

TRAFFIC REGISTER CIRCUITS
GROUP-BUSY FEATURES FOR ORIGINATING, INCOMING,
AND TRANSFER REGISTERS AND FOR SENDERS
TESTS
NO. 5 CROSSBAR OFFICES

1. GENERAL	PAGE
1.01 This section describes a method of testing the group-busy features of the traffic register circuits SD-25892-01, SD-25890-01, and SD-25672-01 in No. 5 crossbar offices provided with a master test frame. The testing of registers in the associated traffic register cabinet is described in the 218-232-series.	5
1.02 The tests covered are:	
A. Incoming Register Group-Busy Alarm: This test checks that a minor alarm is sounded immediately and lamp indications are provided each time all the incoming registers of the associated group are busy. This test also checks that when all incoming registers in the associated group are busy, the audible and visual alarm indications may be delayed for 7 to 15 seconds. . . .	2
B. Originating Register Load Indicating Alarm: This test checks that a minor alarm is sounded and lamp indications are provided each time a predetermined number of originating registers are found to be busy.	4
C. Transfer Register Group-Busy Alarm: This test checks that a minor alarm is sounded immediately and lamp indications are provided each time all the transfer registers of the associated group are busy. This test also checks that when all transfer registers in the associated group are busy, the audible	
and visual alarm indications may be delayed for 7 to 15 seconds. . . .	5
D. Sender Group-Busy Alarm: This test checks that a minor alarm is sounded immediately and lamp indications are provided each time all the senders in the associated group are busy. This test also checks that when all senders in the associated group are busy, the audible and visual alarm indications may be delayed 7 to 15 seconds.	8
1.03 Tests A and C require all registers to be made busy. Test D requires all senders to be made busy.	
1.04 All tests require action and verification at the jack, lamp, and key circuit, the traffic register circuit, and the switchboard.	
1.05 Lettered Steps: A letter a, b, c, etc, added to a step number in Part 3 of this section indicates an action which may or may not be required depending on local conditions. The condition under which a lettered step or a series of lettered steps should be made is given in the ACTION column, and all steps governed by the same condition are designated by the same letter within a test. Where a condition does not apply, all steps designated by that letter should be omitted.	
1.06 During these tests, the associated all register or all sender group traffic registers will score. The reporting of these register operations should be in accordance with local instructions.	

2. APPARATUS

Tests A, C, D

All Tests

2.02 KS-3008 stopwatch or equivalent.

2.01 322A (make-busy) plugs as required.

3. METHOD

STEP	ACTION	VERIFICATION
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A. Incoming Register Group-Busy Alarm

Group-Busy Alarm Delay Provided

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| 1 | At MTF—
Restore all keys; set all switches to OFF. | |
| 2 | Momentarily operate RL key. | All lamps extinguished. |
| 3 | At jack, lamp, and key circuit—
Operate RDA key. | |
| 4 | Insert make-busy plugs into all IRMB- jacks for incoming registers in incoming register group being tested. | Minor alarm sounds.
IRGB- lamp lighted.
At switchboard—
Associated LR- lamp lighted. |

Caution: Do not hold all incoming registers of a group busy longer than necessary as this may interfere with service.

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| 5 | At jack, lamp, and key circuit—
Remove make-busy plug from one IRMB- jack. | |
| 6 | Momentarily operate TR-AR key. | Minor alarm silenced.
IRGB- lamp extinguished. |

Note: If minor alarm continues to sound and IRGB- lamp is lighted, it may be caused by a service call. Wait for the incoming register to release.

