18B TESTBOARD LOWER UNIT
TESTING METHODS IN NOS. 1 AND 2 SWITCHBOARD OFFICES
AND NOS. 1D, 9C, 9D, 10, 11 (BRIDGED SUPERVISION) AND 12 OFFICES

CONTENTS

1. GENERAL

1.01 This section supplements Section 664-600-500 to describe the operating and testing procedures for the No. 18B toll testboard lower unit and directly associated equipment as adapted for making operational tests on ringdown and dial intertoll trunks in offices having toll switchboard Nos. 1 and 2 and switchboard Nos. 1D, 9C, 9D, 10, 11 (bridged supervision) and 12, located in the same building with the toll terminal equipment.

1.02 The No. 18B toll testboard was initially intended for use as a combined primary and secondary testboard for maintaining intertoll trunks in No. 3 type and No. 11 (sleeve supervision) type offices as covered in Section 664-600-500 of this practice.

1.03 The adaptation of the No. 18B toll testboard lower unit for testing intertoll trunks associated with the offices enumerated in Paragraph 1.01 is accomplished by providing applique circuits or auxiliary secondary cord circuits to care for the supervisory and ringing arrangements of the associated switchboards and by providing pulsing and supervisory or dialing and supervisory circuits, where required, to permit the testing of dial intertoll trunks. Primary testing procedures, covered in Section 664-600-500, for maintaining outside plant facilities, are not changed.

1.04 The circuit sketches, block diagrams and references to standard drawings given herein are for illustrative purposes only in connection with the operating and testing procedures. It is recommended that reference be made to local wiring list drawings to verify the actual circuit and testing features provided.

2. TESTING ARRANGEMENTS OF TRUNKS

2.01 Examples of typical testing jack arrangements of intertoll trunks associated with various types of switchboards with which this subsection is concerned are depicted in the following block diagrams:

Fig. 1 - Typical Primary Testing Jack Arrangement

Fig. 2 - Typical Secondary Testing Jack Arrangement - Ringdown Intertoll Trunk

Fig. 3 - Typical Secondary Testing Jack Arrangement - Dial Intertoll Trunk - 2-Wire

Fig. 4 - Typical Secondary Testing Jack Arrangement - Dial Intertoll Trunk - 4-Wire

