K740	K739	KBS88	KBS77	KBX8	KBX7	KBR71	KBR61	KBR62	KBD61	KBD62	KBXGL7
7b	K733	K740	KBS11	KBS88	KBX1	KBX8	KBR1	KBR71	KBR72	KBD71	KBD72	KBXGL8

Table 10-35

Subtest	K<x>	K<y>	K<x>S<y>	K<y>S<n>	K<x>X<y>	K<y>X<n>	K<x>R<n>	K<y>R<n>	K<z>R<n>	K<x>D<n>	K<y>D<n>	K<x>XGL<n>
Page A												
8a	K734	K733	KAS22	KAS11	KCX2	KCX1	KAR11	KAR1	KAR2	KAD1	KAD2	KCXGL1
9a	K735	K734	KAS33	KAS22	KCX3	KCX2	KAR21	KAR11	KAR12	KAD11	KAD12	KCXGL2
10a	K736	K735	KAS44	KAS33	KCX4	KCX3	KAR31	KAR21	KAR22	KAD21	KAD22	KCXGL3
11a	K737	K736	KAS55	KAS44	KCX5	KCX4	KAR41	KAR31	KAR32	KAD31	KAD32	KCXGL4
12a	K738	K737	KAS66	KAS55	KCX6	KCX5	KAR51	KAR41	KAR42	KAD41	KAD42	KCXGL5
13a	K739	K738	KAS77	KAS66	KCX7	KCX6	KAR61	KAR51	KAR52	KAD51	KAD52	KCXGL6
14a	K740	K739	KAS88	KAS77	KCX8	KCX7	KAR71	KAR61	KAR62	KAD61	KAD62	KCXGL7
15a	K733	K740	KAS11	KAS88	KCX1	KCX8	KAR1	KAR71	KAR72	KAD71	KAD72	KCXGL8
Page B												
8b	K734	K733	KBS22	KBS11	KDX2	KDX1	KBR11	KBR1	KBR2	KBD1	KBD2	KDXGL1
9b	K735	K734	KBS33	KBS22	KDX3	KDX2	KBR21	KBR11	KBR12	KBD11	KBD12	KDXGL2
10b	K736	K735	KBS44	KBS33	KDX4	KDX3	KBR31	KBR21	KBR22	KBD21	KBD22	KDXGL3
11b	K737	K736	KBS55	KBS44	KDX5	KDX4	KBR41	KBR31	KBR32	KBD31	KBD32	KDXGL4
12b	K738	K737	KBS66	KBS55	KDX6	KDX5	KBR51	KBR41	KBR42	KBD41	KBD42	KDXGL5
13b	K739	K738	KBS77	KBS66	KDX7	KDX6	KBR61	KBR51	KBR52	KBD51	KBD52	KDXGL6
14b	K740	K739	KBS88	KBS77	KDX8	KDX7	KBR71	KBR61	KBR62	KBD61	KBD62	KDXGL7
15b	K733	K740	KBS11	KBS88	KDX1	KDX8	KBR1	KBR71	KBR72	KBD71	KBD72	KDXGL8

Figure 10-23 Test 13972



Test 13974

Test Receiver to Fixture Interface (MINT) Pin (MUX) Relays can be Closed

Requires: Pin Verification Fixture

This test verifies that K<x>R relays can be closed. A test failure is caused when the relay being tested fails to close. The relay being tested is shown in bold, by subtest, in the table below. Test 13974 is similar to Test 13240, but it contains a redundant path through the Pin Verification Fixture, allowing it to isolate open receiver (MINT) pin (MUX) relays from open receiver to fixture interface (MINT) pin (MUX) relays. This test can fail due to dirty MINT pins because the Pin Verification Fixture is in the path. [Figure 10-24](#) on page 10-103 shows the measurement path.

Table 10-36

Subtest	K	K<x>S<n>	K<x>X<n>	K<x>R<n>	K<x>D<n>	K<y>D<n>	K<x>XGL<n>	K<y>XGL<n>
Page A								
0a	K733	KAS11	KAX1	KAR1	KAD1	KAD11	KAXGL1	KAXGL2
1a	K733	KAS11	KAX1	KAR2	KAD2	KAD12	KAXGL1	KAXGL2
2a	K733	KAS11	KAX1	KAR3	KAD3	KAD13	KAXGL1	KAXGL2
3a	K733	KAS11	KAX1	KAR4	KAD4	KAD14	KAXGL1	KAXGL2
4a	K733	KAS11	KAX1	KAR5	KAD5	KAD15	KAXGL1	KAXGL2
5a	K733	KAS11	KAX1	KAR6	KAD6	KAD16	KAXGL1	KAXGL2
6a	K734	KAS22	KAX2	KAR11	KAD11	KAD21	KAXGL2	KAXGL3
7a	K734	KAS22	KAX2	KAR12	KAD12	KAD22	KAXGL2	KAXGL3
8a	K734	KAS22	KAX2	KAR13	KAD13	KAD23	KAXGL2	KAXGL3
9a	K734	KAS22	KAX2	KAR14	KAD14	KAD24	KAXGL2	KAXGL3
10a	K734	KAS22	KAX2	KAR15	KAD15	KAD25	KAXGL2	KAXGL3
11a	K734	KAS22	KAX2	KAR16	KAD16	KAD26	KAXGL2	KAXGL3
12a	K735	KAS33	KAX3	KAR21	KAD21	KAD31	KAXGL3	KAXGL4
13a	K735	KAS33	KAX3	KAR22	KAD22	KAD32	KAXGL3	KAXGL4
14a	K735	KAS33	KAX3	KAR23	KAD23	KAD33	KAXGL3	KAXGL4
15a	K735	KAS33	KAX3	KAR24	KAD24	KAD34	KAXGL3	KAXGL4
16a	K735	KAS33	KAX3	KAR25	KAD25	KAD35	KAXGL3	KAXGL4
17a	K735	KAS33	KAX3	KAR26	KAD26	KAD36	KAXGL3	KAXGL4
18a	K736	KAS44	KAX4	KAR31	KAD31	KAD41	KAXGL4	KAXGL5
19a	K736	KAS44	KAX4	KAR32	KAD32	KAD42	KAXGL4	KAXGL5

Table 10-36

Subtest	K	K<x>S<n>	K<x>X<n>	K<x>R<n>	K<x>D<n>	K<y>D<n>	K<x>XGL<n>	K<y>XGL<n>
20a	K736	KAS44	KAX4	KAR33	KAD33	KAD43	KAXGL4	KAXGL5
21a	K736	KAS44	KAX4	KAR34	KAD34	KAD44	KAXGL4	KAXGL5
22a	K736	KAS44	KAX4	KAR35	KAD35	KAD45	KAXGL4	KAXGL5
23a	K736	KAS44	KAX4	KAR36	KAD36	KAD46	KAXGL4	KAXGL5
24a	K737	KAS55	KAX5	KAR41	KAD41	KAD51	KAXGL5	KAXGL6
25a	K737	KAS55	KAX5	KAR42	KAD42	KAD52	KAXGL5	KAXGL6
26a	K737	KAS55	KAX5	KAR43	KAD43	KAD53	KAXGL5	KAXGL6
27a	K737	KAS55	KAX5	KAR44	KAD44	KAD54	KAXGL5	KAXGL6
28a	K737	KAS55	KAX5	KAR45	KAD45	KAD55	KAXGL5	KAXGL6
29a	K737	KAS55	KAX5	KAR46	KAD46	KAD56	KAXGL5	KAXGL6
30a	K738	KAS66	KAX6	KAR51	KAD51	KAD61	KAXGL6	KAXGL7
31a	K738	KAS66	KAX6	KAR52	KAD52	KAD62	KAXGL6	KAXGL7
32a	K738	KAS66	KAX6	KAR53	KAD53	KAD63	KAXGL6	KAXGL7
33a	K738	KAS66	KAX6	KAR54	KAD54	KAD64	KAXGL6	KAXGL7
34a	K738	KAS66	KAX6	KAR55	KAD55	KAD65	KAXGL6	KAXGL7
35a	K738	KAS66	KAX6	KAR56	KAD56	KAD66	KAXGL6	KAXGL7
36a	K739	KAS77	KAX7	KAR61	KAD61	KAD71	KAXGL7	KAXGL8
37a	K739	KAS77	KAX7	KAR62	KAD62	KAD72	KAXGL7	KAXGL8
38a	K739	KAS77	KAX7	KAR63	KAD63	KAD73	KAXGL7	KAXGL8
39a	K739	KAS77	KAX7	KAR64	KAD64	KAD74	KAXGL7	KAXGL8
40a	K739	KAS77	KAX7	KAR65	KAD65	KAD75	KAXGL7	KAXGL8
41a	K739	KAS77	KAX7	KAR66	KAD66	KAD76	KAXGL7	KAXGL8
42a	K740	KAS88	KAX8	KAR71	KAD71	KAD1	KAXGL8	KAXGL1
43a	K740	KAS88	KAX8	KAR72	KAD72	KAD2	KAXGL8	KAXGL1
44a	K740	KAS88	KAX8	KAR73	KAD73	KAD3	KAXGL8	KAXGL1
45a	K740	KAS88	KAX8	KAR74	KAD74	KAD4	KAXGL8	KAXGL1
46a	K740	KAS88	KAX8	KAR75	KAD75	KAD5	KAXGL8	KAXGL1
47a	K740	KAS88	KAX8	KAR76	KAD76	KAD6	KAXGL8	KAXGL1
48a	K733	KAS11	KAX1	KAR7	KAD7	KAD17	KAXGL1	KAXGL2
49a	K733	KAS11	KAX1	KAR8	KAD8	KAD18	KAXGL1	KAXGL2

Table 10-36

Subtest	K	K<x>S<n>	K<x>X<n>	K<x>R<n>	K<x>D<n>	K<y>D<n>	K<x>XGL<n>	K<y>XGL<n>
50a	K733	KAS11	KAX1	KAR9	KAD9	KAD19	KAXGL1	KAXGL2
51a	K734	KAS22	KAX2	KAR17	KAD17	KAD27	KAXGL2	KAXGL3
52a	K734	KAS22	KAX2	KAR18	KAD18	KAD28	KAXGL2	KAXGL3
53a	K734	KAS22	KAX2	KAR19	KAD19	KAD29	KAXGL2	KAXGL3
54a	K735	KAS33	KAX3	KAR27	KAD27	KAD37	KAXGL3	KAXGL4
55a	K735	KAS33	KAX3	KAR28	KAD28	KAD38	KAXGL3	KAXGL4
56a	K735	KAS33	KAX3	KAR29	KAD29	KAD39	KAXGL3	KAXGL4
57a	K736	KAS44	KAX4	KAR37	KAD37	KAD47	KAXGL4	KAXGL5
58a	K736	KAS44	KAX4	KAR38	KAD38	KAD48	KAXGL4	KAXGL5
59a	K736	KAS44	KAX4	KAR39	KAD39	KAD49	KAXGL4	KAXGL5
60a	K737	KAS55	KAX5	KAR47	KAD47	KAD57	KAXGL5	KAXGL6
61a	K737	KAS55	KAX5	KAR48	KAD48	KAD58	KAXGL5	KAXGL6
62a	K737	KAS55	KAX5	KAR49	KAD49	KAD59	KAXGL5	KAXGL6
63a	K738	KAS66	KAX6	KAR57	KAD57	KAD67	KAXGL6	KAXGL7
64a	K738	KAS66	KAX6	KAR58	KAD58	KAD68	KAXGL6	KAXGL7
65a	K738	KAS66	KAX6	KAR59	KAD59	KAD69	KAXGL6	KAXGL7
66a	K739	KAS77	KAX7	KAR67	KAD67	KAD77	KAXGL7	KAXGL8
67a	K739	KAS77	KAX7	KAR68	KAD68	KAD78	KAXGL7	KAXGL8
68a	K739	KAS77	KAX7	KAR69	KAD69	KAD79	KAXGL7	KAXGL8
69a	K740	KAS88	KAX8	KAR77	KAD77	KAD7	KAXGL8	KAXGL1
70a	K740	KAS88	KAX8	KAR78	KAD78	KAD8	KAXGL8	KAXGL1
71a	K740	KAS88	KAX8	KAR79	KAD79	KAD9	KAXGL8	KAXGL1
Page B								
0b	K733	KBS11	KBX1	KBR1	KBD1	KBD11	KBXGL1	KBXGL2
1b	K733	KBS11	KBX1	KBR2	KBD2	KBD12	KBXGL1	KBXGL2
2b	K733	KBS11	KBX1	KBR3	KBD3	KBD13	KBXGL1	KBXGL2
3b	K733	KBS11	KBX1	KBR4	KBD4	KBD14	KBXGL1	KBXGL2
4b	K733	KBS11	KBX1	KBR5	KBD5	KBD15	KBXGL1	KBXGL2
5b	K733	KBS11	KBX1	KBR6	KBD6	KBD16	KBXGL1	KBXGL2
6b	K734	KBS22	KBX2	KBR11	KBD11	KBD21	KBXGL2	KBXGL3

Table 10-36

Subtest	K	K<x>S<n>	K<x>X<n>	K<x>R<n>	K<x>D<n>	K<y>D<n>	K<x>XGL<n>	K<y>XGL<n>
7b	K734	KBS22	KBX2	KBR12	KBD12	KBD22	KBXGL2	KBXGL3
8b	K734	KBS22	KBX2	KBR13	KBD13	KBD23	KBXGL2	KBXGL3
9b	K734	KBS22	KBX2	KBR14	KBD14	KBD24	KBXGL2	KBXGL3
10b	K734	KBS22	KBX2	KBR15	KBD15	KBD25	KBXGL2	KBXGL3
11b	K734	KBS22	KBX2	KBR16	KBD16	KBD26	KBXGL2	KBXGL3
12b	K735	KBS33	KBX3	KBR21	KBD21	KBD31	KBXGL3	KBXGL4
13b	K735	KBS33	KBX3	KBR22	KBD22	KBD32	KBXGL3	KBXGL4
14b	K735	KBS33	KBX3	KBR23	KBD23	KBD33	KBXGL3	KBXGL4
15b	K735	KBS33	KBX3	KBR24	KBD24	KBD34	KBXGL3	KBXGL4
16b	K735	KBS33	KBX3	KBR25	KBD25	KBD35	KBXGL3	KBXGL4
17b	K735	KBS33	KBX3	KBR26	KBD26	KBD36	KBXGL3	KBXGL4
18b	K736	KBS44	KBX4	KBR31	KBD31	KBD41	KBXGL4	KBXGL5
19b	K736	KBS44	KBX4	KBR32	KBD32	KBD42	KBXGL4	KBXGL5
20b	K736	KBS44	KBX4	KBR33	KBD33	KBD43	KBXGL4	KBXGL5
21b	K736	KBS44	KBX4	KBR34	KBD34	KBD44	KBXGL4	KBXGL5
22b	K736	KBS44	KBX4	KBR35	KBD35	KBD45	KBXGL4	KBXGL5
23b	K736	KBS44	KBX4	KBR36	KBD36	KBD46	KBXGL4	KBXGL5
24b	K737	KBS55	KBX5	KBR41	KBD41	KBD51	KBXGL5	KBXGL6
25b	K737	KBS55	KBX5	KBR42	KBD42	KBD52	KBXGL5	KBXGL6
26b	K737	KBS55	KBX5	KBR43	KBD43	KBD53	KBXGL5	KBXGL6
27b	K737	KBS55	KBX5	KBR44	KBD44	KBD54	KBXGL5	KBXGL6
28b	K737	KBS55	KBX5	KBR45	KBD45	KBD55	KBXGL5	KBXGL6
29b	K737	KBS55	KBX5	KBR46	KBD46	KBD56	KBXGL5	KBXGL6
30b	K738	KBS66	KBX6	KBR51	KBD51	KBD61	KBXGL6	KBXGL7
31b	K738	KBS66	KBX6	KBR52	KBD52	KBD62	KBXGL6	KBXGL7
32b	K738	KBS66	KBX6	KBR53	KBD53	KBD63	KBXGL6	KBXGL7
33b	K738	KBS66	KBX6	KBR54	KBD54	KBD64	KBXGL6	KBXGL7
34b	K738	KBS66	KBX6	KBR55	KBD55	KBD65	KBXGL6	KBXGL7
35b	K738	KBS66	KBX6	KBR56	KBD56	KBD66	KBXGL6	KBXGL7
36b	K739	KBS77	KBX7	KBR61	KBD61	KBD71	KBXGL7	KBXGL8