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| 7 | At switchboard—
Request attendant to operate associated RL- key. | Associated LR- lamp extinguished. |
| 8 | At jack, lamp, and key circuit—
Replace make-busy plug in IRMB- jack. | Minor alarm sounds.
IRGB- lamp lighted.
At switchboard—
Associated LR- lamp lighted. |
| 9 | Repeat Steps 5 through 8 for each incoming register in group. | |

STEP	ACTION	VERIFICATION
10	At jack, lamp, and key circuit— Remove all make-busy plugs used for test.	
11	Momentarily operate TR-AR key.	Minor alarm silenced. IRGB- lamp extinguished.
12	At switchboard— Request attendant to operate associated RL- key.	Associated LR- lamp extinguished.
13	At jack, lamp, and key circuit— Restore RDA key.	
14a	If SD-25890-01 or SD-25762-01 is provided— At traffic register circuit— Manually hold D relay, associated with register being tested, operated; <i>start timing</i> .	In 7 to 15 seconds— Minor alarm sounds. At jack, lamp, and key circuit— IRGB- lamp lighted.
15a	At traffic register circuit— When minor alarm sounds— Release D relay.	
16b	If SD-25892-01 is provided— At traffic register circuit— Manually hold GB relay, associated with register being tested, operated; <i>start timing</i> .	In 7 to 15 seconds— Minor alarm sounds. At jack, lamp, and key circuit— IRGB- lamp lighted.
17b	At traffic register circuit— When minor alarm sounds— Release GB relay.	
18	At jack, lamp, and key circuit— Momentarily operate TR-AR key.	Minor alarm silenced. IRGB- lamp extinguished.
19	At switchboard— Request attendant to observe associated LR- lamp.	Associated LR- lamp lighted.
20	Request attendant to momentarily operate associated RL- key.	Associated LR- lamp extinguished.

Group-Busy Alarm Delay Not Provided

21	At MTF— Restore all keys; set all switches to OFF.	
22	Momentarily operate RL key.	All lamps extinguished.
23	At jack, lamp, and key circuit— Insert make-busy plugs into all IRMB- jacks for incoming registers in incoming register group being tested.	Minor alarm sounds. IRGB- lamp lighted. At switchboard— Associated LR- lamp lighted.

STEP	ACTION	VERIFICATION
	<i>Caution: Do not hold all incoming registers of a group busy longer than necessary as this may interfere with service.</i>	
24	At jack, lamp, and key circuit— Remove make-busy plug from one IRMB- jack.	
25	Momentarily operate TR-AR key.	Minor alarm silenced. IRGB- lamp extinguished.
	<i>Note: If minor alarm continues to sound and IRGB- lamp is lighted, it may be caused by a service call. Wait for the incoming register to release.</i>	
26	At switchboard— Request attendant to operate associated RL- key.	Associated LR- lamp extinguished.
27	At jack, lamp, and key circuit— Replace make-busy plug in IRMB- jack.	Minor alarm sounds— IRGB- lamp lighted. At switchboard— Associated LR- lamp lighted.
28	Repeat Steps 24 through 27 for each incoming register in group.	
29	At jack, lamp, and key circuit— Remove all make-busy plugs used for test.	
30	Momentarily operate TR-AR key.	Minor alarm silenced. IRGB- lamp extinguished.
31	At switchboard— Request attendant to operate associated RL- key.	Associated LR- lamp extinguished.
B. Originating Register Load Indicating Alarm		
1	At MTF— Restore all keys; set all switches to OFF.	
2	Momentarily operate RL key.	All lamps extinguished.
3	Determine from office records minimum number of originating registers required to be busy to operate load indicating alarms.	
4	At jack, lamp, and key circuit— Insert make-busy plugs into ORMB- jacks to make busy required number of originating registers as determined in Step 3.	Minor alarm sounds. DP-ORB lamp lighted. At switchboard— Associated LR- lamp lighted.

STEP	ACTION	VERIFICATION
5	At jack, lamp, and key circuit— Remove make-busy plug from one ORMB- jack.	
6	Momentarily operate TR-AR key. <i>Note:</i> If minor alarm continues to sound and DP-ORB lamp is lighted, it may be caused by a service call in one of the originating registers not made busy. Wait for the originating register to release.	Minor alarm silenced. DP-ORB lamp extinguished.
7	At switchboard— Request attendant to operate the associated RL- key.	Associated LR- lamp extinguished.
8	At jack, lamp, and key circuit— Remove all make-busy plugs used for test.	