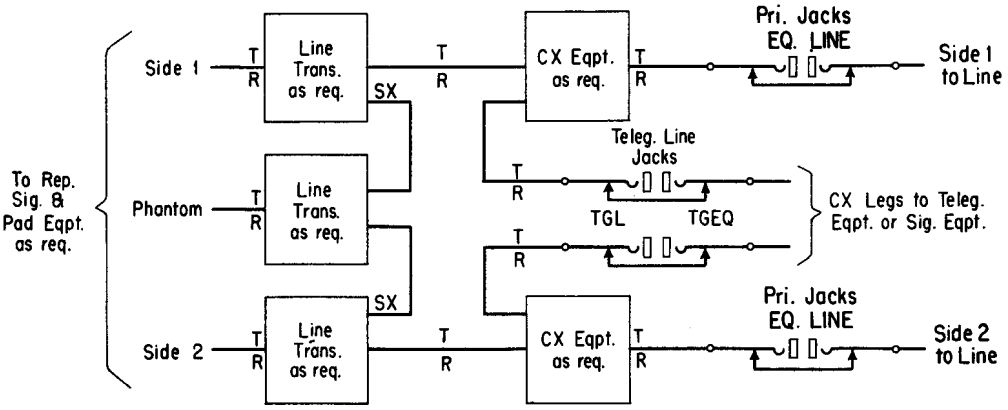


Fig. 1 - Typical Primary Testing Jack Arrangement

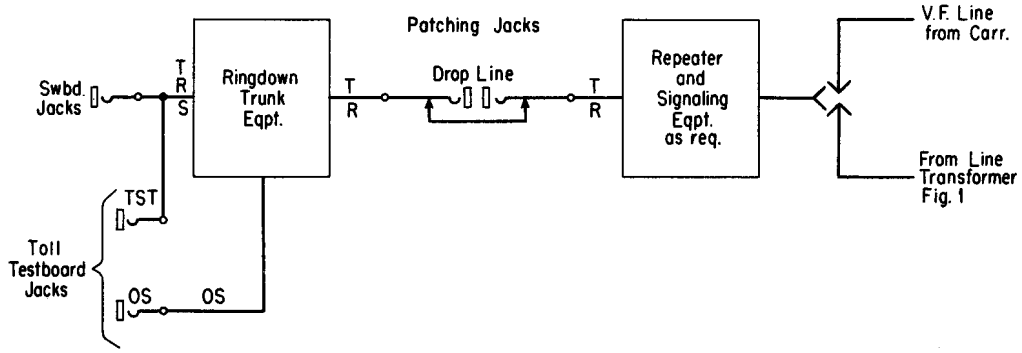


Fig. 2 - Typical Secondary Testing Jack Arrangement - Ringdown Intertoll Trunk

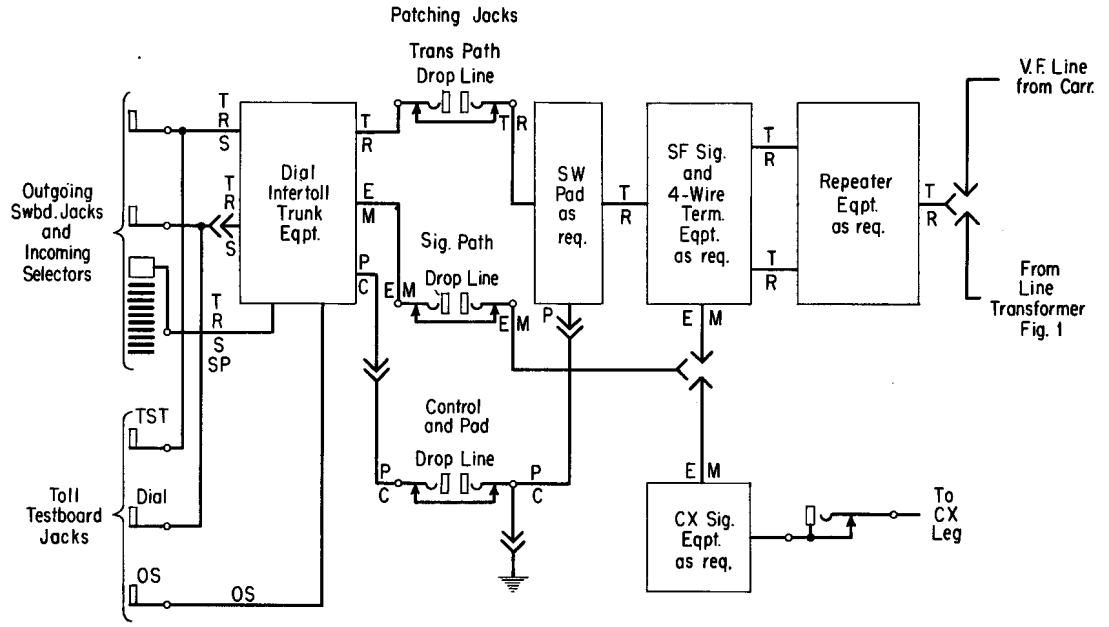


Fig. 3 - Typical Secondary Testing Jack Arrangement - Dial Intertoll Trunk - 2-Wire