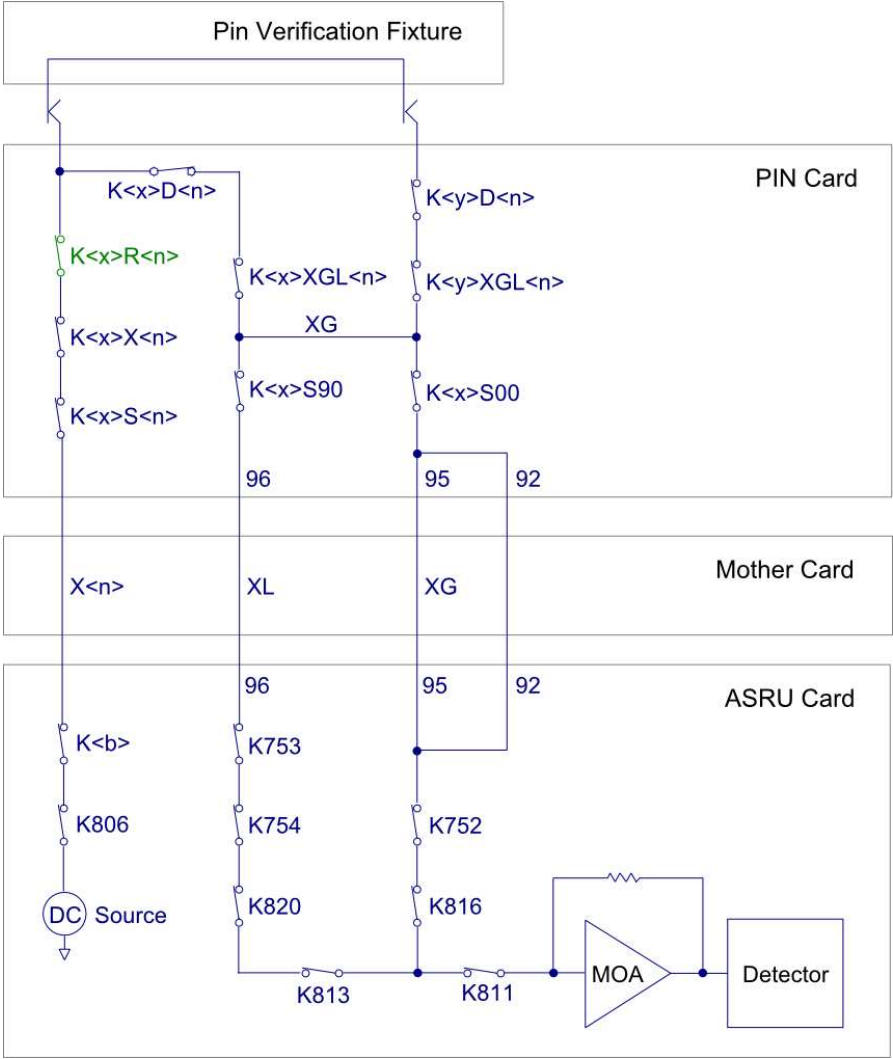
Table 10-36

Subtest	K	K<x>S<n>	K<x>X<n>	K<x>R<n>	K<x>D<n>	K<y>D<n>	K<x>XGL<n>	K<y>XGL<n>
37b	K739	KBS77	KBX7	KBR62	KBD62	KBD72	KBXGL7	KBXGL8
38b	K739	KBS77	KBX7	KBR63	KBD63	KBD73	KBXGL7	KBXGL8
39b	K739	KBS77	KBX7	KBR64	KBD64	KBD74	KBXGL7	KBXGL8
40b	K739	KBS77	KBX7	KBR65	KBD65	KBD75	KBXGL7	KBXGL8
41b	K739	KBS77	KBX7	KBR66	KBD66	KBD76	KBXGL7	KBXGL8
42b	K740	KBS88	KBX8	KBR71	KBD71	KBD1	KBXGL8	KBXGL1
43b	K740	KBS88	KBX8	KBR72	KBD72	KBD2	KBXGL8	KBXGL1
44b	K740	KBS88	KBX8	KBR73	KBD73	KBD3	KBXGL8	KBXGL1
45b	K740	KBS88	KBX8	KBR74	KBD74	KBD4	KBXGL8	KBXGL1
46b	K740	KBS88	KBX8	KBR75	KBD75	KBD5	KBXGL8	KBXGL1
47b	K740	KBS88	KBX8	KBR76	KBD76	KBD6	KBXGL8	KBXGL1
48b	K733	KBS11	KBX1	KBR7	KBD7	KBD17	KBXGL1	KBXGL2
49b	K733	KBS11	KBX1	KBR8	KBD8	KBD18	KBXGL1	KBXGL2
50b	K733	KBS11	KBX1	KBR9	KBD9	KBD19	KBXGL1	KBXGL2
51b	K734	KBS22	KBX2	KBR17	KBD17	KBD27	KBXGL2	KBXGL3
52b	K734	KBS22	KBX2	KBR18	KBD18	KBD28	KBXGL2	KBXGL3
53b	K734	KBS22	KBX2	KBR19	KBD19	KBD29	KBXGL2	KBXGL3
54b	K735	KBS33	KBX3	KBR27	KBD27	KBD37	KBXGL3	KBXGL4
55b	K735	KBS33	KBX3	KBR28	KBD28	KBD38	KBXGL3	KBXGL4
56b	K735	KBS33	KBX3	KBR29	KBD29	KBD39	KBXGL3	KBXGL4
57b	K736	KBS44	KBX4	KBR37	KBD37	KBD47	KBXGL4	KBXGL5
58b	K736	KBS44	KBX4	KBR38	KBD38	KBD48	KBXGL4	KBXGL5
59b	K736	KBS44	KBX4	KBR39	KBD39	KBD49	KBXGL4	KBXGL5
60b	K737	KBS55	KBX5	KBR47	KBD47	KBD57	KBXGL5	KBXGL6
61b	K737	KBS55	KBX5	KBR48	KBD48	KBD58	KBXGL5	KBXGL6
62b	K737	KBS55	KBX5	KBR49	KBD49	KBD59	KBXGL5	KBXGL6
63b	K738	KBS66	KBX6	KBR57	KBD57	KBD67	KBXGL6	KBXGL7
64b	K738	KBS66	KBX6	KBR58	KBD58	KBD68	KBXGL6	KBXGL7
65b	K738	KBS66	KBX6	KBR59	KBD59	KBD69	KBXGL6	KBXGL7
66b	K739	KBS77	KBX7	KBR67	KBD67	KBD77	KBXGL7	KBXGL8

Table 10-36

Subtest	K	K<x>S<n>	K<x>X<n>	K<x>R<n>	K<x>D<n>	K<y>D<n>	K<x>XGL<n>	K<y>XGL<n>
67b	K739	KBS77	KBX7	KBR68	KBD68	KBD78	KBXGL7	KBXGL8
68b	K739	KBS77	KBX7	KBR69	KBD69	KBD79	KBXGL7	KBXGL8
69b	K740	KBS88	KBX8	KBR77	KBD77	KBD7	KBXGL8	KBXGL1
70b	K740	KBS88	KBX8	KBR78	KBD78	KBD8	KBXGL8	KBXGL1
71b	K740	KBS88	KBX8	KBR79	KBD79	KBD9	KBXGL8	KBXGL1

Figure 10-24 Test 13974



Test 13975

Test Driver to Fixture Interface (MINT) Pin (MUX) Relays can be Closed

Requires: Pin Verification Fixture

This test verifies that K<x>D relays can be closed. A test failure is caused when the relay being tested fails to close. The relay being tested is shown in bold, by subtest, in the table below. This test is similar to Test 13240, but it contains a redundant path through the Pin Verification Fixture that allows isolation of driver relays that fail to close from open receiver relays that fail to close. This test can fail due to dirty MINT pins because the Pin Verification Fixture is in the path.

Figure 10-25 on page 10-109 shows the measurement path.

Table 10-37

Subtest	K	K<c>	K<x>S<n>	K<y>S<n>	K<x>X<n>	K<y>X<n>	K<x>R<n>	K<y>R<n>	K<x>D<n>	K<x>XGL<n>
Page A										
0a	K733	K734	KAS11	KAS22	KAX1	KAX2	KAR11	KAR1	KAD1	KAXGL1
1a	K733	K734	KAS11	KAS22	KAX1	KAX2	KAR12	KAR2	KAD2	KAXGL1
2a	K733	K734	KAS11	KAS22	KAX1	KAX2	KAR13	KAR3	KAD3	KAXGL1
3a	K733	K734	KAS11	KAS22	KAX1	KAX2	KAR14	KAR4	KAD4	KAXGL1
4a	K733	K734	KAS11	KAS22	KAX1	KAX2	KAR15	KAR5	KAD5	KAXGL1
5a	K733	K734	KAS11	KAS22	KAX1	KAX2	KAR16	KAR6	KAD6	KAXGL1
6a	K734	K735	KAS22	KAS33	KAX2	KAX3	KAR21	KAR11	KAD11	KAXGL2
7a	K734	K735	KAS22	KAS33	KAX2	KAX3	KAR22	KAR12	KAD12	KAXGL2
8a	K734	K735	KAS22	KAS33	KAX2	KAX3	KAR23	KAR13	KAD13	KAXGL2
9a	K734	K735	KAS22	KAS33	KAX2	KAX3	KAR24	KAR14	KAD14	KAXGL2
10a	K734	K735	KAS22	KAS33	KAX2	KAX3	KAR25	KAR15	KAD15	KAXGL2
11a	K734	K735	KAS22	KAS33	KAX2	KAX3	KAR26	KAR16	KAD16	KAXGL2
12a	K735	K736	KAS33	KAS44	KAX3	KAX4	KAR31	KAR21	KAD21	KAXGL3
13a	K735	K736	KAS33	KAS44	KAX3	KAX4	KAR32	KAR22	KAD22	KAXGL3
14a	K735	K736	KAS33	KAS44	KAX3	KAX4	KAR33	KAR23	KAD23	KAXGL3
15a	K735	K736	KAS33	KAS44	KAX3	KAX4	KAR34	KAR24	KAD24	KAXGL3
16a	K735	K736	KAS33	KAS44	KAX3	KAX4	KAR35	KAR25	KAD25	KAXGL3
17a	K735	K736	KAS33	KAS44	KAX3	KAX4	KAR36	KAR26	KAD26	KAXGL3
18a	K736	K737	KAS44	KAS55	KAX4	KAX5	KAR41	KAR31	KAD31	KAXGL4

Table 10-37

Subtest	K	K<c>	K<x>S<n>	K<y>S<n>	K<x>X<n>	K<y>X<n>	K<x>R<n>	K<y>R<n>	K<x>D<n>	K<x>XGL<n>
19a	K736	K737	KAS44	KAS55	KAX4	KAX5	KAR42	KAR32	KAD32	KAXGL4
20a	K736	K737	KAS44	KAS55	KAX4	KAX5	KAR43	KAR33	KAD33	KAXGL4
21a	K736	K737	KAS44	KAS55	KAX4	KAX5	KAR44	KAR34	KAD34	KAXGL4
22a	K736	K737	KAS44	KAS55	KAX4	KAX5	KAR45	KAR35	KAD35	KAXGL4
23a	K736	K737	KAS44	KAS55	KAX4	KAX5	KAR46	KAR36	KAD36	KAXGL4
24a	K737	K738	KAS55	KAS66	KAX5	KAX6	KAR51	KAR41	KAD41	KAXGL5
25a	K737	K738	KAS55	KAS66	KAX5	KAX6	KAR52	KAR42	KAD42	KAXGL5
26a	K737	K738	KAS55	KAS66	KAX5	KAX6	KAR53	KAR43	KAD43	KAXGL5
27a	K737	K738	KAS55	KAS66	KAX5	KAX6	KAR54	KAR44	KAD44	KAXGL5
28a	K737	K738	KAS55	KAS66	KAX5	KAX6	KAR55	KAR45	KAD45	KAXGL5
29a	K737	K738	KAS55	KAS66	KAX5	KAX6	KAR56	KAR46	KAD46	KAXGL5
30a	K738	K739	KAS66	KAS77	KAX6	KAX7	KAR61	KAR51	KAD51	KAXGL6
31a	K738	K739	KAS66	KAS77	KAX6	KAX7	KAR62	KAR52	KAD52	KAXGL6
32a	K738	K739	KAS66	KAS77	KAX6	KAX7	KAR63	KAR53	KAD53	KAXGL6
33a	K738	K739	KAS66	KAS77	KAX6	KAX7	KAR64	KAR54	KAD54	KAXGL6
34a	K738	K739	KAS66	KAS77	KAX6	KAX7	KAR65	KAR55	KAD55	KAXGL6
35a	K738	K739	KAS66	KAS77	KAX6	KAX7	KAR66	KAR56	KAD56	KAXGL6
36a	K739	K740	KAS77	KAS88	KAX7	KAX8	KAR71	KAR61	KAD61	KAXGL7
37a	K739	K740	KAS77	KAS88	KAX7	KAX8	KAR72	KAR62	KAD62	KAXGL7
38a	K739	K740	KAS77	KAS88	KAX7	KAX8	KAR73	KAR63	KAD63	KAXGL7
39a	K739	K740	KAS77	KAS88	KAX7	KAX8	KAR74	KAR64	KAD64	KAXGL7
40a	K739	K740	KAS77	KAS88	KAX7	KAX8	KAR75	KAR65	KAD65	KAXGL7
41a	K739	K740	KAS77	KAS88	KAX7	KAX8	KAR76	KAR66	KAD66	KAXGL7
42a	K740	K733	KAS88	KAS11	KAX8	KAX1	KAR1	KAR71	KAD71	KAXGL8
43a	K740	K733	KAS88	KAS11	KAX8	KAX1	KAR2	KAR72	KAD72	KAXGL8
44a	K740	K733	KAS88	KAS11	KAX8	KAX1	KAR3	KAR73	KAD73	KAXGL8
45a	K740	K733	KAS88	KAS11	KAX8	KAX1	KAR4	KAR74	KAD74	KAXGL8
46a	K740	K733	KAS88	KAS11	KAX8	KAX1	KAR5	KAR75	KAD75	KAXGL8
47a	K740	K733	KAS88	KAS11	KAX8	KAX1	KAR6	KAR76	KAD76	KAXGL8
48a	K733	K734	KAS11	KAS22	KAX1	KAX2	KAR17	KAR7	KAD7	KAXGL1

