

## TAKING EQUIPMENT OUT OF SERVICE

### DISTRICT JUNCTOR FRAME

### NO. 1 CROSSBAR OFFICES

#### 1. GENERAL

1.01 This section covers the method to be followed in taking a district junctor frame, a group of district junctors or an individual district junctor out of service in No. 1 crossbar offices. Part 3 of this section covers the method of taking a district junctor frame, a district junctor unit or a district junctor circuit out of service and the individual pieces of apparatus associated with this circuit out of service. Part 4 covers the precautions to be followed when working on the apparatus associated with a district junctor circuit.

1.02 This section is reissued to include district junctors arranged for AMA, district junctors for use with step-by-step, dialing district junctors associated with switchboard Nos. 13C, 13D, 15C or 15D and special district junctors SD-25323-01 and SD-25323-02. It is also reissued to cover additional precautions when working on individual pieces of apparatus. Since this reissue covers a general revision, the arrows ordinarily used to indicate changes have been omitted.

1.03 The district junctors are classified as follows in Parts 3 and 4.

#### (a) Subscriber District Junctors

- (1) District junctors arranged for non-coin lines.
- (2) District junctors for use with non-coin lines arranged initially for use with coin lines (special district junctor SD-25323-01).
- (3) District junctors arranged for coin lines.
- (4) District junctors for use with coin lines arranged for conversion to operate with non-coin lines (special district junctor SD-25323-02).

(5) District junctors for use in offices arranged for AMA.

(b) Interoffice District Junctors:  
District junctor circuit for use from step-by-step offices.

(c) Dialing District Junctors: Switchboard Nos. 13C, 13D, 15C or 15D, dialing district junctor circuit, for use with crossbar system No. 1.

(d) Key Pulsing District Junctors: District junctor circuit, DC key pulsing, from switchboard Nos. 3C, 3CL, 13C, 13D, 15C or 15D, in same building.

#### 2. APPARATUS

- 2.01 No. 258C (or No. 310) (make busy) plugs.
- 2.02 No. 349A (or the replaced No. 298A) (make busy) plugs.
- 2.03 Patching cord - No. 642 cord, 3 feet 6 inches long, equipped with 4 No. 309 plugs (3P21A cord), or No. 643 cord, 3 feet long, equipped with 4 No. 310 plugs (3P23A cord).
- 2.04 No. 4B or No. 2B signal plugs (red).
- 2.05 Testing cords - Two No. 893 cords, each 3 feet long, equipped with No. 360A tools (1W13A cord) and two KS-6278 tools.

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

##### District Junctor Frame

Associated Subscriber District Junctors and Interoffice District Junctors

3.01 At the associated subscriber sender link frame, insert No. 349A plugs into each of the MB jacks which are associated with subscriber district junctor groups to make all subscriber districts on one frame busy.

Associated Dialing District Junctors and Key Pulsing District Junctors

3.02 From Nos. 13C, 13D, 15C or 15D Switchboard: At the "A" switchboard, make busy individually each district junctor associated with the district junctor frame. To do this, await the release of the district junctor circuit, if it is engaged in service. This may be determined by making the usual busy test on an associated outgoing trunk jack using

an idle special service cord for the purpose. Then insert a patching cord into an outgoing trunk jack associated with the district junctor to be made busy. (The other end of the patching cord must be in a make busy jack).

3.03 From Nos. 3C or 3CL Switchboard: At the relay rack, make busy the outgoing trunk circuits associated with the district junctors to be removed from service, by inserting No. 258C plugs into the associated MB jacks.

District Junctor Unit (One Group of Twenty Circuits) - Associated with Subscriber District Junctors and Interoffice District Junctors

3.04 Insert a No. 349A plug into the associated MB jack on the subscriber sender link frame.

Subscriber District Junctor and Interoffice District Junctor

3.05 Insert a No. 349A plug into the associated MB jack on the district junctor frame.

Dialing District Junctor and Key Pulsing District Junctor From Nos. 13C, 13D, 15C or 15D Switchboard

3.06 At the "A" switchboard, make busy the district junctor to be removed from service. To do this await the release of the district junctor circuit, if it is engaged in service. This may be determined by making the usual busy test on an associated outgoing trunk jack, using an idle special service cord for the purpose. Then insert a patching cord into an outgoing trunk jack associated with the district junctor to be made busy. (The other end of the patching cord must be in a make busy jack).

Key Pulsing District Junctor From Nos. 3C or 3CL Switchboard

3.07 At the relay rack, make busy the outgoing trunk circuit associated with the district junctor to be removed from service by inserting a No. 258C plug into the associated MB jack.

District Junctor Relays

G or G1 Relay

3.08 Remove the ten district junctor circuits associated with the G or G1 relays in accordance with 3.05.

EB and EF, or EBR and EFR Relays

3.09 Make busy all subscriber district junctors on the frame which are associated with all the even numbered district link primary switches in accordance with 3.05.