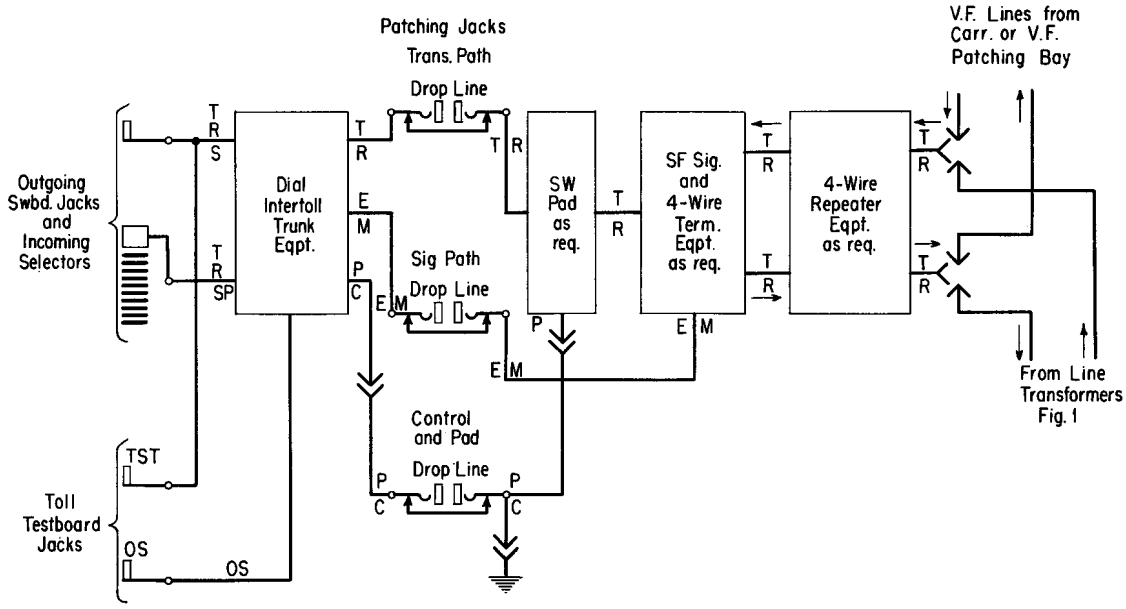


Fig. 4 - Typical Secondary Testing Jack Arrangement - Dial Intertoll Trunk - 4-Wire

3. TESTING ARRANGEMENTS IN NO. 1 TOLL SWITCHBOARD OFFICES

(A) Rear Secondary Test Cords Equipped with Applique Circuit per SD-55395-01
Refer to Figs. 5, 6 and 7

General

3.01 Some installations of the No. 18B toll testboard when associated with intertoll trunks in No. 1 toll switchboards are provided with applique circuits per SD-55395-01 in the rear secondary test cords to convert a-c supervision received over the tip and ring conductors of the rear test cords to cord lamp signals and to convert the d-c ringing functions of the cord circuits to a-c signals over the tip and ring conductors of the rear test cords. The rear test cords may be used with a dialing and supervisory circuit on dial intertoll trunks of the non-sleeve supervision type and may be used with an MF keyset and a pulsing and supervisory circuit on MF key pulsing intertoll trunks.

3.02 The front secondary test cords are not affected by the applique and may be used for connecting to local trunks, transmission measuring circuits and other miscellaneous circuits normally used with the No. 18B toll testboard. Transmission measurements made using an associated pair of test cords as connecting cords should be corrected for the loss introduced by the applique circuit.

Secondary Cord and Position Circuit Functions

3.03 The operating procedures for the various cord and position circuit functions as presented in chart form in Section 664-600-500 are, where pertinent, applicable to the modified rear secondary test cords with the following exceptions:

(a) Busy Test: Rear secondary test cords equipped with the applique circuit per SD-55395-01 can not be used for making busy tests on trunks. Busy tests can be made on dial and MF key pulsing intertoll trunks by using the Dialing and Supervisory Circuit (SD-56064-01) or the Pulsing and Supervisory Circuit (SD-55327-01).

(b) Pad Control: Transmission pads, in intertoll trunks connected to modified rear secondary test cords, will not be under control of the TALK key as is the case of unmodified test cords. The operation of the PO key (located in the upper unit jack field), will remove the transmission pad. The transmission pads in the dial or MF key pulsing intertoll trunks will be under the control of the jack ended dialing and supervisory or pulsing and supervisory circuits connecting the trunks to the rear test cords.

(c) Positional Dialing: When testing on dial intertoll trunks, the jack ended Dialing and Supervisory Circuit per SD-56064-01 is required in addition to the applique circuit provided on the rear test cords. The operating procedures for positional dialing are covered in CHART A.

(d) MF Key Pulsing: When testing on MF key pulsing intertoll trunks, the jack ended Pulsing and Supervisory Circuit per SD-55327-01 is required in addition to the applique circuit provided on the rear test cords. The operating procedures for MF key pulsing are covered in CHART B.

(e) D-C Key Pulsing: No provision is made for d-c key pulsing on intertoll trunks with the rear secondary cord applique per SD-55395-01. Where this testing feature is required, the Auxiliary Secondary Cord Circuit per SD-56212-01 is provided as discussed in Part 1(B) of this subsection.