Table 10-37

Subtest	K	K<c>	K<x>S<n>	K<y>S<n>	K<x>X<n>	K<y>X<n>	K<x>R<n>	K<y>R<n>	K<x>D<n>	K<x>XGL<n>
49a	K733	K734	KAS11	KAS22	KAX1	KAX2	KAR18	KAR8	KAD8	KAXGL1
50a	K733	K734	KAS11	KAS22	KAX1	KAX2	KAR19	KAR9	KAD9	KAXGL1
51a	K734	K735	KAS22	KAS33	KAX2	KAX3	KAR27	KAR17	KAD17	KAXGL2
52a	K734	K735	KAS22	KAS33	KAX2	KAX3	KAR28	KAR18	KAD18	KAXGL2
53a	K734	K735	KAS22	KAS33	KAX2	KAX3	KAR29	KAR19	KAD19	KAXGL2
54a	K735	K736	KAS33	KAS44	KAX3	KAX4	KAR37	KAR27	KAD27	KAXGL3
55a	K735	K736	KAS33	KAS44	KAX3	KAX4	KAR38	KAR28	KAD28	KAXGL3
56a	K735	K736	KAS33	KAS44	KAX3	KAX4	KAR39	KAR29	KAD29	KAXGL3
57a	K736	K737	KAS44	KAS55	KAX4	KAX5	KAR47	KAR37	KAD37	KAXGL4
58a	K736	K737	KAS44	KAS55	KAX4	KAX5	KAR48	KAR38	KAD38	KAXGL4
59a	K736	K737	KAS44	KAS55	KAX4	KAX5	KAR49	KAR39	KAD39	KAXGL4
60a	K737	K738	KAS55	KAS66	KAX5	KAX6	KAR57	KAR47	KAD47	KAXGL5
61a	K737	K738	KAS55	KAS66	KAX5	KAX6	KAR58	KAR48	KAD48	KAXGL5
62a	K737	K738	KAS55	KAS66	KAX5	KAX6	KAR59	KAR49	KAD49	KAXGL5
63a	K738	K739	KAS66	KAS77	KAX6	KAX7	KAR67	KAR57	KAD57	KAXGL6
64a	K738	K739	KAS66	KAS77	KAX6	KAX7	KAR68	KAR58	KAD58	KAXGL6
65a	K738	K739	KAS66	KAS77	KAX6	KAX7	KAR69	KAR59	KAD59	KAXGL6
66a	K739	K740	KAS77	KAS88	KAX7	KAX8	KAR77	KAR67	KAD67	KAXGL7
67a	K739	K740	KAS77	KAS88	KAX7	KAX8	KAR78	KAR68	KAD68	KAXGL7
68a	K739	K740	KAS77	KAS88	KAX7	KAX8	KAR79	KAR69	KAD69	KAXGL7
69a	K740	K733	KAS88	KAS11	KAX8	KAX1	KAR7	KAR77	KAD77	KAXGL8
70a	K740	K733	KAS88	KAS11	KAX8	KAX1	KAR8	KAR78	KAD78	KAXGL8
71a	K740	K733	KAS88	KAS11	KAX8	KAX1	KAR9	KAR79	KAD79	KAXGL8
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0b	K733	K734	KBS11	KBS22	KBX1	KBX2	KBR11	KBR1	KBD1	KBXGL1
1b	K733	K734	KBS11	KBS22	KBX1	KBX2	KBR12	KBR2	KBD2	KBXGL1
2b	K733	K734	KBS11	KBS22	KBX1	KBX2	KBR13	KBR3	KBD3	KBXGL1
3b	K733	K734	KBS11	KBS22	KBX1	KBX2	KBR14	KBR4	KBD4	KBXGL1
4b	K733	K734	KBS11	KBS22	KBX1	KBX2	KBR15	KBR5	KBD5	KBXGL1
5b	K733	K734	KBS11	KBS22	KBX1	KBX2	KBR16	KBR6	KBD6	KBXGL1

Table 10-37

Subtest	K	K<c>	K<x>S<n>	K<y>S<n>	K<x>X<n>	K<y>X<n>	K<x>R<n>	K<y>R<n>	K<x>D<n>	K<x>XGL<n>
6b	K734	K735	KBS22	KBS33	KBX2	KBX3	KBR21	KBR11	KBD11	KBXGL2
7b	K734	K735	KBS22	KBS33	KBX2	KBX3	KBR22	KBR12	KBD12	KBXGL2
8b	K734	K735	KBS22	KBS33	KBX2	KBX3	KBR23	KBR13	KBD13	KBXGL2
9b	K734	K735	KBS22	KBS33	KBX2	KBX3	KBR24	KBR14	KBD14	KBXGL2
10b	K734	K735	KBS22	KBS33	KBX2	KBX3	KBR25	KBR15	KBD15	KBXGL2
11b	K734	K735	KBS22	KBS33	KBX2	KBX3	KBR26	KBR16	KBD16	KBXGL2
12b	K735	K736	KBS33	KBS44	KBX3	KBX4	KBR31	KBR21	KBD21	KBXGL3
13b	K735	K736	KBS33	KBS44	KBX3	KBX4	KBR32	KBR22	KBD22	KBXGL3
14b	K735	K736	KBS33	KBS44	KBX3	KBX4	KBR33	KBR23	KBD23	KBXGL3
15b	K735	K736	KBS33	KBS44	KBX3	KBX4	KBR34	KBR24	KBD24	KBXGL3
16b	K735	K736	KBS33	KBS44	KBX3	KBX4	KBR35	KBR25	KBD25	KBXGL3
17b	K735	K736	KBS33	KBS44	KBX3	KBX4	KBR36	KBR26	KBD26	KBXGL3
18b	K736	K737	KBS44	KBS55	KBX4	KBX5	KBR41	KBR31	KBD31	KBXGL4
19b	K736	K737	KBS44	KBS55	KBX4	KBX5	KBR42	KBR32	KBD32	KBXGL4
20b	K736	K737	KBS44	KBS55	KBX4	KBX5	KBR43	KBR33	KBD33	KBXGL4
21b	K736	K737	KBS44	KBS55	KBX4	KBX5	KBR44	KBR34	KBD34	KBXGL4
22b	K736	K737	KBS44	KBS55	KBX4	KBX5	KBR45	KBR35	KBD35	KBXGL4
23b	K736	K737	KBS44	KBS55	KBX4	KBX5	KBR46	KBR36	KBD36	KBXGL4
24b	K737	K738	KBS55	KBS66	KBX5	KBX6	KBR51	KBR41	KBD41	KBXGL5
25b	K737	K738	KBS55	KBS66	KBX5	KBX6	KBR52	KBR42	KBD42	KBXGL5
26b	K737	K738	KBS55	KBS66	KBX5	KBX6	KBR53	KBR43	KBD43	KBXGL5
27b	K737	K738	KBS55	KBS66	KBX5	KBX6	KBR54	KBR44	KBD44	KBXGL5
28b	K737	K738	KBS55	KBS66	KBX5	KBX6	KBR55	KBR45	KBD45	KBXGL5
29b	K737	K738	KBS55	KBS66	KBX5	KBX6	KBR56	KBR46	KBD46	KBXGL5
30b	K738	K739	KBS66	KBS77	KBX6	KBX7	KBR61	KBR51	KBD51	KBXGL6
31b	K738	K739	KBS66	KBS77	KBX6	KBX7	KBR62	KBR52	KBD52	KBXGL6
32b	K738	K739	KBS66	KBS77	KBX6	KBX7	KBR63	KBR53	KBD53	KBXGL6
33b	K738	K739	KBS66	KBS77	KBX6	KBX7	KBR64	KBR54	KBD54	KBXGL6
34b	K738	K739	KBS66	KBS77	KBX6	KBX7	KBR65	KBR55	KBD55	KBXGL6
35b	K738	K739	KBS66	KBS77	KBX6	KBX7	KBR66	KBR56	KBD56	KBXGL6

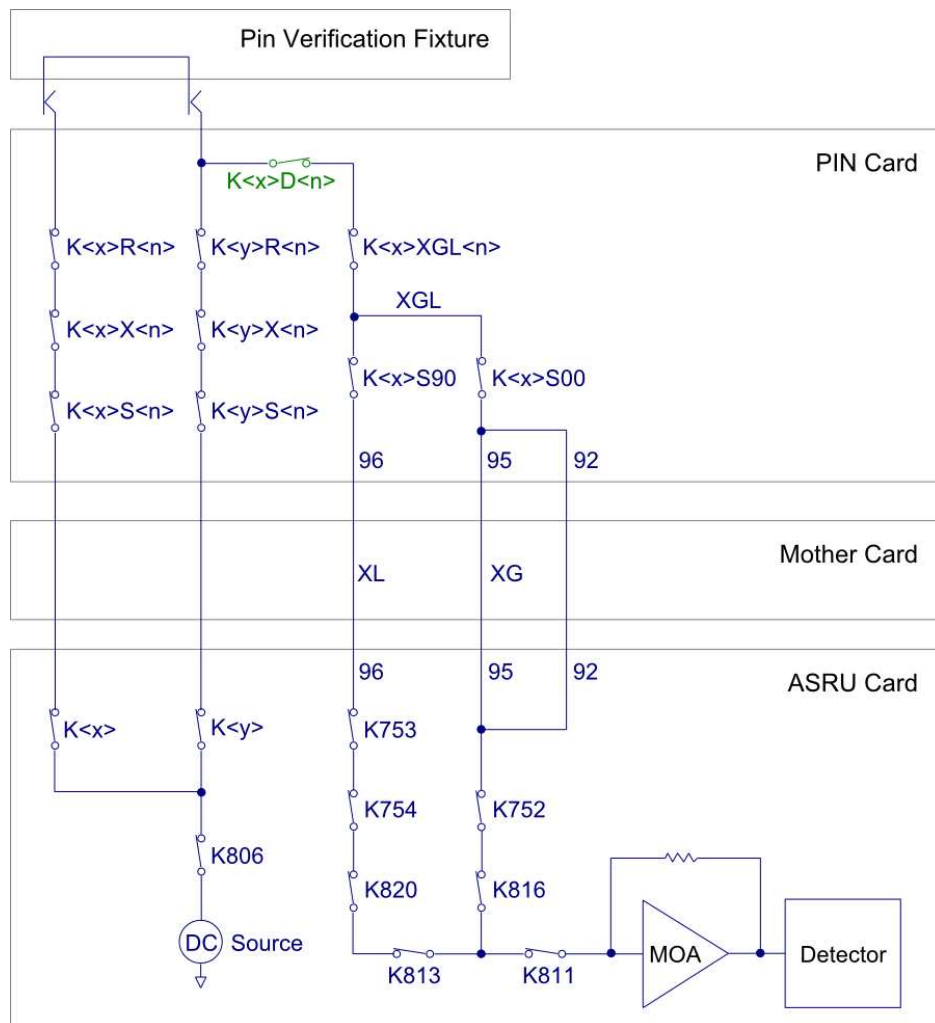
Table 10-37

Subtest	K	K<c>	K<x>S<n>	K<y>S<n>	K<x>X<n>	K<y>X<n>	K<x>R<n>	K<y>R<n>	K<x>D<n>	K<x>XGL<n>
36b	K739	K740	KBS77	KBS88	KBX7	KBX8	KBR71	KBR61	KBD61	KBXGL7
37b	K739	K740	KBS77	KBS88	KBX7	KBX8	KBR72	KBR62	KBD62	KBXGL7
38b	K739	K740	KBS77	KBS88	KBX7	KBX8	KBR73	KBR63	KBD63	KBXGL7
39b	K739	K740	KBS77	KBS88	KBX7	KBX8	KBR74	KBR64	KBD64	KBXGL7
40b	K739	K740	KBS77	KBS88	KBX7	KBX8	KBR75	KBR65	KBD65	KBXGL7
41b	K739	K740	KBS77	KBS88	KBX7	KBX8	KBR76	KBR66	KBD66	KBXGL7
42b	K740	K733	KBS88	KBS11	KBX8	KBX1	KBR1	KBR71	KBD71	KBXGL8
43b	K740	K733	KBS88	KBS11	KBX8	KBX1	KBR2	KBR72	KBD72	KBXGL8
44b	K740	K733	KBS88	KBS11	KBX8	KBX1	KBR3	KBR73	KBD73	KBXGL8
45b	K740	K733	KBS88	KBS11	KBX8	KBX1	KBR4	KBR74	KBD74	KBXGL8
46b	K740	K733	KBS88	KBS11	KBX8	KBX1	KBR5	KBR75	KBD75	KBXGL8
47b	K740	K733	KBS88	KBS11	KBX8	KBX1	KBR6	KBR76	KBD76	KBXGL8
48b	K733	K734	KBS11	KBS22	KBX1	KBX2	KBR17	KBR7	KBD7	KBXGL1
49b	K733	K734	KBS11	KBS22	KBX1	KBX2	KBR18	KBR8	KBD8	KBXGL1
50b	K733	K734	KBS11	KBS22	KBX1	KBX2	KBR19	KBR9	KBD9	KBXGL1
51b	K734	K735	KBS22	KBS33	KBX2	KBX3	KBR27	KBR17	KBD17	KBXGL2
52b	K734	K735	KBS22	KBS33	KBX2	KBX3	KBR28	KBR18	KBD18	KBXGL2
53b	K734	K735	KBS22	KBS33	KBX2	KBX3	KBR29	KBR19	KBD19	KBXGL2
54b	K735	K736	KBS33	KBS44	KBX3	KBX4	KBR37	KBR27	KBD27	KBXGL3
55b	K735	K736	KBS33	KBS44	KBX3	KBX4	KBR38	KBR28	KBD28	KBXGL3
56b	K735	K736	KBS33	KBS44	KBX3	KBX4	KBR39	KBR29	KBD29	KBXGL3
57b	K736	K737	KBS44	KBS55	KBX4	KBX5	KBR47	KBR37	KBD37	KBXGL4
58b	K736	K737	KBS44	KBS55	KBX4	KBX5	KBR48	KBR38	KBD38	KBXGL4
59b	K736	K737	KBS44	KBS55	KBX4	KBX5	KBR49	KBR39	KBD39	KBXGL4
60b	K737	K738	KBS55	KBS66	KBX5	KBX6	KBR57	KBR47	KBD47	KBXGL5
61b	K737	K738	KBS55	KBS66	KBX5	KBX6	KBR58	KBR48	KBD48	KBXGL5
62b	K737	K738	KBS55	KBS66	KBX5	KBX6	KBR59	KBR49	KBD49	KBXGL5
63b	K738	K739	KBS66	KBS77	KBX6	KBX7	KBR67	KBR57	KBD57	KBXGL6
64b	K738	K739	KBS66	KBS77	KBX6	KBX7	KBR68	KBR58	KBD58	KBXGL6
65b	K738	K739	KBS66	KBS77	KBX6	KBX7	KBR69	KBR59	KBD59	KBXGL6

Table 10-37

Subtest	K	K<c>	K<x>S<n>	K<y>S<n>	K<x>X<n>	K<y>X<n>	K<x>R<n>	K<y>R<n>	K<x>D<n>	K<x>XGL<n>
66b	K739	K740	KBS77	KBS88	KBX7	KBX8	KBR77	KBR67	KBD67	KBXGL7
67b	K739	K740	KBS77	KBS88	KBX7	KBX8	KBR78	KBR68	KBD68	KBXGL7
68b	K739	K740	KBS77	KBS88	KBX7	KBX8	KBR79	KBR69	KBD69	KBXGL7
69b	K740	K733	KBS88	KBS11	KBX8	KBX1	KBR7	KBR77	KBD77	KBXGL8
70b	K740	K733	KBS88	KBS11	KBX8	KBX1	KBR8	KBR78	KBD78	KBXGL8
71b	K740	K733	KBS88	KBS11	KBX8	KBX1	KBR9	KBR79	KBD79	KBXGL8

