

## OFFICE LINK FRAME TAKING EQUIPMENT OUT OF SERVICE NO. 1 CROSSBAR OFFICES

### 1. GENERAL

1.01 This section covers the methods to be followed in taking an office link and connector frame and individual pieces of apparatus out of service.

1.02 This section is reissued to cover office extension frames, to include information regarding office junctors, to revise the methods of taking an office link out of service, and to revise and amplify the precautions when working on TR-, CH and MB relays and primary switches.

1.03 Part 3 of this section covers the method of taking equipment out of service and part 4 covers the general precautions to be followed when working on the apparatus.

### 2. APPARATUS

2.01 No. 275A or No. 322A (make busy) plugs.

2.02 No. 298A (make busy) plugs.

2.03 No. 508A (relay blocking) tools.

2.04 No. 325C (vertical unit make busy) plugs (or the replaced D-99544 or No. 321C plugs where they can be used).

2.05 No. 558A (armature blocking) tools (or the replaced D-99604 or No. 542A tools where they can be used).

### 3. METHOD OF TAKING EQUIPMENT OUT OF SERVICE

#### Office Link Frame

3.01 Make busy the office link frame by inserting a No. 298A plug into the associated OMB jack.

#### Primary Switch

3.02 Insert a No. 298A plug into the associated PMB jack. This grounds two LS leads to the marker which prevents any connection through this switch.

#### Secondary Switch

3.03 Insert a No. 298A plug into the associated SMB jack. This grounds two S1 leads to the marker which prevents any connection through this switch.

### Office Junctors

3.04 Office junctors may be taken out of service at the district or trunk link frame or at the office link frame. If the junctor is to be taken out of service at the district or trunk link frame follow procedure 3.05. If the junctor is to be taken out of service at the office link frame, proceed as outlined in 3.06. If work is to be performed at the district or trunk link end or at the office link end, proceed as outlined in 4.05.

3.05 When making an office junctor busy at the district or trunk link end

(a) Insert a No. 298A plug into the MB jack of the trunk or district link secondary switch on which the office junctor appears. Block non-operated the office primary switch hold magnet with the No. 558A armature blocking tool.

(b) Make sure that the hold magnet is not operated on a call and then insert the No. 325C plug into the district or trunk link vertical unit jack associated with the office junctor.

(c) Remove the make busy plug from the district or trunk link secondary switch.

3.06 When making busy an office junctor at the office end

(a) Make busy in accordance with 3.02 the office primary switch on which the office junctor is located.

(b) Block the secondary hold magnet on the associated district link or trunk link non-operated with the No. 558A armature blocking tool.

(c) Make sure that the hold magnet is not operated on a call and then insert the No. 325C plug into the vertical unit jack of the office primary switch associated with the office junctor.

(d) Remove the make busy plug from the primary switch.

### Office Link

3.07 Make busy in accordance with 3.03 the secondary switch on which the office link to be removed from service is located and also the associated secondary switch on the extension frame where provided.

3.08 Make sure that the hold magnet is not operated on a call and then insert a No. 325C plug into the vertical unit jack of the office secondary switch associated with the office link.

3.09 Remove the make busy plugs from the SMB jacks.

Marker Connector MCA and MCB Relays

3.10 Make busy the associated marker in the approved manner. If the contacts of the relay are crossed, insulate the associated lead in the marker. If the contacts of the relay are falsely grounded, make busy the office link frame in accordance with 3.01.

Link Connector LC Relay

3.11 Make busy the associated secondary switch and the secondary switch on the extension frame where provided in accordance with 3.03. If the contacts of the relay are crossed or grounded, make busy the office link frame in accordance with 3.01.

TL, TR and SS Relays

3.12 Make busy the office link frame in accordance with 3.01.

MP Relays on Even Numbered Frame

3.13 The MP relays of the even numbered office link frame are out of service if the TR relays of the associated pair of office link frames are operated.

3.14 The operation of the MTR (marker transfer) key will cause the TR relays to operate. Before operating an MTR key consult local records to determine whether the circuit has been transferred because of trouble conditions or routine. If the TR relays are not operated, momentarily operate the MTR key on either the odd or even numbered office link frame. This will cause the TR relays to operate. To silence the alarm operate the SA (silence alarm) key on the even numbered office link frame.

MP Relays on Odd Numbered Frame

3.15 The MP relays of the odd numbered office link frame are out of service if the TR relays of the associated pair of office link frames are unoperated. If the TR relays are operated, momentarily operate the MTR key on the odd office link frame. This will cause the TR relays to release. To silence the alarm restore the SA key on the even numbered office link frame.

TR1 Relay on Odd Numbered Office Link Frame

3.16 Make busy the associated marker in the approved manner.

TR1 Relay on Even Numbered Office Link Frame

3.17 If the TR1 relay is operated, block it operated, if unoperated, block it unoperated. If necessary, block all TR relays in the same position as the TR1 relay is blocked. If the trouble necessitates the removal from service of the associated marker, remove it in the approved manner.