(f) Use as Connecting Cords: The front secondary test cords are not affected by the applique circuit and may be used with the associated rear test cords for connecting intertoll trunks to transmission measuring circuits and other miscellaneous circuits normally used with the No. 18B toll testboards. For example, an intertoll dial trunk connected to a rear secondary test cord may be patched to a transmission measuring circuit by connecting the associated front test cord to the appropriate jack of the transmission measuring circuit. Transmission measurements made in this manner should be corrected for the loss introduced by the rear test cord applique circuit. When ringdown trunks are connected to a timed ringing circuit, the rear test cord should be connected to the trunk first to prevent premature operation of the timed ringing circuit.

Associated Equipment Required for Testing Dial Intertoll Trunks

3.04 Rear secondary test cords equipped with the applique circuit per SD-55395-01 may be employed for testing dial intertoll trunks where the following additional testboard equipment is provided:

Type of Trunk	Additional Equipment Required	Reference
Dial Pulsing	Position Dial Circuit, SD-64741-01	Fig. 6 and CHART A
	Dial and Supervisory Circuit, SD-56064-01	
MF Key Pulsing	MF Keyset, SD-55925-01 Pulsing and Supervisory Circuit, SD-55327-01	Fig. 7 and CHART B

(B) Rear Secondary Test Cords Equipped with Auxiliary Secondary Cord Circuit per SD-56212-01
Refer to Figs. 8, 9 and 10

General

3.05 Some installations of No. 18B toll testboards associated with No. 1 toll switchboards are provided with auxiliary cord circuits per SD-56212-01 connected in the rear secondary test cords for the purpose of receiving supervisory signals used in the switchboard and converting them to the supervisory signals used in the No. 18B toll testboard. Also, the auxiliary secondary cord circuit converts the d-c ringing signal received from the position circuit of the No. 18B testboard to the a-c ringing signal used on ringdown intertoll trunks. The modified rear test cords may be used with a DC-MF keyset for d-c or MF key pulsing intertoll trunks of the non-sleeve supervision type. They may also be used with a dialing and supervisory circuit for dial intertoll trunks of the non-sleeve supervision type.

3.06 The front secondary test cords are not affected by the auxiliary circuits and may be used for connecting to local trunks, transmission measuring circuits and other miscellaneous circuits used in the No. 18B toll testboard. Transmission measurements made using an associated pair of test cords as connecting cords should be corrected for the loss introduced by the transformer in the auxiliary cord circuit.

Rear Secondary Test Cord and Position Circuit Functions

3.07 The operating procedures as covered in Section 664-600-500, for the various cord and position circuit functions are, where pertinent, applicable to the modified rear secondary test cords with the following exceptions:

(a) Busy Test: When tests are made on dial intertoll trunks the busy test is made from the dialing and supervisory circuit to which the rear test cord is connected as discussed in CHART A.

(b) Pad Control: Transmission pads in intertoll trunks connected to modified rear secondary test cords will not be under control of the TALK key as is the case of unmodified test cords. The operation of the PO key associated with each auxiliary cord circuit (located in the upper unit jack field) will remove the transmission pad. When tests are made on dial intertoll trunks, the transmission pads will be under control of the PO key in the dialing and supervisory circuits connecting the trunks to the rear test cords as discussed in CHART A.

(c) Supervision

(1) Supervision on Intertoll Trunks in No. 1 Toll Switchboard Offices Employing Non-sleeve Supervision: The Auxiliary Secondary Cord Circuit per SD-56212-01 may be arranged for testing intertoll trunks in NON-SLEEVE supervision type No. 1 toll switchboard offices employing WET-DRY supervision, RINGDOWN supervision or both. When provision is made for both WET-DRY and RINGDOWN supervision, the auxiliary secondary cord circuit is usually arranged for RINGDOWN supervision. When it is desired to test WET-DRY supervision trunks, the WD key (located in the miscellaneous jack field) associated with the auxiliary secondary cord circuit should be operated before a rear secondary test cord is connected to the trunk. When tests are made on dial intertoll trunks, supervision will be obtained on the supervisory lamp of the dialing and supervisory circuit through which the rear secondary test cord is connected

to the trunk as discussed in CHART A. Typical modified rear secondary test cord supervisory lamp indications when connected directly to intertoll trunks are:

Supervision Employed	Intertoll Trunk Condition	Cord (RS) Lamp Indication
RINGDOWN	Ring from far end	SECONDARY POSITION KEYS NORMAL: RS lamp lights and is locked in until the TALK key is operated
		TALK KEY OPERATED: RS lamp lights for duration of ring
		HOLD KEY OPERATED: RS lamp lights and is locked in until the TALK key is operated and the HOLD key is restored
WET-DRY	"Off-hook" from trunk	TALK KEY OPERATED: RS lamp dark
	"On-hook" from trunk	RS lamp lighted

(2) Supervision on Intertoll Trunks in No. 1 Toll Switchboard Offices Employing Sleeve Supervision: The Auxiliary Secondary Cord Circuit per SD-56212-01 for testing intertoll trunks in No. 1 toll switchboards may be arranged for testing trunks with SLEEVE supervision only, SLEEVE and RINGDOWN supervision trunks, SLEEVE and WET-DRY supervision trunks or SLEEVE, RINGDOWN and WET-DRY supervision trunks. When provision is made for testing SLEEVE and RINGDOWN supervision trunks, the proper supervisory arrangement for the trunk to which a rear secondary test cord is connected is automatically determined and selected by marginal relays in the sleeve circuits of the auxiliary secondary cord circuit. When provision is made for testing WET-DRY supervision trunks, the WD key associated with the auxiliary secondary cord circuit should be operated before connecting a rear secondary test cord to a WET-DRY supervision trunk. When tests are made on dial intertoll trunks, supervision will be obtained on the supervisory lamp of the dialing and supervisory circuit through which the rear secondary test cord is connected to the trunk as discussed in CHART A.

Typical modified rear secondary test cord supervisory lamp indications when connected directly to intertoll trunks are:

Supervision Employed	Intertoll Trunk Condition	Cord (RS) Lamp Indication
SLEEVE OR WET-DRY	"Off-hook" from trunk	TALK KEY OPERATED: RS lamp dark
	"On-hook" from trunk	RS lamp lighted
RINGDOWN	Ring from far end	SECONDARY POSITION KEYS NORMAL: RS lamp lights and is locked in until the TALK key is operated
		TALK KEY OPERATED: RS lamp lights for the duration of the ring
		HOLD KEY OPERATED: RS lamp lights and is locked in until the TALK key is operated and the HOLD key is restored

(d) Dial Cord Dialing: When testing dial intertoll trunks, the position Dial Cord Circuit per SD-64761-01 is required in addition to the auxiliary circuit provided on the rear test cords. The operating procedures for dial cord dialing on intertoll dial trunks are:

(1) Start Dialing Supervision: The rear secondary test cord supervisory lamp RS will light steadily when the connected trunk is ready to receive dial pulses. Refer to the chart in Section 664-600-500, which covers the various supervisory indications on intertoll dial trunks.

(2) Stop Dialing Supervision: The RS lamp serves to indicate the progress of the call during dialing. If the RS lamp is extinguished before the full number of digits has been dialed, it is an indication that the dialing should be halted until the distant switching equipment has obtained a path for the extension of the call. When the path has been obtained the RS lamp will relight and the dialing may be resumed.

(3) Trunk Supervision: The rear secondary test cord RS lamp will give flashing supervision to indicate a BUSY, OVERFLOW or REORDER condition. Refer to the chart in Section 664-600-500, which covers the various supervisory indications on intertoll dial trunks and the action to be taken.

(e) Positional Dialing: When testing dial intertoll trunks, the jack ended Dialing and Supervisory Circuit per SD-56064-01 is required in addition to the auxiliary circuit provided on the rear secondary test cords. The operating procedures for positional dialing are covered in CHART A.

(f) D-C and MF Key Pulsing: Two types of testboard keyset circuits may be provided for testing key pulsing intertoll trunks; the MF Keyset Circuit per SD-55925-01 or the combined DC-MF Keyset Circuit per SD-56279-01. The operating procedures for key pulsing as covered in Section 664-600-500, are applicable with the following exception:

(1) Trouble Release: When trouble is encountered while multi-frequency pulsing with a DC-MF keyset and it is necessary to disconnect from the trunk, the test cord should be removed from the trunk jack and the RLS key operated and held operated until the KR lamp is extinguished.