Figure 10-25 Test 13975



Test 13976

Test Ground Relays can be Closed

Requires: Pin Verification Fixture

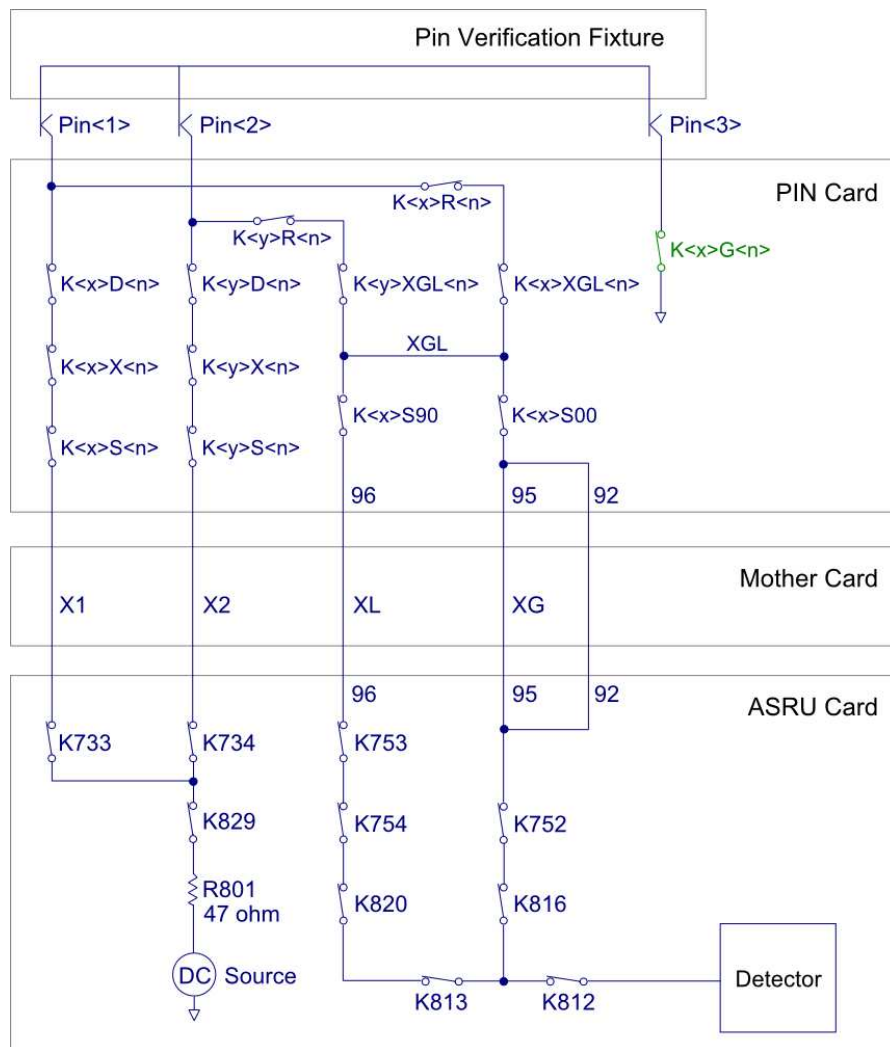
This test verifies that the K<x>G relays can be closed. A test failure is caused when the relay being tested fails to close. The relay being tested is shown in bold, by subtest, in the table below. Subtests 0 through 5 check the ground relays and their fixture interface (MINT) pin (MUX) relays via a path through the Pin Verification Fixture. This test can fail due to dirty MINT pins.

Figure 10-26 shows the measurement path.

Table 10-38

Subtest	Pin<a>	Pin	Pin<c>	K<x>S<n>	K<y>S<n>	K<x>X<n>	K<y>X<n>	K<x>XGL<n>	K<y>XGL<n>	K<x>D<n>	K<y>D<n>	K<x>R<n>	K<y>R<n>	K<x>G<n>
Page A														
0a	1	2	19	KAS11	KAS22	KAX1	KAX2	KAXGL1	KAXGL2	KAD1	KAD11	KAR1	KAR11	KAG19
1a	3	4	20	KAS11	KAS22	KAX1	KAX2	KAXGL1	KAXGL2	KAD2	KAD12	KAR2	KAR12	KAG20
2a	5	6	39	KAS11	KAS22	KAX1	KAX2	KAXGL1	KAXGL2	KAD3	KAD13	KAR3	KAR13	KAG39
3a	7	8	40	KAS11	KAS22	KAX1	KAX2	KAXGL1	KAXGL2	KAD4	KAD14	KAR4	KAR14	KAG40
4a	9	10	59	KAS11	KAS22	KAX1	KAX2	KAXGL1	KAXGL2	KAD5	KAD15	KAR5	KAR15	KAG59
5a	11	12	60	KAS11	KAS22	KAX1	KAX2	KAXGL1	KAXGL2	KAD6	KAD16	KAR6	KAR16	KAG60
Page B														
0b	1	2	19	KBS11	KBS22	KBX1	KBX2	KBXGL1	KBXGL2	KBD1	KBD11	KBR1	KBR11	KBG19
1b	3	4	20	KBS11	KBS22	KBX1	KBX2	KBXGL1	KBXGL2	KBD2	KBD12	KBR2	KBR12	KBG20
2b	5	6	39	KBS11	KBS22	KBX1	KBX2	KBXGL1	KBXGL2	KBD3	KBD13	KBR3	KBR13	KBG39
3b	7	8	40	KBS11	KBS22	KBX1	KBX2	KBXGL1	KBXGL2	KBD4	KBD14	KBR4	KBR14	KBG40
4b	9	10	59	KBS11	KBS22	KBX1	KBX2	KBXGL1	KBXGL2	KBD5	KBD15	KBR5	KBR15	KBG59
5b	11	12	60	KBS11	KBS22	KBX1	KBX2	KBXGL1	KBXGL2	KBD6	KBD16	KBR6	KBR16	KBG60

Figure 10-26 Test 13976



Relay with Fixture: Tests 13981-13991

- Test 13981
- Test 13982
- Test 13983
- Test 13985
- Test 13986
- Test 13987
- Test 13991
- Test 13992

Test 13981

Test Receiver to X-Bus Relays can be Opened

Requires: Pin Verification Fixture

This test verifies that the K<x>X relays can be opened. A test failure is caused when the relay being tested fails to open. The relay being tested is shown in bold, by subtest, in the table below. Test 13310 tests the same relays but does not contain the redundant path through the Pin Verification Fixture.

Figure 10-27 shows the measurement path.

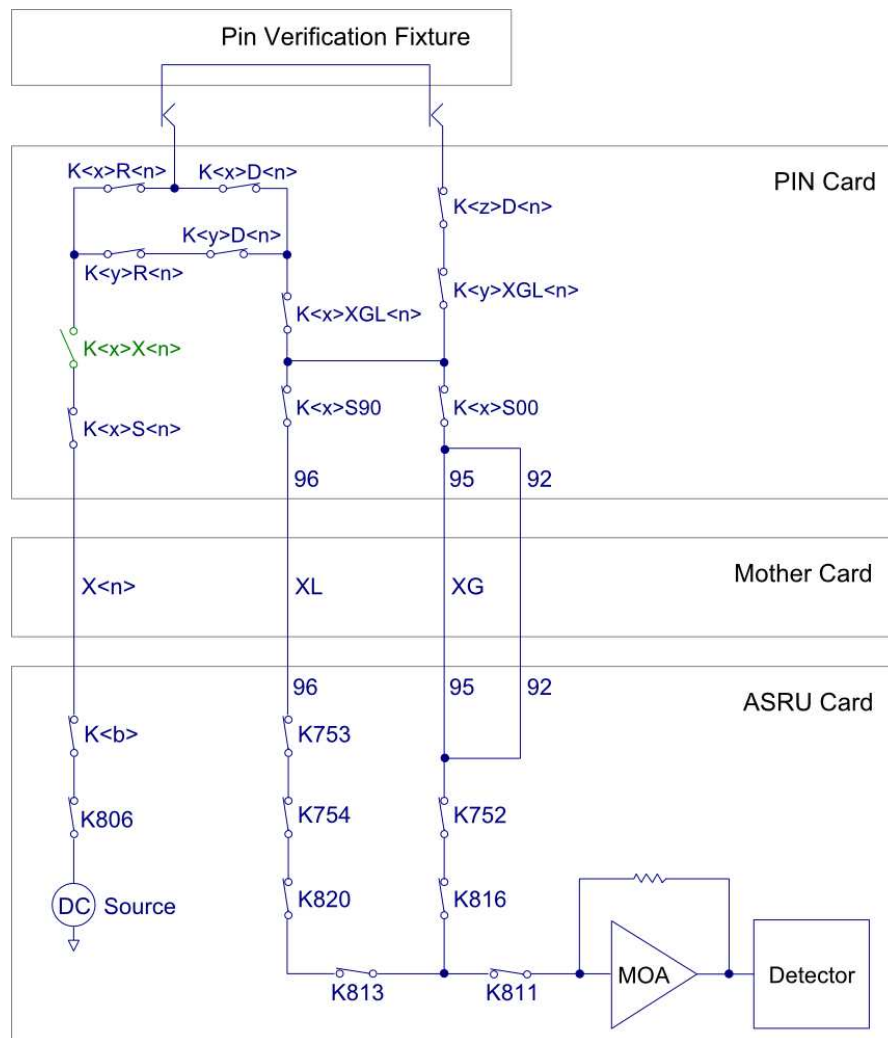
Table 10-39

Subtest	K	X<n>	K<x>S<n>	K<x>X<n>	K<x>D<n>	K<y>D<n>	K<z>D<n>	K<x>R<n>	K<y>R<n>	K<x>XGL<n>	K<y>XGL<n>
Page A											
0a	K733	X1	KAS11	KAX1	KAD1	KAD2	KAD11	KAR1	KAR2	KAXGL1	KAXGL2
1a	K734	X2	KAS22	KAX2	KAD11	KAD12	KAD21	KAR11	KAR12	KAXGL2	KAXGL3
2a	K735	X3	KAS33	KAX3	KAD21	KAD22	KAD31	KAR21	KAR22	KAXGL3	KAXGL4
3a	K736	X4	KAS44	KAX4	KAD31	KAD32	KAD41	KAR31	KAR32	KAXGL4	KAXGL5
4a	K737	X5	KAS55	KAX5	KAD41	KAD42	KAD51	KAR41	KAR42	KAXGL5	KAXGL6
5a	K738	X6	KAS66	KAX6	KAD51	KAD52	KAD61	KAR51	KAR52	KAXGL6	KAXGL7
6a	K739	X7	KAS77	KAX7	KAD61	KAD62	KAD71	KAR61	KAR62	KAXGL7	KAXGL8
7a	K740	X8	KAS88	KAX8	KAD71	KAD72	KAD1	KAR71	KAR72	KAXGL8	KAXGL1
Page B											
0b	K733	X1	KBS11	KBX1	KBD1	KBD2	KBD11	KBR1	KBR2	KBXGL1	KBXGL2
1b	K734	X2	KBS22	KBX2	KBD11	KBD12	KBD21	KBR11	KBR12	KBXGL2	KBXGL3
2b	K735	X3	KBS33	KBX3	KBD21	KBD22	KBD31	KBR21	KBR22	KBXGL3	KBXGL4
3b	K736	X4	KBS44	KBX4	KBD31	KBD32	KBD41	KBR31	KBR32	KBXGL4	KBXGL5
4b	K737	X5	KBS55	KBX5	KBD41	KBD42	KBD51	KBR41	KBR42	KBXGL5	KBXGL6
5b	K738	X6	KBS66	KBX6	KBD51	KBD52	KBD61	KBR51	KBR52	KBXGL6	KBXGL7
6b	K739	X7	KBS77	KBX7	KBD61	KBD62	KBD71	KBR61	KBR62	KBXGL7	KBXGL8
7b	K740	X8	KBS88	KBX8	KBD71	KBD72	KBD1	KBR71	KBR72	KBXGL8	KBXGL1

Table 10-39

Subtest	K	X<n>	K<x>S<n>	K<x>X<n>	K<x>D<n>	K<y>D<n>	K<z>D<n>	K<x>R<n>	K<y>R<n>	K<x>XGL<n>	K<y>XGL<n>
Page A											
8a	K733	X1	KAS11	KCX1	KAD1	KAD2	KAD11	KAR1	KAR2	KCXGL1	KCXGL2
9a	K734	X2	KAS22	KCX2	KAD11	KAD12	KAD21	KAR11	KAR12	KCXGL2	KCXGL3
10a	K735	X3	KAS33	KCX3	KAD21	KAD22	KAD31	KAR21	KAR22	KCXGL3	KCXGL4
11a	K736	X4	KAS44	KCX4	KAD31	KAD32	KAD41	KAR31	KAR32	KCXGL4	KCXGL5
12a	K737	X5	KAS55	KCX5	KAD41	KAD42	KAD51	KAR41	KAR42	KCXGL5	KCXGL6
13a	K738	X6	KAS66	KCX6	KAD51	KAD52	KAD61	KAR51	KAR52	KCXGL6	KCXGL7
14a	K739	X7	KAS77	KCX7	KAD61	KAD62	KAD71	KAR61	KAR62	KCXGL7	KCXGL8
15a	K740	X8	KAS88	KCX8	KAD71	KAD72	KAD1	KAR71	KAR72	KCXGL8	KCXGL1
Page B											
8b	K733	X1	KBS11	KDX1	KBD1	KBD2	KBD11	KBR1	KBR2	KDXGL1	KDXGL2
9b	K734	X2	KBS22	KDX2	KBD11	KBD12	KBD21	KBR11	KBR12	KDXGL2	KDXGL3
10b	K735	X3	KBS33	KDX3	KBD21	KBD22	KBD31	KBR21	KBR22	KDXGL3	KDXGL4
11b	K736	X4	KBS44	KDX4	KBD31	KBD32	KBD41	KBR31	KBR32	KDXGL4	KDXGL5
12b	K737	X5	KBS55	KDX5	KBD41	KBD42	KBD51	KBR41	KBR42	KDXGL5	KDXGL6
13b	K738	X6	KBS66	KDX6	KBD51	KBD52	KBD61	KBR51	KBR52	KDXGL6	KDXGL7
14b	K739	X7	KBS77	KDX7	KBD61	KBD62	KBD71	KBR61	KBR62	KDXGL7	KDXGL8
15b	K740	X8	KBS88	KDX8	KBD71	KBD72	KBD1	KBR71	KBR72	KDXGL8	KDXGL1

Figure 10-27 Test 13981



Test 13982

Test X-Bus Disconnect Relays can be Opened

Requires: Pin Verification Fixture

This test verifies that the $K<x>S$ relays can be opened. A test failure is caused when the relay being tested fails to open. The relay being tested is shown in bold, by subtest, in the table below.

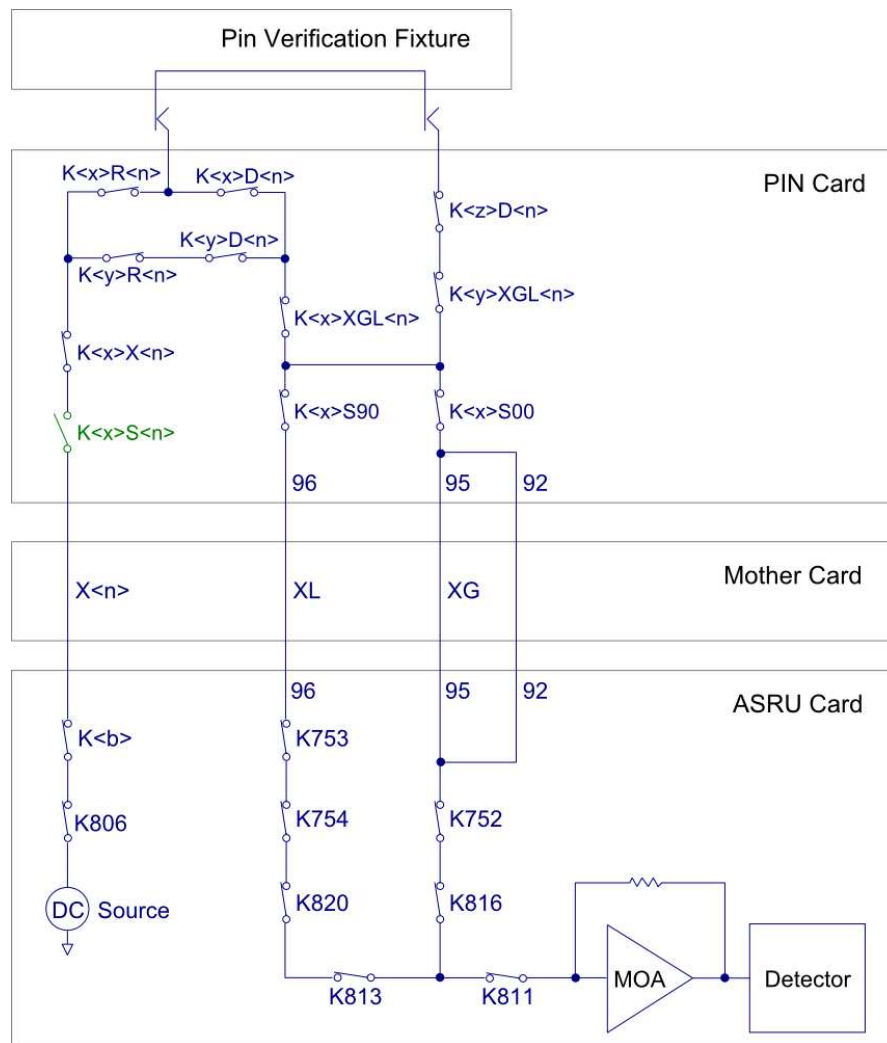
Test 13320 tests the same relays but does not contain the redundant path through the Pin Verification Fixture.