C. Transfer Register Group-Busy Alarm

Group-Busy Alarm Delay Provided

1	At MTF— Restore all keys; set all switches to OFF.	
2	Momentarily operated RL key.	All lamps extinguished.
3	At jack, lamp, and key circuit— Operate RDA key.	
4	Insert make-busy plugs into all TFRMB- jacks for transfer registers in transfer register group being tested.	Minor alarm sounds. TRGB- lamp lighted. At switchboard— Associated LR- lamp lighted.
<i>Caution: Do not hold all transfer registers of a group busy longer than necessary as this may interfere with service.</i>		
5	At jack, lamp, and key circuit— Remove make-busy plug from one TFRMB- jack.	
6	Momentarily operate TR-AR key.	Minor alarm silenced. TRGB- lamp extinguished.

Note: If minor alarm continues to sound and TRGB- lamp is lighted, it may be caused by a service call. Wait for the transfer register to release.

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STEP	ACTION	VERIFICATION
7	At switchboard— Request attendant to operate associated RL-key.	Associated LR- lamp extinguished.
8	At jack, lamp, and key circuit— Replace make-busy plug in TFRMB- jack.	Minor alarm sounds. TRGB- lamp lighted. At switchboard— Associated LR- lamp lighted.
9	Repeat Steps 5 through 8 for each transfer register in the group.	
10	At jack, lamp, and key circuit— Remove all make-busy plugs used for test.	
11	Momentarily operate TR-AR key.	Minor alarm silenced. TRGB- lamp extinguished.
12	At switchboard— Request attendant to operate associated RL-key.	Associated LR- lamp extinguished.
13	At jack, lamp, and key circuit— Restore RDA key.	
14a	If SD-25890-01 or SD-25672-01 is provided— At traffic register circuit— Manually hold D relay, associated with register being tested, operated; <i>start timing</i> .	In 7 to 15 seconds— Minor alarm sounds. At jack, lamp, and key circuit— TRGB- lamp lighted.
15a	At traffic register circuit— When minor alarm sounds— Release D relay.	
16b	IF SD-25892-01 is provided— At traffic register circuit— Manually hold GB relay, associated with register being tested, operated; <i>start timing</i> .	In 7 to 15 seconds— Minor alarm sounds. At jack, lamp, and key circuit— TRGB- lamp lighted.
17b	At traffic register circuit— When minor alarm sounds— Release GB relay.	
18	At jack, lamp, and key circuit— Momentarily operate TR-AR key.	Minor alarm silenced. TRGB- lamp extinguished.
19	At switchboard— Request attendant to observe associated LR-lamp.	Associated LR- lamp lighted.
20	Request attendant to momentarily operate associated RL- key.	Associated LR- lamp extinguished.

STEP	ACTION	VERIFICATION
Group-Busy Alarm Delay Not Provided		
21	At MTF— Restore all keys; set all switches to OFF.	
22	Momentarily operate RL key.	All lamps extinguished.
23	At jack, lamp, and key circuit— Insert make-busy plugs into all TFRMB- jacks for transfer registers in transfer register busy group being tested.	Minor alarm sounds. TRGB- lamp lighted. At switchboard— Associated LR- lamp lighted.
Caution: Do not hold all transfer registers of a group busy longer than necessary as this may interfere with service.		
24	At jack, lamp, and key circuit— Remove make-busy plug from one TFRMB- jack.	
25	Momentarily operate TR-AR key.	Minor alarm silenced. TRGB- lamp extinguished.
Note: If minor alarm continues to sound and TRGB- lamp is lighted, it may be caused by a service call. Wait for the transfer register to release.		
26	At switchboard— Request attendant to operate associated RL- key.	Associated LR- lamp extinguished.
27	At jack, lamp, and key circuit— Replace make-busy plug in TFRMB- jack.	Minor alarm sounds. TRGB- lamp lighted. At switchboard— Associated LR- lamp lighted.
28	Repeat Steps 24 through 27 for each transfer register in group.	
29	At jack, lamp and key circuit— Remove all make-busy plugs used for test.	
30	Momentarily operate TR-AR key.	Minor alarm silenced. TRGB- lamp extinguished.
31	At switchboard— Request attendant to operate associated RL- key.	Associated LR- lamp extinguished.