(g) Use as Connecting Cords: The front secondary test cords are not affected by the auxiliary cord circuit and may be used with the associated rear test cords for connecting intertoll trunks to transmission measuring circuits and other miscellaneous circuits normally used with the No. 18B toll testboard under the following conditions:

(1) If the TALK-MON key is normal, the auxiliary cord circuit will be arranged for converting the various supervisory signals received, on an intertoll trunk connected to the rear test cord, to cord supervisory lamp signals. The tip and ring conductors of the front and rear test cords will be connected together through a transformer in the auxiliary cord circuit. Transmission measurements made under this condition should be corrected for the added loss in this transformer. When a cord circuit is used to connect a ringdown intertoll trunk to a timed ringing circuit the rear test cord should be connected to the trunk first to prevent premature operation of the timed ringing circuit.

(2) If the cord circuit MON key is operated, both the front and rear test cord sleeve circuits will be open and all relays in the auxiliary secondary circuit will be normal. The tip and ring conductors of the front and rear test cords will be connected together and no transmission loss will be introduced when they are used as a connecting cord. Under this condition, the secondary test cords should be used to connect only jack ended circuits which will not be affected by an open sleeve circuit.

Associated Equipment Required for Testing Dial Intertoll Trunks

3.08 Rear secondary test cords, equipped with the Auxiliary Secondary Cord Circuit per SD-56212-01, may be employed for testing dial intertoll trunks when the following additional equipment is provided:

Type of Trunk	Additional Equipment Required	Reference
Dial Cord Pulsing	Dial Cord Circuit, SD-64761-01	Fig. 8
Position Dial Pulsing	Position Dial Circuit, SD-64741-01 Dial and Supervisory Circuit, SD-56064-01	Fig. 9 and CHART A
MF Key Pulsing	MF Keyset, SD-55925-01	Fig. 10
D-C or D-C and MF Key Pulsing	DC-MF Keyset, SD-56279-01	Fig. 10

4. TESTING ARRANGEMENTS IN NO. 2 TOLL SWITCHBOARD OFFICES AND NOS. 1D, 10, 11 (BRIDGED SUPERVISION) AND 12 SWITCHBOARD OFFICES

(A) Nos. 11 (Bridged Supervision) and 12 Switchboard Offices - Rear Secondary Test Cords Equipped with Applique Circuit per SD-55395-01 for Testing Ringdown Intertoll Trunks Refer to Fig. 5

General

4.01 Some installations of the No. 18B toll testboard associated with ringdown intertoll trunks in No. 11 (bridged supervision) and No. 12 switchboards are equipped with applique circuits per SD-55395-01 in the rear secondary test cords to convert a-c supervision received over the tip and ring conductors of the rear test cords to appropriate cord lamp signals and to convert the d-c ringing functions of the cord circuits to a-c ringing signals over the

tip and ring conductors of the rear test cords. When bridged supervision is used in the switchboard, the applique circuit may be arranged to convert the bridged supervision signals on a connected trunk circuit to appropriate cord lamp signals.

4.02 The front secondary test cords are not affected by the applique and may be used for connecting to local trunks, transmission measuring circuits and other miscellaneous circuits normally used in the No. 18B toll testboard. Transmission measurements made using an associated pair of test cords as connecting cords should be corrected for the loss introduced by the applique circuit.

Rear Secondary Test Cord and Position Circuit Functions

4.03 The operating procedures for the various test cord and position circuit functions as covered in Section 664-600-500 are, where pertinent, applicable to the modified rear secondary test cords with the following exceptions:

(a) Busy Test: Rear secondary test cords equipped with the applique circuit per SD-55395-01 can not be used for making busy test. The front test cords should be used for busy tests as described in Section 664-600-500.

(b) Supervision: When modified rear secondary test cords are used for testing ringdown intertoll trunks in No. 11 (bridged supervision) and No. 12 switchboards, the following are typical cord circuit supervisory lamp indications.