Figure 10-28 shows the measurement path.

Table 10-40

Subtest	K	X<n>	K<x>S<n>	K<x>X<n>	K<x>D<n>	K<y>D<n>	K<x>R<n>	K<y>R<n>	K<z>D<n>	K<x>XGL<n>	K<y>XGL<n>
Page A											
0a	K733	X1	KAS11	KAX1	KAD1	KAD2	KAR1	KAR2	KAD11	KAXGL1	KAXGL2
1a	K734	X2	KAS22	KAX2	KAD11	KAD12	KAR11	KAR12	KAD21	KAXGL2	KAXGL3
2a	K735	X3	KAS33	KAX3	KAD21	KAD22	KAR21	KAR22	KAD31	KAXGL3	KAXGL4
3a	K736	X4	KAS44	KAX4	KAD31	KAD32	KAR31	KAR32	KAD41	KAXGL4	KAXGL5
4a	K737	X5	KAS55	KAX5	KAD41	KAD42	KAR41	KAR42	KAD51	KAXGL5	KAXGL6
5a	K738	X6	KAS66	KAX6	KAD51	KAD52	KAR51	KAR52	KAD61	KAXGL6	KAXGL7
6a	K739	X7	KAS77	KAX7	KAD61	KAD62	KAR61	KAR62	KAD71	KAXGL7	KAXGL8
7a	K740	X8	KAS88	KAX8	KAD71	KAD72	KAR71	KAR72	KAD1	KAXGL8	KAXGL1
Page B											
0b	K733	X1	KBS11	KBX1	KBD1	KBD2	KBR1	KBR2	KBD11	KBXGL1	KBXGL2
1b	K734	X2	KBS22	KBX2	KBD11	KBD12	KBR11	KBR12	KBD21	KBXGL2	KBXGL3
2b	K735	X3	KBS33	KBX3	KBD21	KBD22	KBR21	KBR22	KBD31	KBXGL3	KBXGL4
3b	K736	X4	KBS44	KBX4	KBD31	KBD32	KBR31	KBR32	KBD41	KBXGL4	KBXGL5
4b	K737	X5	KBS55	KBX5	KBD41	KBD42	KBR41	KBR42	KBD51	KBXGL5	KBXGL6
5b	K738	X6	KBS66	KBX6	KBD51	KBD52	KBR51	KBR52	KBD61	KBXGL6	KBXGL7
6b	K739	X7	KBS77	KBX7	KBD61	KBD62	KBR61	KBR62	KBD71	KBXGL7	KBXGL8
7b	K740	X8	KBS88	KBX8	KBD71	KBD72	KBR71	KBR72	KBD1	KBXGL8	KBXGL1

Figure 10-28 Test 13982



Test 13983

Test Driver to XGL-Bus Relays can be Opened

Requires: Pin Verification Fixture

This test verifies that the K<x>XGL relays can be opened. A test failure is caused when the relay being tested fails to open. The relay being tested is shown in bold, by subtest, in the table below. Test 13330 tests the same relays but does not contain the redundant path through the Pin Verification Fixture.

Figure 10-29 shows the measurement path.

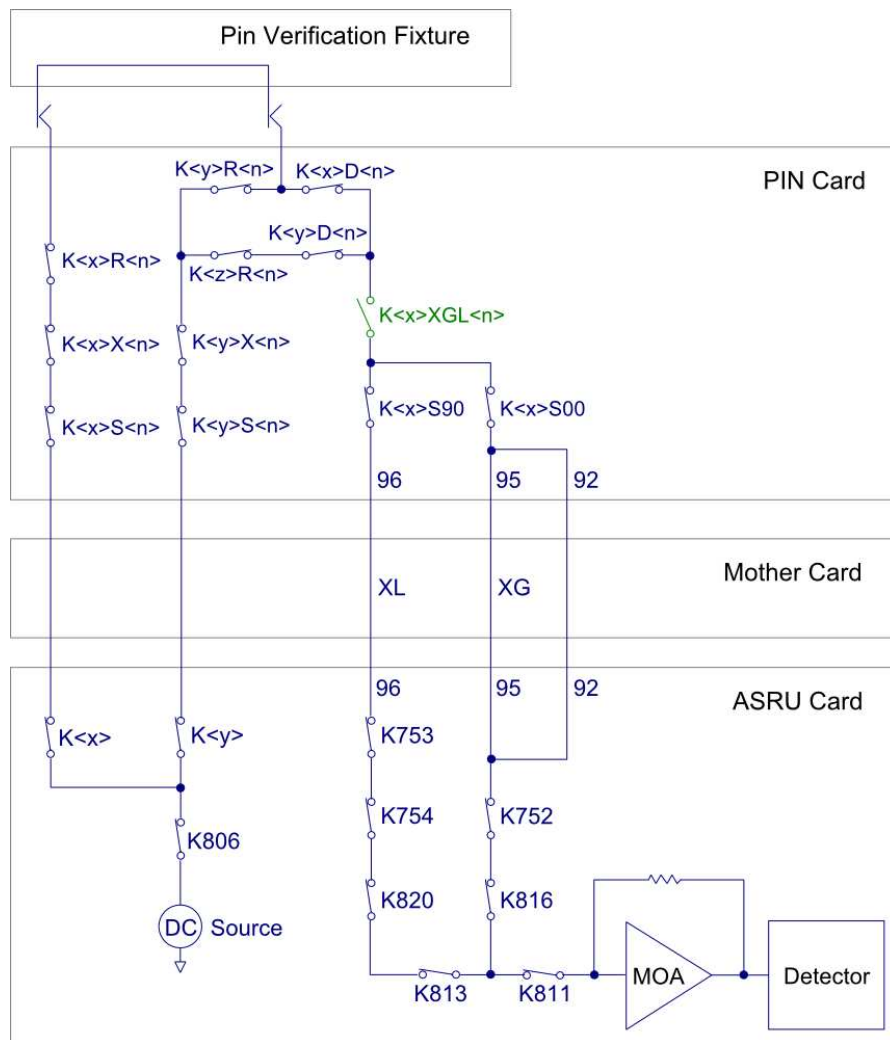
Table 10-41

Subtest	K<x>	K<y>	K<x>S<n>	K<y>S<n>	K<x>X<n>	K<y>X<n>	K<x>R<n>	K<y>R<n>	K<z>R<n>	K<x>D<n>	K<y>D<n>	K<x>XGL<n>
Page A												
0a	K734	K733	KAS22	KAS11	KAX2	KAX1	KAR11	KAR1	KAR2	KAD1	KAD2	KAXGL1
1a	K735	K734	KAS33	KAS22	KAX3	KAX2	KAR21	KAR11	KAR12	KAD11	KAD12	KAXGL2
2a	K736	K735	KAS44	KAS33	KAX4	KAX3	KAR31	KAR21	KAR22	KAD21	KAD22	KAXGL3
3a	K737	K736	KAS55	KAS44	KAX5	KAX4	KAR41	KAR31	KAR32	KAD31	KAD32	KAXGL4
4a	K738	K737	KAS66	KAS55	KAX6	KAX5	KAR51	KAR41	KAR42	KAD41	KAD42	KAXGL5
5a	K739	K738	KAS77	KAS66	KAX7	KAX6	KAR61	KAR51	KAR52	KAD51	KAD52	KAXGL6
6a	K740	K739	KAS88	KAS77	KAX8	KAX7	KAR71	KAR61	KAR62	KAD61	KAD62	KAXGL7
7a	K733	K740	KAS11	KAS88	KAX1	KAX8	KAR1	KAR71	KAR72	KAD71	KAD72	KAXGL8
Page B												
0b	K734	K733	KBS22	KBS11	KBX2	KBX1	KBR11	KBR1	KBR2	KBD1	KBD2	KBXGL1
1b	K735	K734	KBS33	KBS22	KBX3	KBX2	KBR21	KBR11	KBR12	KBD11	KBD12	KBXGL2
2b	K736	K735	KBS44	KBS33	KBX4	KBX3	KBR31	KBR21	KBR22	KBD21	KBD22	KBXGL3
3b	K737	K736	KBS55	KBS44	KBX5	KBX4	KBR41	KBR31	KBR32	KBD31	KBD32	KBXGL4
4b	K738	K737	KBS66	KBS55	KBX6	KBX5	KBR51	KBR41	KBR42	KBD41	KBD42	KBXGL5
5b	K739	K738	KBS77	KBS66	KBX7	KBX6	KBR61	KBR51	KBR52	KBD51	KBD52	KBXGL6
6b	K740	K739	KBS88	KBS77	KBX8	KBX7	KBR71	KBR61	KBR62	KBD61	KBD62	KBXGL7
7b	K733	K740	KBS11	KBS88	KBX1	KBX8	KBR1	KBR71	KBR72	KBD71	KBD72	KBXGL8
8a	K734	K733	KAS22	KAS11	KCX2	KCX1	KAR11	KAR1	KAR2	KAD1	KAD2	KCXGL1
9a	K735	K734	KAS33	KAS22	KCX3	KCX2	KAR21	KAR11	KAR12	KAD11	KAD12	KCXGL2
10a	K736	K735	KAS44	KAS33	KCX4	KCX3	KAR31	KAR21	KAR22	KAD21	KAD22	KCXGL3
11a	K737	K736	KAS55	KAS44	KCX5	KCX4	KAR41	KAR31	KAR32	KAD31	KAD32	KCXGL4

Table 10-41

Subtest	K<x>	K<y>	K<x>S<n>	K<y>S<n>	K<x>X<n>	K<y>X<n>	K<x>R<n>	K<y>R<n>	K<z>R<n>	K<x>D<n>	K<y>D<n>	K<x>XGL<n>
12a	K738	K737	KAS66	KAS55	KCX6	KCX5	KAR51	KAR41	KAR42	KAD41	KAD42	KCXGL5
13a	K739	K738	KAS77	KAS66	KCX7	KCX6	KAR61	KAR51	KAR52	KAD51	KAD52	KCXGL6
14a	K740	K739	KAS88	KAS77	KCX8	KCX7	KAR71	KAR61	KAR62	KAD61	KAD62	KCXGL7
15a	K733	K740	KAS11	KAS88	KCX1	KCX8	KAR1	KAR71	KAR72	KAD71	KAD72	KCXGL8
8b	K734	K733	KBS22	KBS11	KDX2	KDX1	KBR11	KBR1	KBR2	KBD1	KBD2	KDXGL1
9b	K735	K734	KBS33	KBS22	KDX3	KDX2	KBR21	KBR11	KBR12	KBD11	KBD12	KDXGL2
10b	K736	K735	KBS44	KBS33	KDX4	KDX3	KBR31	KBR21	KBR22	KBD21	KBD22	KDXGL3
11b	K737	K736	KBS55	KBS44	KDX5	KDX4	KBR41	KBR31	KBR32	KBD31	KBD32	KDXGL4
12b	K738	K737	KBS66	KBS55	KDX6	KDX5	KBR51	KBR41	KBR42	KBD41	KBD42	KDXGL5
13b	K739	K738	KBS77	KBS66	KDX7	KDX6	KBR61	KBR51	KBR52	KBD51	KBD52	KDXGL6
14b	K740	K739	KBS88	KBS77	KDX8	KDX7	KBR71	KBR61	KBR62	KBD61	KBD62	KDXGL7
15b	K733	K740	KBS11	KBS88	KDX1	KDX8	KBR1	KBR71	KBR72	KBD71	KBD72	KDXGL8

Figure 10-29 Test 13983



Test 13985

Test Receiver to Fixture Interface (MINT) Pin (MUX) Relays can be Opened

Requires: Pin Verification Fixture

This test verifies that the K<x>R relays can be opened. A test failure is caused when the relay being tested fails to open. The relay being tested is shown in bold, by subtest, in the table below. Test 13350 tests the same relays but does not contain the redundant path through the Pin Verification Fixture.

Figure 10-30 shows the measurement path.

Table 10-42

Subtest	K	K<x>S<n>	K<x>X<n>	K<x>R<n>	K<x>D<n>	K<y>D<n>	K<x>XGL<n>	K<y>XGL<n>
Page A								
0a	K733	KAS11	KAX1	KAR1	KAD1	KAD11	KAXGL1	KAXGL2
1a	K733	KAS11	KAX1	KAR2	KAD2	KAD12	KAXGL1	KAXGL2
2a	K733	KAS11	KAX1	KAR3	KAD3	KAD13	KAXGL1	KAXGL2
3a	K733	KAS11	KAX1	KAR4	KAD4	KAD14	KAXGL1	KAXGL2
4a	K733	KAS11	KAX1	KAR5	KAD5	KAD15	KAXGL1	KAXGL2
5a	K733	KAS11	KAX1	KAR6	KAD6	KAD16	KAXGL1	KAXGL2
6a	K734	KAS22	KAX2	KAR11	KAD11	KAD21	KAXGL2	KAXGL3
7a	K734	KAS22	KAX2	KAR12	KAD12	KAD22	KAXGL2	KAXGL3
8a	K734	KAS22	KAX2	KAR13	KAD13	KAD23	KAXGL2	KAXGL3
9a	K734	KAS22	KAX2	KAR14	KAD14	KAD24	KAXGL2	KAXGL3
10a	K734	KAS22	KAX2	KAR15	KAD15	KAD25	KAXGL2	KAXGL3
11a	K734	KAS22	KAX2	KAR16	KAD16	KAD26	KAXGL2	KAXGL3
12a	K735	KAS33	KAX3	KAR21	KAD21	KAD31	KAXGL3	KAXGL4
13a	K735	KAS33	KAX3	KAR22	KAD22	KAD32	KAXGL3	KAXGL4
14a	K735	KAS33	KAX3	KAR23	KAD23	KAD33	KAXGL3	KAXGL4
15a	K735	KAS33	KAX3	KAR24	KAD24	KAD34	KAXGL3	KAXGL4
16a	K735	KAS33	KAX3	KAR25	KAD25	KAD35	KAXGL3	KAXGL4
17a	K735	KAS33	KAX3	KAR26	KAD26	KAD36	KAXGL3	KAXGL4
18a	K736	KAS44	KAX4	KAR31	KAD31	KAD41	KAXGL4	KAXGL5
19a	K736	KAS44	KAX4	KAR32	KAD32	KAD42	KAXGL4	KAXGL5
20a	K736	KAS44	KAX4	KAR33	KAD33	KAD43	KAXGL4	KAXGL5