OB and OF, or OBR and OFR Relays

3.10 Make busy all subscriber district junctors on the frame which are associated with all the odd numbered district link primary switches in accordance with 3.05.

RL Relay (Subscriber District Junctors Only) and RL1 Relay (Interoffice District Junctors Only)

3.11 Make busy the associated twenty district junctors by inserting a No. 349A plug into the proper MB jack on the sender link frame.

All Other District Junctor Relays

3.12 Associated With Subscriber District Junctors or Interoffice District Junctors: Insert a No. 349A plug into the associated MB jack on the district junctor frame.

3.13 Associated with Dialing District Junctors and Key Pulsing District Junctors From Nos. 13C, 13D, 15C or 15D Switchboard: Proceed as outlined in 3.06.

3.14 Associated with Key Pulsing District Junctors From Nos. 3C or 3CL Switchboard: At the relay rack, make busy the outgoing trunk circuit associated with the district junctor to be removed from service by inserting a No. 258C plug into the associated MB jack.

4. PRECAUTIONS TO BE FOLLOWED WHEN WORKING ON THE APPARATUS

4.01 It is desirable when working on the individual pieces of apparatus to make busy equipment as indicated below. Before doing any work await the release of all circuits which have been made busy in order to avoid interference with circuits which may be in use.

Relays Associated with Subscriber District Junctors

4.02 Observe the following precautions when working on the relays noted in 4.03 to 4.10, inclusive.

EB and EF, or EBR and EFR Relays

4.03 Make busy all subscriber district junctors on the frame, which are associated with all the even numbered district link primary switches, by inserting No. 349A plugs into the associated MB jacks on the district junctor frame.

Note: The major alarm may sound when working on these relays.

F Relay

4.04 Make busy individually each of the ten circuits in the group containing

the circuit to be worked on, by inserting No. 349A plugs into the associated MB jacks on the district junctor frame.

4.05 To prevent operating the primary switch select magnet of the district link and controller circuit associated with the F relay, insulate a contact of the F relay as outlined below.

- (1) On non-coin (non AMA) district juncctors insulate the 1OB contact.
- (2) On district juncctors for use with non-coin lines arranged initially for use with coin lines insulate the 6T contact.
- (3) On coin district juncctors insulate the 6T contact.
- (4) On district juncctors for use with coin lines arranged for conversion to operate with non-coin lines insulate the 6T contact.

#### G and G1, and RL Relays

4.06 Make busy the associated twenty subscriber district juncctors by inserting a No. 349A plug into the proper MB jack on the sender link frame.

#### OB and OF, or OBR and OFR Relays

4.07 Make busy all subscriber district juncctors on the frame, which are associated with all the odd numbered district link primary switches, by inserting No. 349A plugs into the associated MB jacks on the district junctor frame.

Note: The major alarm may sound when working on these relays.

#### TC Relay

4.08 Make busy the associated subscriber district junctor by inserting a No. 349A plug into the MB jack on the district junctor frame.

4.09 On district juncctors in offices arranged for AMA, exercise caution when adjusting the TC relay to prevent crossing the 6B and 7B springs of the TC relay, which might interfere with district junctor identification on service calls through other district junctor circuits.

#### All Other Relays Associated with Subscriber District Juncctors

4.10 Make busy the associated subscriber district junctor by inserting a No. 349A plug into the MB jack on the district junctor frame.

#### Relays Associated with Interoffice District Juncctors

4.11 Observe the following precautions when working on relays noted in 4.12 to 4.24 inclusive.

#### EB and EF Relays

4.12 Make busy all interoffice district juncctors on the frame, which are associated with all the even numbered district link primary switches, by inserting No. 349A plugs into the associated MB jacks on the district junctor frame.

Note: The major alarm may sound when working on these relays.

#### F Relay

4.13 Make busy individually each of the ten circuits in the group containing the circuit to be worked on, by inserting No. 349A plugs into the associated MB jacks on the district junctor frame.

4.14 Insulate the 4T contact of the F relay to prevent operating the associated primary switch select magnet of the district link and connector circuit.

#### OB and OF Relays

4.15 Make busy all interoffice district juncctors on the frame, which are associated with all the odd numbered district link primary switches, by inserting No. 349A plugs into the associated MB jacks on the district junctor frame.

Note: The major alarm may sound when working on these relays.

#### RL1 Relay

4.16 Make busy the associated twenty interoffice district juncctors by inserting a No. 349A plug into the proper MB jack on the sender link frame.

#### SL Relay

4.17 Make busy the associated interoffice district junctor by inserting a No. 349A plug into the MB jack on the district junctor frame.

4.18 Use a test cord and strap the 1T and 2T springs of the SL relay on the terminal side. Use a second test cord and strap the 1B and 2B springs of the SL relay on the terminal side.

4.19 If the SL relay is removed from the circuit, short circuit the leads connected to its 1T and 2T springs and also short circuit the leads connected to its 1B and 2B springs.

ST Relay

4.20 Make busy the associated interoffice district junctor by inserting a No. 349A plug into the MB jack on the district junctor frame.