Ringdown Intertoll Trunk Condition	Cord (RS) Lamp Indication
Ring from far end	SECONDARY CORD CIRCUIT KEYS NORMAL: RS lamp lights. In No. 11 switchboard offices only, the RS lamp is locked in until the TALK key is operated
	TALK KEY OPERATED: RS lamp lights for duration of the ring
	HOLD KEY OPERATED: RS lamp lights. In No. 11 switchboard offices only, the RS lamp is locked in until the TALK key is operated and the HOLD key is restored

(c) Use as Connecting Cords: The front secondary test cords are not affected by the applique circuit and may be used with the associated rear test cords for connecting intertoll trunks to transmission measuring circuits and other miscellaneous circuits normally used with the No. 18B toll testboard. For example, a ringdown intertoll trunk connected to a rear secondary test cord may be patched to a transmission measuring circuit by connecting the associated front test cord to the appropriate jack of the transmission measuring circuit. Transmission measurements made in this manner should be corrected for the loss introduced by the rear cord applique circuit. When ringdown intertoll trunks are connected to a timed ringing circuit, the rear test cord should be connected to the trunk first to prevent premature operation of the timed ringing circuit.

(B) No. 2 Toll Switchboard Offices and Nos. 1D, 10, 11 (Bridged Supervision) and 12 Switchboard Offices - Rear Secondary Test Cords Equipped with Auxiliary Secondary Test Cord Circuit per SD-56213-01 for Testing Ringdown and Dial Intertoll Trunks
Refer to Fig. 11

General

4.04 Installations of the No. 18B toll testboard associated with ringdown and dial intertoll trunks in No. 2 toll switchboards and Nos. 1D, 10, 11 (bridged supervision) and 12 switchboards are equipped with Auxiliary Secondary Test Cord Circuits per SD-56213-01 in the rear secondary test cords to convert a-c supervision received over the tip and ring conductors of the rear test cords to appropriate cord lamp signals and to convert the d-c ringing functions of the test cord circuits to a-c ringing signals over the tip and ring conductors of the rear test cords. When bridged supervision is employed in the switchboards, the auxiliary cord circuit provides the means to convert the "off-hook" and "on-hook" signals on a connected trunk to appropriate rear cord lamp signals. The auxiliary cord circuit may be arranged to convert either ringdown or bridged supervisory signals, or both. In the latter case, the sleeve resistance (high or low) of the intertoll trunk under test causes the auxiliary cord circuit to arrange itself automatically for the proper type of supervision. The modified rear test cord circuits may be used for testing dial intertoll trunks when the No. 18B toll testboard is equipped with a dial cord circuit.

4.05 The front secondary test cords are not affected by the modification and may be used for connecting to local trunks, transmission measuring circuits and other miscellaneous circuits used in the No. 18B toll testboard. Transmission measurements made using an associated pair of test cords as connecting cords should be corrected for the loss introduced by the transformer in the auxiliary secondary test cord circuit.

Rear Secondary Test Cord and Position Circuit Functions

4.06 The operating procedures for the various test cord and position circuit functions as presented in chart form in Section 664-600-500 are, where pertinent, applicable to the modified rear secondary test cords with the following exceptions:

(a) Supervision: The Auxiliary Secondary Test Cord Circuit per SD-56213-01 may be arranged for use with intertoll trunks employing either ringdown or bridged supervision, or both. In the latter case, the sleeve resistance of the intertoll trunk under test causes the auxiliary cord circuit to arrange itself automatically for the proper type of supervision. Typical modified rear secondary test cord supervisory lamp indications are:

Supervision Employed	Intertoll Trunk Condition	Cord (RS) Lamp Indication
RINGDOWN	Ring from far end	SECONDARY POSITION KEYS NORMAL: RS lamp lights and is locked in until TALK key is operated
		TALK KEY OPERATED: RS lamp lights for duration of ring
		HOLD KEY OPERATED: RS lamp lights and is locked in until the TALK key is operated and the HOLD key is restored
BRIDGED	"Off-hook" from trunk	TALK KEY OPERATED: RS lamp dark
	"On-hook" from trunk	RS lamp lighted

(b) Dial Cord Dialing: When testing dial intertoll trunks, the position Dial Cord Circuit per SD-64761-01 is required in addition to the auxiliary secondary test cord circuit provided on the rear test cords. The operating procedures for dial cord dialing are:

(1) Start Dialing Supervision: The rear secondary test cord supervisory lamp RS will light steadily when the connected trunk is ready to receive dial pulses. Refer to the chart in Section 664-600-500, which covers the various supervisory indications on intertoll dial trunks.