Table 10-42

Subtest	K	K<x>S<n>	K<x>X<n>	K<x>R<n>	K<x>D<n>	K<y>D<n>	K<x>XGL<n>	K<y>XGL<n>
21a	K736	KAS44	KAX4	KAR34	KAD34	KAD44	KAXGL4	KAXGL5
22a	K736	KAS44	KAX4	KAR35	KAD35	KAD45	KAXGL4	KAXGL5
23a	K736	KAS44	KAX4	KAR36	KAD36	KAD46	KAXGL4	KAXGL5
24a	K737	KAS55	KAX5	KAR41	KAD41	KAD51	KAXGL5	KAXGL6
25a	K737	KAS55	KAX5	KAR42	KAD42	KAD52	KAXGL5	KAXGL6
26a	K737	KAS55	KAX5	KAR43	KAD43	KAD53	KAXGL5	KAXGL6
27a	K737	KAS55	KAX5	KAR44	KAD44	KAD54	KAXGL5	KAXGL6
28a	K737	KAS55	KAX5	KAR45	KAD45	KAD55	KAXGL5	KAXGL6
29a	K737	KAS55	KAX5	KAR46	KAD46	KAD56	KAXGL5	KAXGL6
30a	K738	KAS66	KAX6	KAR51	KAD51	KAD61	KAXGL6	KAXGL7
31a	K738	KAS66	KAX6	KAR52	KAD52	KAD62	KAXGL6	KAXGL7
32a	K738	KAS66	KAX6	KAR53	KAD53	KAD63	KAXGL6	KAXGL7
33a	K738	KAS66	KAX6	KAR54	KAD54	KAD64	KAXGL6	KAXGL7
34a	K738	KAS66	KAX6	KAR55	KAD55	KAD65	KAXGL6	KAXGL7
35a	K738	KAS66	KAX6	KAR56	KAD56	KAD66	KAXGL6	KAXGL7
36a	K739	KAS77	KAX7	KAR61	KAD61	KAD71	KAXGL7	KAXGL8
37a	K739	KAS77	KAX7	KAR62	KAD62	KAD72	KAXGL7	KAXGL8
38a	K739	KAS77	KAX7	KAR63	KAD63	KAD73	KAXGL7	KAXGL8
39a	K739	KAS77	KAX7	KAR64	KAD64	KAD74	KAXGL7	KAXGL8
40a	K739	KAS77	KAX7	KAR65	KAD65	KAD75	KAXGL7	KAXGL8
41a	K739	KAS77	KAX7	KAR66	KAD66	KAD76	KAXGL7	KAXGL8
42a	K740	KAS88	KAX8	KAR71	KAD71	KAD1	KAXGL8	KAXGL1
43a	K740	KAS88	KAX8	KAR72	KAD72	KAD2	KAXGL8	KAXGL1
44a	K740	KAS88	KAX8	KAR73	KAD73	KAD3	KAXGL8	KAXGL1
45a	K740	KAS88	KAX8	KAR74	KAD74	KAD4	KAXGL8	KAXGL1
46a	K740	KAS88	KAX8	KAR75	KAD75	KAD5	KAXGL8	KAXGL1
47a	K740	KAS88	KAX8	KAR76	KAD76	KAD6	KAXGL8	KAXGL1
48a	K733	KAS11	KAX1	KAR7	KAD7	KAD17	KAXGL1	KAXGL2
49a	K733	KAS11	KAX1	KAR8	KAD8	KAD18	KAXGL1	KAXGL2
50a	K733	KAS11	KAX1	KAR9	KAD9	KAD19	KAXGL1	KAXGL2

Table 10-42

Subtest	K	K<x>S<n>	K<x>X<n>	K<x>R<n>	K<x>D<n>	K<y>D<n>	K<x>XGL<n>	K<y>XGL<n>
51a	K734	KAS22	KAX2	KAR17	KAD17	KAD27	KAXGL2	KAXGL3
52a	K734	KAS22	KAX2	KAR18	KAD18	KAD28	KAXGL2	KAXGL3
53a	K734	KAS22	KAX2	KAR19	KAD19	KAD29	KAXGL2	KAXGL3
54a	K735	KAS33	KAX3	KAR27	KAD27	KAD37	KAXGL3	KAXGL4
55a	K735	KAS33	KAX3	KAR28	KAD28	KAD38	KAXGL3	KAXGL4
56a	K735	KAS33	KAX3	KAR29	KAD29	KAD39	KAXGL3	KAXGL4
57a	K736	KAS44	KAX4	KAR37	KAD37	KAD47	KAXGL4	KAXGL5
58a	K736	KAS44	KAX4	KAR38	KAD38	KAD48	KAXGL4	KAXGL5
59a	K736	KAS44	KAX4	KAR39	KAD39	KAD49	KAXGL4	KAXGL5
60a	K737	KAS55	KAX5	KAR47	KAD47	KAD57	KAXGL5	KAXGL6
61a	K737	KAS55	KAX5	KAR48	KAD48	KAD58	KAXGL5	KAXGL6
62a	K737	KAS55	KAX5	KAR49	KAD49	KAD59	KAXGL5	KAXGL6
63a	K738	KAS66	KAX6	KAR57	KAD57	KAD67	KAXGL6	KAXGL7
64a	K738	KAS66	KAX6	KAR58	KAD58	KAD68	KAXGL6	KAXGL7
65a	K738	KAS66	KAX6	KAR59	KAD59	KAD69	KAXGL6	KAXGL7
66a	K739	KAS77	KAX7	KAR67	KAD67	KAD77	KAXGL7	KAXGL8
67a	K739	KAS77	KAX7	KAR68	KAD68	KAD78	KAXGL7	KAXGL8
68a	K739	KAS77	KAX7	KAR69	KAD69	KAD79	KAXGL7	KAXGL8
69a	K740	KAS88	KAX8	KAR77	KAD77	KAD7	KAXGL8	KAXGL1
70a	K740	KAS88	KAX8	KAR78	KAD78	KAD8	KAXGL8	KAXGL1
71a	K740	KAS88	KAX8	KAR79	KAD79	KAD9	KAXGL8	KAXGL1
Page B								
0b	K733	KBS11	KBX1	KBR1	KBD1	KBD11	KBXGL1	KBXGL2
1b	K733	KBS11	KBX1	KBR2	KBD2	KBD12	KBXGL1	KBXGL2
2b	K733	KBS11	KBX1	KBR3	KBD3	KBD13	KBXGL1	KBXGL2
3b	K733	KBS11	KBX1	KBR4	KBD4	KBD14	KBXGL1	KBXGL2
4b	K733	KBS11	KBX1	KBR5	KBD5	KBD15	KBXGL1	KBXGL2
5b	K733	KBS11	KBX1	KBR6	KBD6	KBD16	KBXGL1	KBXGL2
6b	K734	KBS22	KBX2	KBR11	KBD11	KBD21	KBXGL2	KBXGL3
7b	K734	KBS22	KBX2	KBR12	KBD12	KBD22	KBXGL2	KBXGL3

Table 10-42

Subtest	K	K<x>S<n>	K<x>X<n>	K<x>R<n>	K<x>D<n>	K<y>D<n>	K<x>XGL<n>	K<y>XGL<n>
8b	K734	KBS22	KBX2	KBR13	KBD13	KBD23	KBXGL2	KBXGL3
9b	K734	KBS22	KBX2	KBR14	KBD14	KBD24	KBXGL2	KBXGL3
10b	K734	KBS22	KBX2	KBR15	KBD15	KBD25	KBXGL2	KBXGL3
11b	K734	KBS22	KBX2	KBR16	KBD16	KBD26	KBXGL2	KBXGL3
12b	K735	KBS33	KBX3	KBR21	KBD21	KBD31	KBXGL3	KBXGL4
13b	K735	KBS33	KBX3	KBR22	KBD22	KBD32	KBXGL3	KBXGL4
14b	K735	KBS33	KBX3	KBR23	KBD23	KBD33	KBXGL3	KBXGL4
15b	K735	KBS33	KBX3	KBR24	KBD24	KBD34	KBXGL3	KBXGL4
16b	K735	KBS33	KBX3	KBR25	KBD25	KBD35	KBXGL3	KBXGL4
17b	K735	KBS33	KBX3	KBR26	KBD26	KBD36	KBXGL3	KBXGL4
18b	K736	KBS44	KBX4	KBR31	KBD31	KBD41	KBXGL4	KBXGL5
19b	K736	KBS44	KBX4	KBR32	KBD32	KBD42	KBXGL4	KBXGL5
20b	K736	KBS44	KBX4	KBR33	KBD33	KBD43	KBXGL4	KBXGL5
21b	K736	KBS44	KBX4	KBR34	KBD34	KBD44	KBXGL4	KBXGL5
22b	K736	KBS44	KBX4	KBR35	KBD35	KBD45	KBXGL4	KBXGL5
23b	K736	KBS44	KBX4	KBR36	KBD36	KBD46	KBXGL4	KBXGL5
24b	K737	KBS55	KBX5	KBR41	KBD41	KBD51	KBXGL5	KBXGL6
25b	K737	KBS55	KBX5	KBR42	KBD42	KBD52	KBXGL5	KBXGL6
26b	K737	KBS55	KBX5	KBR43	KBD43	KBD53	KBXGL5	KBXGL6
27b	K737	KBS55	KBX5	KBR44	KBD44	KBD54	KBXGL5	KBXGL6
28b	K737	KBS55	KBX5	KBR45	KBD45	KBD55	KBXGL5	KBXGL6
29b	K737	KBS55	KBX5	KBR46	KBD46	KBD56	KBXGL5	KBXGL6
30b	K738	KBS66	KBX6	KBR51	KBD51	KBD61	KBXGL6	KBXGL7
31b	K738	KBS66	KBX6	KBR52	KBD52	KBD62	KBXGL6	KBXGL7
32b	K738	KBS66	KBX6	KBR53	KBD53	KBD63	KBXGL6	KBXGL7
33b	K738	KBS66	KBX6	KBR54	KBD54	KBD64	KBXGL6	KBXGL7
34b	K738	KBS66	KBX6	KBR55	KBD55	KBD65	KBXGL6	KBXGL7
35b	K738	KBS66	KBX6	KBR56	KBD56	KBD66	KBXGL6	KBXGL7
36b	K739	KBS77	KBX7	KBR61	KBD61	KBD71	KBXGL7	KBXGL8
37b	K739	KBS77	KBX7	KBR62	KBD62	KBD72	KBXGL7	KBXGL8

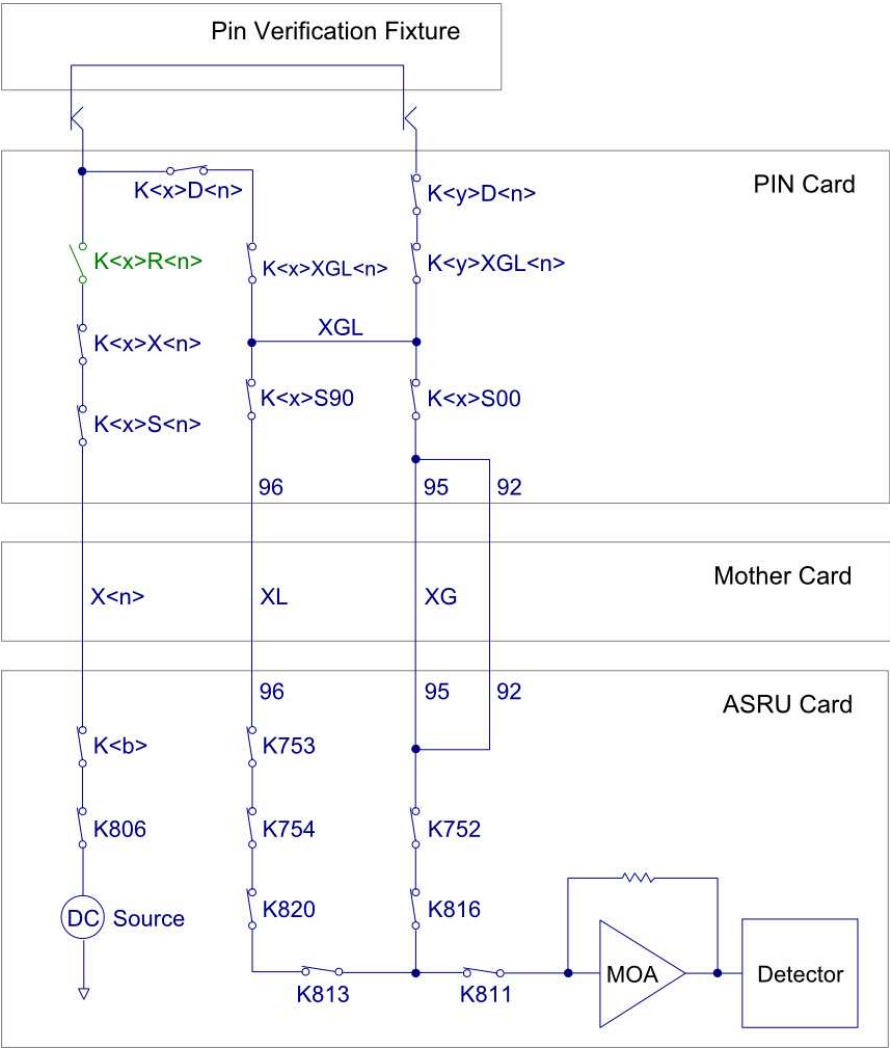
Table 10-42

Subtest	K	K<x>S<n>	K<x>X<n>	K<x>R<n>	K<x>D<n>	K<y>D<n>	K<x>XGL<n>	K<y>XGL<n>
38b	K739	KBS77	KBX7	KBR63	KBD63	KBD73	KBXGL7	KBXGL8
39b	K739	KBS77	KBX7	KBR64	KBD64	KBD74	KBXGL7	KBXGL8
40b	K739	KBS77	KBX7	KBR65	KBD65	KBD75	KBXGL7	KBXGL8
41b	K739	KBS77	KBX7	KBR66	KBD66	KBD76	KBXGL7	KBXGL8
42b	K740	KBS88	KBX8	KBR71	KBD71	KBD1	KBXGL8	KBXGL1
43b	K740	KBS88	KBX8	KBR72	KBD72	KBD2	KBXGL8	KBXGL1
44b	K740	KBS88	KBX8	KBR73	KBD73	KBD3	KBXGL8	KBXGL1
45b	K740	KBS88	KBX8	KBR74	KBD74	KBD4	KBXGL8	KBXGL1
46b	K740	KBS88	KBX8	KBR75	KBD75	KBD5	KBXGL8	KBXGL1
47b	K740	KBS88	KBX8	KBR76	KBD76	KBD6	KBXGL8	KBXGL1
48b	K733	KBS11	KBX1	KBR7	KBD7	KBD17	KBXGL1	KBXGL2
49b	K733	KBS11	KBX1	KBR8	KBD8	KBD18	KBXGL1	KBXGL2
50b	K733	KBS11	KBX1	KBR9	KBD9	KBD19	KBXGL1	KBXGL2
51b	K734	KBS22	KBX2	KBR17	KBD17	KBD27	KBXGL2	KBXGL3
52b	K734	KBS22	KBX2	KBR18	KBD18	KBD28	KBXGL2	KBXGL3
53b	K734	KBS22	KBX2	KBR19	KBD19	KBD29	KBXGL2	KBXGL3
54b	K735	KBS33	KBX3	KBR27	KBD27	KBD37	KBXGL3	KBXGL4
55b	K735	KBS33	KBX3	KBR28	KBD28	KBD38	KBXGL3	KBXGL4
56b	K735	KBS33	KBX3	KBR29	KBD29	KBD39	KBXGL3	KBXGL4
57b	K736	KBS44	KBX4	KBR37	KBD37	KBD47	KBXGL4	KBXGL5
58b	K736	KBS44	KBX4	KBR38	KBD38	KBD48	KBXGL4	KBXGL5
59b	K736	KBS44	KBX4	KBR39	KBD39	KBD49	KBXGL4	KBXGL5
60b	K737	KBS55	KBX5	KBR47	KBD47	KBD57	KBXGL5	KBXGL6
61b	K737	KBS55	KBX5	KBR48	KBD48	KBD58	KBXGL5	KBXGL6
62b	K737	KBS55	KBX5	KBR49	KBD49	KBD59	KBXGL5	KBXGL6
63b	K738	KBS66	KBX6	KBR57	KBD57	KBD67	KBXGL6	KBXGL7
64b	K738	KBS66	KBX6	KBR58	KBD58	KBD68	KBXGL6	KBXGL7
65b	K738	KBS66	KBX6	KBR59	KBD59	KBD69	KBXGL6	KBXGL7
66b	K739	KBS77	KBX7	KBR67	KBD67	KBD77	KBXGL7	KBXGL8
67b	K739	KBS77	KBX7	KBR68	KBD68	KBD78	KBXGL7	KBXGL8

Table 10-42

Subtest	K	K<x>S<n>	K<x>X<n>	K<x>R<n>	K<x>D<n>	K<y>D<n>	K<x>XGL<n>	K<y>XGL<n>
68b	K739	KBS77	KBX7	KBR69	KBD69	KBD79	KBXGL7	KBXGL8
69b	K740	KBS88	KBX8	KBR77	KBD77	KBD7	KBXGL8	KBXGL1
70b	K740	KBS88	KBX8	KBR78	KBD78	KBD8	KBXGL8	KBXGL1
71b	K740	KBS88	KBX8	KBR79	KBD79	KBD9	KBXGL8	KBXGL1

Figure 10-30 Test 13985



Test 13986

Test Driver to Fixture Interface (MINT) Pin (MUX) Relays can be Opened

Requires: Pin Verification Fixture

This test verifies that the K<x>D relays can be opened. A test failure is caused when the relay being tested fails to open. The relay being tested is shown in bold, by subtest, in the table below. Test 13360 tests the same relays but does not contain the redundant path through the Pin Verification Fixture.