STEP	ACTION	VERIFICATION
D. Sender Group-Busy Alarm		
Group-Busy Alarm Delay Provided		
1	At MTF— Restore all keys; set all switches to OFF.	
2	Momentarily operate RL key.	All lamps extinguished.
3	At jack, lamp, and key circuit— Operate SDA key.	
4	Insert make-busy plugs into all SMB- jacks for senders in sender group being tested.	Minor alarm sounds. SGB- lamp lighted. At switchboard— Associated LR- lamp lighted.
<i>Caution: Do not hold all senders of a group busy longer than necessary as this may interfere with service.</i>		
5	At jack, lamp, and key circuit— Remove make-busy plug from one SMB- jack.	
6	Momentarily operate TR-AR key.	Minor alarm silenced. SMB- lamp extinguished.
<i>Note: If minor alarm continues to sound and SMB- lamp is lighted, it may be caused by a service call. Wait for sender to release.</i>		
7	At switchboard— Request attendant to operate associated RL- key.	Associated LR- lamp extinguished.
8	At jack, lamp, and key circuit— Replace make-busy plug in SMB- jack.	Minor alarm sounds. SMB- lamp lighted. At switchboard— Associated LR- lamp lighted.
9	Repeat Steps 5 through 8 for each sender in group.	
10	At jack, lamp, and key circuit— Remove all make-busy plugs used for test.	
11	Momentarily operate TR-AR key.	Minor alarm silenced. SMB- lamp extinguished.
12	At switchboard— Request attendant to operate associated RL- key.	Associated LR- lamp extinguished.

STEP	ACTION	VERIFICATION
13	At jack, lamp, and key circuit— Restore SDA key.	
14a	If SD-25890-01 or SD-25672-01 is provided— At traffic register circuit— Manually hold D relay, associated with sender group under test, operated; <i>start timing</i> .	In 7 to 15 seconds— Minor alarm sounds. At jack, lamp, and key circuit— SGB- lamp lighted.
15a	At traffic register circuit— When minor alarm sounds— Release D relay.	
16b	If SD-25892-01 is provided— At traffic register circuit— Manually hold GB relay, associated with sender group being tested, operated; <i>start timing</i> .	In 7 to 15 seconds— Minor alarm sounds. At jack, lamp, and key circuit— SGB- lamp lighted. At switchboard— Associated LR- lamp lighted.
17b	At traffic register circuit— When minor alarm sounds— Release GB relay.	
18	At jack, lamp, and key circuit— Momentarily operate TR-AR key.	Minor alarm silenced. SGB- lamp extinguished.
19	At switchboard— Request attendant to operate associated RL- key.	Associated LR- lamp extinguished.

Group-Busy Alarm Delay Not Provided

20	At MTF— Restore all keys; set all switches to OFF.	
21	Momentarily operate RL key.	All lamps extinguished.
22	At jack, lamp, and key circuit— Insert make-busy plugs into all SMB- jacks for senders in sender group being tested.	Minor alarm sounds. SGB- lamp lighted. At switchboard— Associated LR- lamp lighted.

Caution: *Do not hold all senders of a group busy longer than necessary as this may interfere with service.*

23	At jack, lamp, and key circuit— Remove make-busy plug from one SMB- jack.	
24	Momentarily operate TR-AR key.	Minor alarm silenced. SGB- lamp extinguished.

STEP	ACTION	VERIFICATION
	<i>Note:</i> If minor alarm continues to sound and SGB- lamp is lighted, it may be caused by a service call. Wait for the sender to release.	
25	At switchboard— Request attendant to operate associated RL-key.	Associated LR- lamp extinguished.
26	At jack, lamp, and key circuit— Replace make-busy plug in SMB- jack.	Minor alarm sounds. SGB- lamp lighted. At switchboard— Associated LR- lamp lighted.
27	Repeat Steps 23 through 26 for each sender in group.	
28	At jack, lamp, and key circuit— Remove all make-busy plugs used for test.	
29	Momentarily operate TR-AR key.	Minor alarm silenced. SGB- lamp extinguished.
30	At switchboard— Request attendant to operate associated RL-key.	Associated LR- lamp extinguished.