4.21 Insulate the 7T contact of the ST relay to prevent false seizure of the district junctor circuit.

T1 Relay

4.22 Make busy the associated interoffice district junctor by inserting a No. 349A plug into the MB jack on the district junctor frame.

4.23 Block non-operated the ST relay to prevent false seizure of the district junctor circuit.

All Other Relays Associated with Interoffice District Junctors

4.24 Make busy the associated interoffice district junctor by inserting a No. 349A plug into the MB jack on the district junctor frame.

Relays Associated with Dialing District Junctors

4.25 Observe the following precautions when working on the relays noted in 4.26 to 4.38 inclusive.

F Relay

4.26 Make each of the ten associated districts busy at the "A" switchboard. To do this await the release of the district junctor circuit, if it is engaged in service. This may be determined by making the usual busy test on an associated outgoing trunk jack using an idle special service cord for the purpose. Then insert a patching cord into an outgoing trunk jack associated with the district junctor to be made busy. (The other end of the patching cord must be in a make busy jack).

4.27 Insulate the 4B contact of the F relay to prevent operating the associated primary switch select magnet of the district link and connector circuit.

RL Relay

4.28 Make the associated district busy at the "A" switchboard. To do this await the release of the district junctor circuit, if it is engaged in service. This may be determined by making the usual busy test on the associated outgoing trunk jack using an idle special service cord for the purpose. Then insert a patching cord into an outgoing trunk jack associated with the district junctor to be made busy. (The other end of the patching cord must be in a make busy jack).

4.29 Block operated the T relay.

SL Relay

4.30 Make the district junctor busy by inserting No. 4B or No. 2B signal plugs into each appearance of the outgoing trunk multiple jacks at the associated switchboard.

4.31 Block operated the LC relay to prevent false make busy indications or false idle trunk indications at the switchboard.

ST Relay

4.32 Make busy the district junctor circuit as outlined in 4.28.

4.33 Insulate the 7T contact of the ST relay to prevent false seizures of the district junctor circuit.

T Relay

4.34 Make busy the associated district junctor as outlined in 4.28.

4.35 Insulate the 1T contact of the SL relay.

T1 Relay

4.36 Make busy the associated district junctor as outlined in 4.28.

4.37 Block non-operated the ST relay to prevent false seizure of the district junctor circuit.

All Other Relays Associated with Dialing District Junctors

4.38 Make busy the associated district junctor as outlined in 4.28.

Relays Associated with Key Pulsing District Junctors from Nos. 13C, 13D, 15C or 15D Switchboard

4.39 Observe the following precautions when working on the relays noted in 4.40 to 4.48 inclusive.

F Relay

4.40 Make busy each of the ten associated district junctors as outlined in 4.26.

4.41 Insulate the 4B contact of the F relay to prevent operating the associated primary switch select magnet of the district link and connector circuit.

LC and SL Relays

4.42 Proceed as outlined in 4.28.

## LC1 Relay

- 4.43 Proceed as outlined in 4.28.
- 4.44 Block operated the TR relay to prevent interference when applying a current flow test to the LC1 relay.

## ST Relay

- 4.45 Proceed as outlined in 4.28.
- 4.46 Block operated the LC relay to prevent false starts of the sender link and controller circuit.

## TR Relay

- 4.47 Proceed as outlined in 4.28.
- 4.48 Insulate the 3T contact of the SL relay to prevent interference when applying a current flow test to the TR relay.

Relays Associated with Key Pulsing District Junctors from Nos. 3C or 3CL Switchboard

- 4.49 Observe the following precautions when working on the relays noted in 4.50 to 4.58 inclusive.

## F Relay

- 4.50 Make busy at the relay rack the outgoing trunks associated with the ten district junctor circuits to be removed from service by inserting No. 258C plugs into the associated MB jacks.
- 4.51 Insulate the 4B contact of the F relay to prevent operating the associated primary switch select magnet of the district link and connector circuit.

## LC and SL Relays

- 4.52 Make busy at the relay rack the outgoing trunk associated with the

district junctor circuit to be removed from service by inserting a No. 258C plug into the associated MB jack.

## LC1 Relay

- 4.53 Make busy at the relay rack the outgoing trunk associated with the district junctor circuit to be removed from service by inserting a No. 258C plug into the associated MB jack.

- 4.54 Block operated the TR relay to prevent interference when applying a current flow test to the LC1 relay.

## ST Relay

- 4.55 Make busy at the relay rack the outgoing trunk associated with the district junctor circuit to be removed from service by inserting a No. 258C plug into the associated MB jack.

- 4.56 Block operated the LC relay to prevent false starts of the sender link and controller circuit.

## TR Relay

- 4.57 Make busy at the relay rack the outgoing trunk associated with the district junctor circuit to be removed from service by inserting a No. 258C plug into the associated MB jack.

- 4.58 Insulate the 3T contact of the SL relay to prevent interference when applying a current flow test to the TR relay.

5. REPORTS

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