Figure 10-31 shows the measurement path.

Table 10-43

Subtest	K	K<c>	K<x>S<n>	K<y>S<n>	K<x>X<n>	K<y>X<n>	K<x>R<n>	K<y>R<n>	K<x>D<n>	K<x>XGL<n>
Page A										
0a	K733	K734	KAS11	KAS22	KAX1	KAX2	KAR11	KAR1	KAD1	KAXGL1
1a	K733	K734	KAS11	KAS22	KAX1	KAX2	KAR12	KAR2	KAD2	KAXGL1
2a	K733	K734	KAS11	KAS22	KAX1	KAX2	KAR13	KAR3	KAD3	KAXGL1
3a	K733	K734	KAS11	KAS22	KAX1	KAX2	KAR14	KAR4	KAD4	KAXGL1
4a	K733	K734	KAS11	KAS22	KAX1	KAX2	KAR15	KAR5	KAD5	KAXGL1
5a	K733	K734	KAS11	KAS22	KAX1	KAX2	KAR16	KAR6	KAD6	KAXGL1
6a	K734	K735	KAS22	KAS33	KAX2	KAX3	KAR21	KAR11	KAD11	KAXGL2
7a	K734	K735	KAS22	KAS33	KAX2	KAX3	KAR21	KAR12	KAD12	KAXGL2
8a	K734	K735	KAS22	KAS33	KAX2	KAX3	KAR23	KAR13	KAD13	KAXGL2
9a	K734	K735	KAS22	KAS33	KAX2	KAX3	KAR24	KAR14	KAD14	KAXGL2
10a	K734	K735	KAS22	KAS33	KAX2	KAX3	KAR25	KAR15	KAD15	KAXGL2
11a	K734	K735	KAS22	KAS33	KAX2	KAX3	KAR26	KAR16	KAD16	KAXGL2
12a	K735	K736	KAS33	KAS44	KAX3	KAX4	KAR31	KAR21	KAD21	KAXGL3
13a	K735	K736	KAS33	KAS44	KAX3	KAX4	KAR32	KAR22	KAD22	KAXGL3
14a	K735	K736	KAS33	KAS44	KAX3	KAX4	KAR33	KAR23	KAD23	KAXGL3
15a	K735	K736	KAS33	KAS44	KAX3	KAX4	KAR34	KAR24	KAD24	KAXGL3
16a	K735	K736	KAS33	KAS44	KAX3	KAX4	KAR35	KAR25	KAD25	KAXGL3
17a	K735	K736	KAS33	KAS44	KAX3	KAX4	KAR36	KAR26	KAD26	KAXGL3
18a	K736	K737	KAS44	KAS55	KAX4	KAX5	KAR41	KAR31	KAD31	KAXGL4
19a	K736	K737	KAS44	KAS55	KAX4	KAX5	KAR42	KAR32	KAD32	KAXGL4
20a	K736	K737	KAS44	KAS55	KAX4	KAX5	KAR43	KAR33	KAD33	KAXGL4

Table 10-43

Subtest	K	K<c>	K<x>S<n>	K<y>S<n>	K<x>X<n>	K<y>X<n>	K<x>R<n>	K<y>R<n>	K<x>D<n>	K<x>XGL<n>
21a	K736	K737	KAS44	KAS55	KAX4	KAX5	KAR44	KAR34	KAD34	KAXGL4
22a	K736	K737	KAS44	KAS55	KAX4	KAX5	KAR45	KAR35	KAD35	KAXGL4
23a	K736	K737	KAS44	KAS55	KAX4	KAX5	KAR46	KAR36	KAD36	KAXGL4
24a	K737	K738	KAS55	KAS66	KAX5	KAX6	KAR51	KAR41	KAD41	KAXGL5
25a	K737	K738	KAS55	KAS66	KAX5	KAX6	KAR52	KAR42	KAD42	KAXGL5
26a	K737	K738	KAS55	KAS66	KAX5	KAX6	KAR53	KAR43	KAD43	KAXGL5
27a	K737	K738	KAS55	KAS66	KAX5	KAX6	KAR54	KAR44	KAD44	KAXGL5
28a	K737	K738	KAS55	KAS66	KAX5	KAX6	KAR55	KAR45	KAD45	KAXGL5
29a	K737	K738	KAS55	KAS66	KAX5	KAX6	KAR56	KAR46	KAD46	KAXGL5
30a	K738	K739	KAS66	KAS77	KAX6	KAX7	KAR61	KAR51	KAD51	KAXGL6
31a	K738	K739	KAS66	KAS77	KAX6	KAX7	KAR62	KAR52	KAD52	KAXGL6
32a	K738	K739	KAS66	KAS77	KAX6	KAX7	KAR63	KAR53	KAD53	KAXGL6
33a	K738	K739	KAS66	KAS77	KAX6	KAX7	KAR64	KAR54	KAD54	KAXGL6
34a	K738	K739	KAS66	KAS77	KAX6	KAX7	KAR65	KAR55	KAD55	KAXGL6
35a	K738	K739	KAS66	KAS77	KAX6	KAX7	KAR66	KAR56	KAD56	KAXGL6
36a	K739	K740	KAS77	KAS88	KAX7	KAX8	KAR71	KAR61	KAD61	KAXGL7
37a	K739	K740	KAS77	KAS88	KAX7	KAX8	KAR72	KAR62	KAD62	KAXGL7
38a	K739	K740	KAS77	KAS88	KAX7	KAX8	KAR73	KAR63	KAD63	KAXGL7
39a	K739	K740	KAS77	KAS88	KAX7	KAX8	KAR74	KAR64	KAD64	KAXGL7
40a	K739	K740	KAS77	KAS88	KAX7	KAX8	KAR75	KAR65	KAD65	KAXGL7
41a	K739	K740	KAS77	KAS88	KAX7	KAX8	KAR76	KAR66	KAD66	KAXGL7
42a	K740	K733	KAS88	KAS11	KAX8	KAX1	KAR1	KAR71	KAD71	KAXGL8
43a	K740	K733	KAS88	KAS11	KAX8	KAX1	KAR2	KAR72	KAD72	KAXGL8
44a	K740	K733	KAS88	KAS11	KAX8	KAX1	KAR3	KAR73	KAD73	KAXGL8
45a	K740	K733	KAS88	KAS11	KAX8	KAX1	KAR4	KAR74	KAD74	KAXGL8
46a	K740	K733	KAS88	KAS11	KAX8	KAX1	KAR5	KAR75	KAD75	KAXGL8
47a	K740	K733	KAS88	KAS11	KAX8	KAX1	KAR6	KAR76	KAD76	KAXGL8
48a	K733	K734	KAS11	KAS22	KAX1	KAX2	KAR17	KAR7	KAD7	KAXGL1
49a	K733	K734	KAS11	KAS22	KAX1	KAX2	KAR18	KAR8	KAD8	KAXGL1
50a	K733	K734	KAS11	KAS22	KAX1	KAX2	KAR19	KAR9	KAD9	KAXGL1

Table 10-43

Subtest	K	K<c>	K<x>S<n>	K<y>S<n>	K<x>X<n>	K<y>X<n>	K<x>R<n>	K<y>R<n>	K<x>D<n>	K<x>XGL<n>
51a	K734	K735	KAS22	KAS33	KAX2	KAX3	KAR27	KAR17	KAD17	KAXGL2
52a	K734	K735	KAS22	KAS33	KAX2	KAX3	KAR28	KAR18	KAD18	KAXGL2
53a	K734	K735	KAS22	KAS33	KAX2	KAX3	KAR29	KAR19	KAD19	KAXGL2
54a	K735	K736	KAS33	KAS44	KAX3	KAX4	KAR37	KAR27	KAD27	KAXGL3
55a	K735	K736	KAS33	KAS44	KAX3	KAX4	KAR38	KAR28	KAD28	KAXGL3
56a	K735	K736	KAS33	KAS44	KAX3	KAX4	KAR39	KAR29	KAD29	KAXGL3
57a	K736	K737	KAS44	KAS55	KAX4	KAX5	KAR47	KAR37	KAD37	KAXGL4
58a	K736	K737	KAS44	KAS55	KAX4	KAX5	KAR48	KAR38	KAD38	KAXGL4
59a	K736	K737	KAS44	KAS55	KAX4	KAX5	KAR49	KAR39	KAD39	KAXGL4
60a	K737	K738	KAS55	KAS66	KAX5	KAX6	KAR57	KAR47	KAD47	KAXGL5
61a	K737	K738	KAS55	KAS66	KAX5	KAX6	KAR58	KAR48	KAD48	KAXGL5
62a	K737	K738	KAS55	KAS66	KAX5	KAX6	KAR59	KAR49	KAD49	KAXGL5
63a	K738	K739	KAS66	KAS77	KAX6	KAX7	KAR67	KAR57	KAD57	KAXGL6
64a	K738	K739	KAS66	KAS77	KAX6	KAX7	KAR68	KAR58	KAD58	KAXGL6
65a	K738	K739	KAS66	KAS77	KAX6	KAX7	KAR69	KAR59	KAD59	KAXGL6
66a	K739	K740	KAS77	KAS88	KAX7	KAX8	KAR77	KAR67	KAD67	KAXGL7
67a	K739	K740	KAS77	KAS88	KAX7	KAX8	KAR78	KAR68	KAD68	KAXGL7
68a	K739	K740	KAS77	KAS88	KAX7	KAX8	KAR79	KAR69	KAD69	KAXGL7
69a	K740	K733	KAS88	KAS11	KAX8	KAX1	KAR7	KAR77	KAD77	KAXGL8
70a	K740	K733	KAS88	KAS11	KAX8	KAX1	KAR8	KAR78	KAD78	KAXGL8
71a	K740	K733	KAS88	KAS11	KAX8	KAX1	KAR9	KAR79	KAD79	KAXGL8
Page B										
0b	K733	K734	KBS11	KBS22	KBX1	KBX2	KBR11	KBR1	KBD1	KBXGL1
1b	K733	K734	KBS11	KBS22	KBX1	KBX2	KBR12	KBR2	KBD2	KBXGL1
2b	K733	K734	KBS11	KBS22	KBX1	KBX2	KBR13	KBR3	KBD3	KBXGL1
3b	K733	K734	KBS11	KBS22	KBX1	KBX2	KBR14	KBR4	KBD4	KBXGL1
4b	K733	K734	KBS11	KBS22	KBX1	KBX2	KBR15	KBR5	KBD5	KBXGL1
5b	K733	K734	KBS11	KBS22	KBX1	KBX2	KBR16	KBR6	KBD6	KBXGL1
6b	K734	K735	KBS22	KBS33	KBX2	KBX3	KBR21	KBR11	KBD11	KBXGL2
7b	K734	K735	KBS22	KBS33	KBX2	KBX3	KBR21	KBR12	KBD12	KBXGL2

Table 10-43

Subtest	K	K<c>	K<x>S<n>	K<y>S<n>	K<x>X<n>	K<y>X<n>	K<x>R<n>	K<y>R<n>	K<x>D<n>	K<x>XGL<n>
8b	K734	K735	KBS22	KBS33	KBX2	KBX3	KBR23	KBR13	KBD13	KBXGL2
9b	K734	K735	KBS22	KBS33	KBX2	KBX3	KBR24	KBR14	KBD14	KBXGL2
10b	K734	K735	KBS22	KBS33	KBX2	KBX3	KBR25	KBR15	KBD15	KBXGL2
11b	K734	K735	KBS22	KBS33	KBX2	KBX3	KBR26	KBR16	KBD16	KBXGL2
12b	K735	K736	KBS33	KBS44	KBX3	KBX4	KBR31	KBR21	KBD21	KBXGL3
13b	K735	K736	KBS33	KBS44	KBX3	KBX4	KBR32	KBR22	KBD22	KBXGL3
14b	K735	K736	KBS33	KBS44	KBX3	KBX4	KBR33	KBR23	KBD23	KBXGL3
15b	K735	K736	KBS33	KBS44	KBX3	KBX4	KBR34	KBR24	KBD24	KBXGL3
16b	K735	K736	KBS33	KBS44	KBX3	KBX4	KBR35	KBR25	KBD25	KBXGL3
17b	K735	K736	KBS33	KBS44	KBX3	KBX4	KBR36	KBR26	KBD26	KBXGL3
18b	K736	K737	KBS44	KBS55	KBX4	KBX5	KBR41	KBR31	KBD31	KBXGL4
19b	K736	K737	KBS44	KBS55	KBX4	KBX5	KBR42	KBR32	KBD32	KBXGL4
20b	K736	K737	KBS44	KBS55	KBX4	KBX5	KBR43	KBR33	KBD33	KBXGL4
21b	K736	K737	KBS44	KBS55	KBX4	KBX5	KBR44	KBR34	KBD34	KBXGL4
22b	K736	K737	KBS44	KBS55	KBX4	KBX5	KBR45	KBR35	KBD35	KBXGL4
23b	K736	K737	KBS44	KBS55	KBX4	KBX5	KBR46	KBR36	KBD36	KBXGL4
24b	K737	K738	KBS55	KBS66	KBX5	KBX6	KBR51	KBR41	KBD41	KBXGL5
25b	K737	K738	KBS55	KBS66	KBX5	KBX6	KBR52	KBR42	KBD42	KBXGL5
26b	K737	K738	KBS55	KBS66	KBX5	KBX6	KBR53	KBR43	KBD43	KBXGL5
27b	K737	K738	KBS55	KBS66	KBX5	KBX6	KBR54	KBR44	KBD44	KBXGL5
28b	K737	K738	KBS55	KBS66	KBX5	KBX6	KBR55	KBR45	KBD45	KBXGL5
29b	K737	K738	KBS55	KBS66	KBX5	KBX6	KBR56	KBR46	KBD46	KBXGL5
30b	K738	K739	KBS66	KBS77	KBX6	KBX7	KBR61	KBR51	KBD51	KBXGL6
31b	K738	K739	KBS66	KBS77	KBX6	KBX7	KBR62	KBR52	KBD52	KBXGL6
32b	K738	K739	KBS66	KBS77	KBX6	KBX7	KBR63	KBR53	KBD53	KBXGL6
33b	K738	K739	KBS66	KBS77	KBX6	KBX7	KBR64	KBR54	KBD54	KBXGL6
34b	K738	K739	KBS66	KBS77	KBX6	KBX7	KBR65	KBR55	KBD55	KBXGL6
35b	K738	K739	KBS66	KBS77	KBX6	KBX7	KBR66	KBR56	KBD56	KBXGL6
36b	K739	K740	KBS77	KBS88	KBX7	KBX8	KBR71	KBR61	KBD61	KBXGL7
37b	K739	K740	KBS77	KBS88	KBX7	KBX8	KBR72	KBR62	KBD62	KBXGL7