Note: When the TR1 relay on the even numbered office link frame is blocked operated or unoperated, the link and connector alarm and its associated lamps are out of service. Therefore prompt action is necessary in restoring this relay to service in order to reduce to a minimum the elapsed time that the connector alarm is out of service.

CH and TR2 Relays

3.18 If the TR1 relay on the even numbered office link frame is operated, block it operated, if unoperated, block it unoperated. See the note under 3.17.

TR3 and TR4 Relays

3.19 Make busy the associated markers in the approved manner.

MB Relay

3.20 Make busy the office link frame as covered in 3.01. Note that the MB relay operates. If it does not, block the relay operated with the No. 508A relay blocking tool. Check for ground on the MB lead at the MCA relay terminal strip on the office frame paired with the office frame in trouble.

Caution: Do not take both office frames of an associated pair out of service at one time.

Outgoing Trunk

3.21 Insert a No. 322A plug into the associated MB jack at the outgoing trunk test frame jack bay.

4. GENERAL PRECAUTIONS WHEN WORKING ON THE APPARATUS

Office Link Frame

4.01 Make busy the office link frame in accordance with 3.01 and allow sufficient time for any marker which may be connected to the frame to complete its operation.

Primary Switch

4.02 Make busy the primary switch in accordance with 3.02.

4.03 When checking requirements of primary switch hold magnets block unoperated the associated office secondary switch hold magnets using the No. 558A armature blocking tools. Also block unoperated the secondary switch hold magnets of the associated junctors on the district link or trunk link frames.

#### Secondary Switch

4.04 Make busy the secondary switch and where provided, the associated secondary switch on the extension frame in accordance with 3.03. If the trunks connected to this switch also appear on another frame, make busy the outgoing trunks which would be affected by the work to be performed on the secondary switch in accordance with 3.21.

#### Office Junctors

4.05 Proceed as outlined in 3.05 (a) if work is to be performed at the district link or trunk link end. If work is to be performed at the office link end, proceed as outlined in 4.02 and 4.03.

#### Office Link

4.06 Proceed as outlined in 4.02 and 4.03 or 4.04 according to whether or not the work to be performed on the office link is on the primary or secondary end of the link.

#### Marker Connector MCA and MCB Relays

4.07 Make busy the associated originating marker in the approved manner.

4.08 Proceed as outlined in 4.01.

#### LC, TL, TR and SS Relays

4.09 Proceed as outlined in 4.01.

#### Marker Preference MP Relays

4.10 To perform work on the even numbered office link frame MP relays transfer the circuit to the odd numbered office link frame MP relays in accordance with 3.13 and 3.14.

4.11 To perform work on the odd numbered office link frame MP relays remove them from service in accordance with 3.15.

#### TR1 Relay on Odd Numbered Office Link Frame

4.12 Make busy the associated marker.

4.13 If the connections on the winding are to be opened, then block all other TR relays on the associated pair of office link frames operated if they are operated, or unoperated if they are unoperated.

4.14 To determine whether the TR1 relay is within its electrical requirements, block all TR relays unoperated except the TR1 relay on the odd numbered frame if they

were unoperated. If the TR relays were operated, proceed as outlined in 3.15 to release the TR relays and then block them unoperated.

#### TR1 Relay on Even Numbered Office Link Frame

4.15 Make busy the associated marker.

4.16 If the TR relays on the associated pair of office link frames are operated, block all the TR relays operated, if the TR relays are unoperated, block all the TR relays unoperated.

#### CH and TR2 Relays

4.17 If connections to the winding of a CH relay or the TR2 relay are to be opened or current flow tests are to be made on a CH relay, block the TR1 relay operated on the even numbered office link frame if it is operated or unoperated if it is unoperated.

4.18 To check the TR2 relay for its electrical requirements, proceed as outlined in 3.15 and 4.14.

Note: While working on the TR2 relay, the connector alarm and its associated lamps may operate momentarily.

#### TR3 and TR4 Relays

4.19 Make busy the associated markers in the approved manner. To check the electrical requirements for the TR3 or TR4 relay, proceed in accordance with 3.15 and 4.14.

4.20 If the connections on the winding of the TR3 or TR4 relay are to be opened, proceed in accordance with 4.13.

#### MB Relay

4.21 Make busy the office link frame in accordance with 3.20.

4.22 If the relay is to be replaced, proceed as follows. Ground the MB lead on the MCA relay terminal strip on the mate office link frame.

4.23 Replace the MB relay. Perform all the necessary work on the replaced MB relay and remove the ground from the MCA terminal strip.

#### Outgoing Trunk

4.24 Check in the approved manner at the outgoing trunk test frame that the trunk is not busy in service. Make busy the outgoing trunk in accordance with 3.21.

### 5. REPORTS

5.01 Any required record of the equipment removed from service should be entered on the proper form.