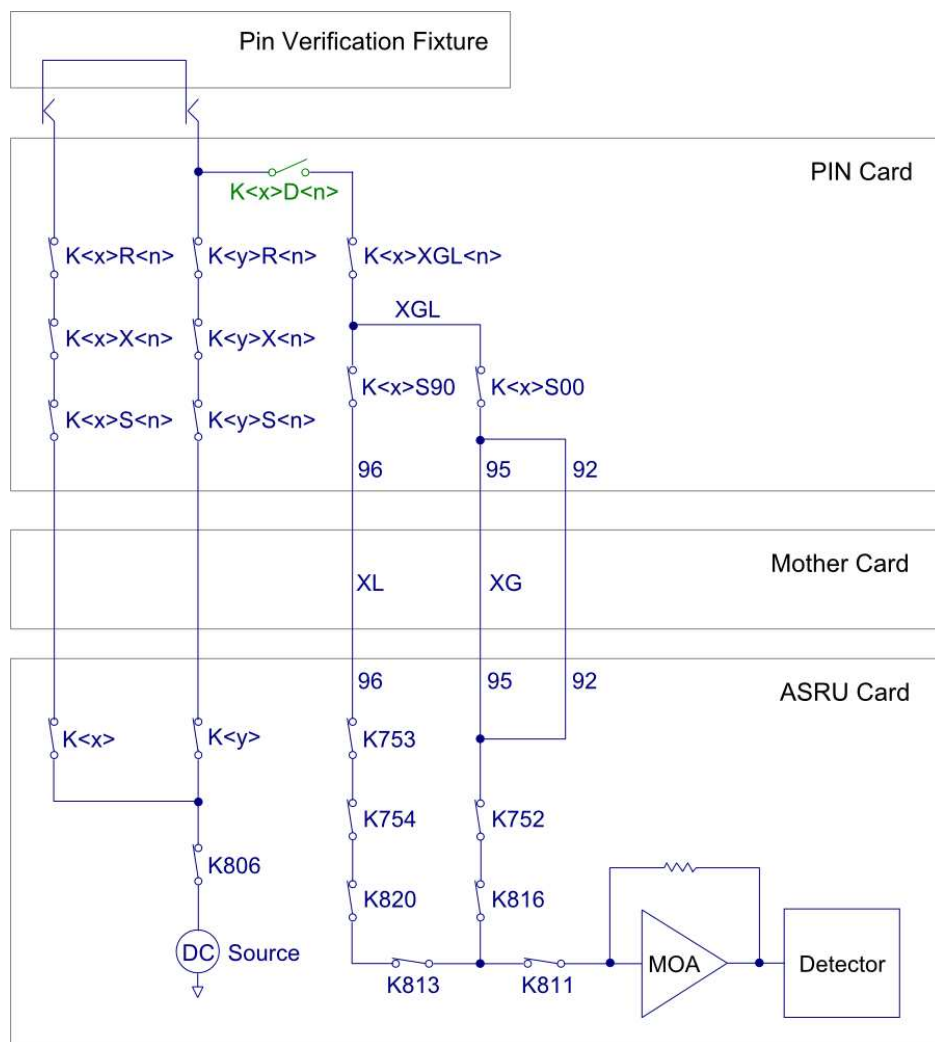
Table 10-43

Subtest	K	K<c>	K<x>S<n>	K<y>S<n>	K<x>X<n>	K<y>X<n>	K<x>R<n>	K<y>R<n>	K<x>D<n>	K<x>XGL<n>
38b	K739	K740	KBS77	KBS88	KBX7	KBX8	KBR73	KBR63	KBD63	KBXGL7
39b	K739	K740	KBS77	KBS88	KBX7	KBX8	KBR74	KBR64	KBD64	KBXGL7
40b	K739	K740	KBS77	KBS88	KBX7	KBX8	KBR75	KBR65	KBD65	KBXGL7
41b	K739	K740	KBS77	KBS88	KBX7	KBX8	KBR76	KBR66	KBD66	KBXGL7
42b	K740	K733	KBS88	KBS11	KBX8	KBX1	KBR1	KBR71	KBD71	KBXGL8
43b	K740	K733	KBS88	KBS11	KBX8	KBX1	KBR2	KBR72	KBD72	KBXGL8
44b	K740	K733	KBS88	KBS11	KBX8	KBX1	KBR3	KBR73	KBD73	KBXGL8
45b	K740	K733	KBS88	KBS11	KBX8	KBX1	KBR4	KBR74	KBD74	KBXGL8
46b	K740	K733	KBS88	KBS11	KBX8	KBX1	KBR5	KBR75	KBD75	KBXGL8
47b	K740	K733	KBS88	KBS11	KBX8	KBX1	KBR6	KBR76	KBD76	KBXGL8
48b	K733	K734	KBS11	KBS22	KBX1	KBX2	KBR17	KBR7	KBD7	KBXGL1
49b	K733	K734	KBS11	KBS22	KBX1	KBX2	KBR18	KBR8	KBD8	KBXGL1
50b	K733	K734	KBS11	KBS22	KBX1	KBX2	KBR19	KBR9	KBD9	KBXGL1
51b	K734	K735	KBS22	KBS33	KBX2	KBX3	KBR27	KBR17	KBD17	KBXGL2
52b	K734	K735	KBS22	KBS33	KBX2	KBX3	KBR28	KBR18	KBD18	KBXGL2
53b	K734	K735	KBS22	KBS33	KBX2	KBX3	KBR29	KBR19	KBD19	KBXGL2
54b	K735	K736	KBS33	KBS44	KBX3	KBX4	KBR37	KBR27	KBD27	KBXGL3
55b	K735	K736	KBS33	KBS44	KBX3	KBX4	KBR38	KBR28	KBD28	KBXGL3
56b	K735	K736	KBS33	KBS44	KBX3	KBX4	KBR39	KBR29	KBD29	KBXGL3
57b	K736	K737	KBS44	KBS55	KBX4	KBX5	KBR47	KBR37	KBD37	KBXGL4
58b	K736	K737	KBS44	KBS55	KBX4	KBX5	KBR48	KBR38	KBD38	KBXGL4
59b	K736	K737	KBS44	KBS55	KBX4	KBX5	KBR49	KBR39	KBD39	KBXGL4
60b	K737	K738	KBS55	KBS66	KBX5	KBX6	KBR57	KBR47	KBD47	KBXGL5
61b	K737	K738	KBS55	KBS66	KBX5	KBX6	KBR58	KBR48	KBD48	KBXGL5
62b	K737	K738	KBS55	KBS66	KBX5	KBX6	KBR59	KBR49	KBD49	KBXGL5
63b	K738	K739	KBS66	KBS77	KBX6	KBX7	KBR67	KBR57	KBD57	KBXGL6
64b	K738	K739	KBS66	KBS77	KBX6	KBX7	KBR68	KBR58	KBD58	KBXGL6
65b	K738	K739	KBS66	KBS77	KBX6	KBX7	KBR69	KBR59	KBD59	KBXGL6
66b	K739	K740	KBS77	KBS88	KBX7	KBX8	KBR77	KBR67	KBD67	KBXGL7
67b	K739	K740	KBS77	KBS88	KBX7	KBX8	KBR78	KBR68	KBD68	KBXGL7

Table 10-43

Subtest	K	K<c>	K<x>S<n>	K<y>S<n>	K<x>X<n>	K<y>X<n>	K<x>R<n>	K<y>R<n>	K<x>D<n>	K<x>XGL<n>
68b	K739	K740	KBS77	KBS88	KBX7	KBX8	KBR79	KBR69	KBD69	KBXGL7
69b	K740	K733	KBS88	KBS11	KBX8	KBX1	KBR7	KBR77	KBD77	KBXGL8
70b	K740	K733	KBS88	KBS11	KBX8	KBX1	KBR8	KBR78	KBD78	KBXGL8
71b	K740	K733	KBS88	KBS11	KBX8	KBX1	KBR9	KBR79	KBD79	KBXGL8

Figure 10-31 Test 13986



Test 13987

Test Ground Relays can be Opened

Requires: Pin Verification Fixture

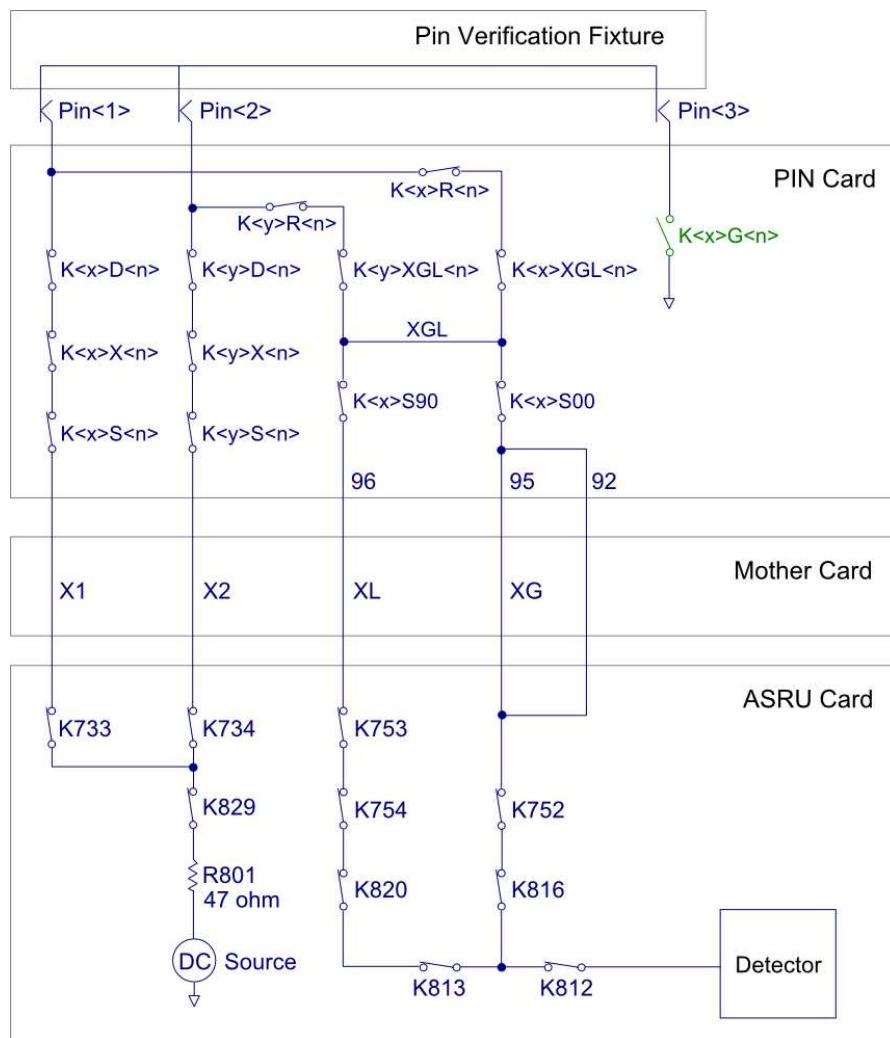
This test verifies that the K<x>G relays can be opened. A test failure is caused when the relay being tested fails to open. The relay being tested is shown in bold, by subtest, in the table below.

Figure 10-32 shows the measurement path.

Table 10-44

Subtest	K<x>D<n>	K<x>R<n>	Pin<a>	K<y>D<n>	K<y>R<n>	Pin	Pin<c>	K<x>G<n>
Page A								
0a	KAD1	KAR1	1a	KAD11	KAR11	2a	19a	KAG19
1a	KAD2	KAR2	3a	KAD12	KAR12	4a	20a	KAG20
2a	KAD3	KAR3	5a	KAD13	KAR13	6a	39a	KAG39
3a	KAD4	KAR4	7a	KAD14	KAR14	8a	40a	KAG40
4a	KAD5	KAR5	9a	KAD15	KAR15	10a	59a	KAG59
5a	KAD6	KAR6	11a	KAD16	KAR16	12a	60a	KAG60
Page B								
0b	KBD1	KBR1	1b	KBD11	KBR11	2b	19b	KBG19
1b	KBD2	KBR2	3b	KBD12	KBR12	4b	20b	KBG20
2b	KBD3	KBR3	5b	KBD13	KBR13	6b	39b	KBG39
3b	KBD4	KBR4	7b	KBD14	KBR14	8b	40b	KBG40
4b	KBD5	KBR5	9b	KBD15	KBR15	10b	59b	KBG59
5b	KBD6	KBR6	11b	KBD16	KBR16	12b	60b	KBG60

Figure 10-32 Test 13987



Test 13991

Verify Fixture Interface (MINT) Pins

Requires: Pin Verification Fixture

This test verifies the fixture interface (MINT) pins. It is the only test that explicitly tests the fixture interface (MINT) pins.

Table 10-45

Subtest	Pin	Subtest	Pin	Subtest	Pin
Side A		Side A		Side A	
0a	62a	24a	14a	48a	47a
1a	64a	25a	16a	49a	49a
2a	66a	26a	18a	50a	51a
3a	68a	27a	21a	51a	53a
4a	70a	28a	23a	52a	55a
5a	72a	29a	25a	53a	57a
6a	74a	30a	27a	54a	42a
7a	76a	31a	29a	55a	44a
8a	78a	32a	31a	56a	46a
9a	1a	33a	33a	57a	48a
10a	3a	34a	35a	58a	50a
11a	5a	35a	37a	59a	52a
12a	7a	36a	22a	60a	54a
13a	9a	37a	24a	61a	56a
14a	11a	38a	26a	62a	58a
15a	13a	39a	28a	63a	61a
16a	15a	40a	30a	64a	63a
17a	17a	41a	32a	65a	65a
18a	2a	42a	34a	66a	67a
19a	4a	43a	36a	67a	69a
20a	6a	44a	38a	68a	71a
21a	8a	45a	41a	69a	73a
22a	10a	46a	43a	70a	75a
23a	12a	47a	45a	71a	77 a

Table 10-45

Subtest	Pin	Subtest	Pin	Subtest	Pin
Side B		Side B		Side B	
0b	62b	24b	14b	48b	47b
1b	64b	25b	16b	49b	49b
2b	66b	26b	18b	50b	51b
3b	68b	27b	21b	51b	53b
4b	70b	28b	23b	52b	55b
5b	72b	29b	25b	53b	57b
6b	74b	30b	27b	54b	42b
7b	76b	31b	29b	55b	44b
8b	78b	32b	31b	56b	46b
9b	1b	33b	33b	57b	48b
10b	3b	34b	35b	58b	50b
11b	5b	35b	37b	59b	52b
12b	7b	36b	22b	60b	54b
13b	9b	37b	24b	61b	56b
14b	11b	38b	26b	62b	58b
15b	13b	39b	28b	63b	61b
16b	15b	40b	30b	64b	63b
17b	17b	41b	32b	65b	65b
18b	2b	42b	34b	66b	67b
19b	4b	43b	36b	67b	69b
20b	6b	44b	38b	68b	71b
21b	8b	45b	41b	69b	73b
22b	10b	46b	43b	70b	75b
23b	12b	47b	45b	71b	77 b

Test 13992

Verify No Short Between Fixture Interface (MINT) Pins

This test verifies that there are no shorts between adjacent MINT pins. It makes a resistance measurement between adjacent pairs of pins and passes if the result is greater than 10 kohms.

It cannot detect a short between KGD (digital ground) pins, but it can detect a short between KGD and adjacent hybrid pins.

The test is run without the pin verification fixture. If a fixture is present, it is released.

NOTE

Overriding the pin verification fixture requirement on this test will cause false failures since the pin verification fixture purposely shorts MINT pins together.

An error message would resemble the following:

Test 13992, Subtest 75, Module 3, Slot 2b FAILED.

Short detected between MINT pins 77 and 78

Low Limit:	1.00000E+04
Result Received:	2.06013E+00 Ohms
High Limit:	1.00000E+30