(2) Stop Dialing Supervision: The RS lamp serves to indicate the progress of the call during dialing. If the RS lamp is extinguished before the full number of digits has been dialed, it is an indication that the dialing should be halted until the distant switching equipment has obtained a path for the extension of the call. When the path has been obtained the RS lamp will relight and the dialing may be resumed.

(3) Trunk Supervision: The rear secondary test cord RS lamp will give flashing supervision to indicate a BUSY, OVERFLOW or REORDER condition. Refer to the chart in Section 660-600-500, which covers the various indications on intertoll dial trunks and the action to be taken.

(c) Use as Connecting Cords: The front secondary test cords are not affected by the auxiliary secondary test cord circuit and may be used with the associated rear test cords for connecting intertoll trunks to transmission measuring circuits and other miscellaneous circuits normally used with the No. 18B toll testboard under the following conditions:

(1) If the TALK-MON key is normal, the auxiliary test cord circuit will be arranged for converting the various supervisory signals received on an intertoll trunk connected to the rear test cord to cord lamp indications. The tip and ring conductors of the front and rear test cords will be connected together through a transformer

in the auxiliary cord circuit. Transmission measurements made under this condition should be corrected for the added loss of this transformer. When a cord circuit is used under this condition to connect a ringdown intertoll trunk to a timed ringing circuit, the rear test cord should be connected to the trunk first to prevent premature operation of the timed ringing circuit.

(2) If the cord circuit MON key is operated, both the front and rear test cord sleeve circuits will be open and all relays in the auxiliary test cord circuit will be normal. The tip and ring conductors of the front and rear test cords will be connected together and no transmission loss will be introduced when they are used as a connecting cord. Under this condition, the secondary test cords should be used to connect only jack ended circuits which will not be affected by an open sleeve circuit.

Associated Equipment Required for Testing Dial Intertoll Trunks

4.07 Rear secondary test cord circuits equipped with the Auxiliary Secondary Test Cord Circuit per SD-56213-01 may be used for testing dial intertoll trunks where the toll testboard is equipped with the Dial Cord Circuit per SD-64761-01.

(C) Nos. 10 and 11 (Bridged Supervision) Switchboard Offices - Rear Secondary Test Cords Equipped with Auxiliary Secondary Test Cord Circuit per SD-56232-01 for Testing Ringdown and Dial Intertoll Trunks
Refer to Fig. 12

General

4.08 Installations of the No. 18B toll testboard associated with ringdown and dial intertoll trunks in No. 10 or No. 11 (bridged supervision) switchboards are equipped with Auxiliary Secondary Test Cord Circuits per SD-56232-01 in the rear secondary test cords to convert a-c supervision received over the tip and ring conductors of the rear test cords to appropriate cord lamp signals and to convert the d-c ringing functions of the cord circuits to a-c ringing signals over the tip and ring conductors of the rear test cords. When bridged supervision is used in the switchboards, the auxiliary cord circuit provides the means to convert the "off-hook" and "on-hook" signals on a connected trunk to appropriate rear test cord lamp signals. The auxiliary cord circuit may be arranged to convert either ringdown or bridged supervision signals, or both. In the latter case, the sleeve resistance (high or low) of the intertoll trunk under test causes the auxiliary secondary test cord circuit to arrange itself automatically for the proper type of supervision. The modified rear test cord circuits may be used for testing dial intertoll trunks when the No. 18B toll testboard is equipped with a position dial circuit.

4.09 The front secondary test cords are not affected by the modification and may be used for connecting to local trunks, transmission measuring circuits and other miscellaneous circuits used in the No. 18B toll testboard. Transmission measurements made using an associated pair of test cords as connecting cords should be corrected for the loss introduced by the transformer in the auxiliary cord circuit.

Rear Secondary Test Cord and Position Circuit Functions

4.10 The operating procedures for the various cord and position circuit functions as covered in Section 664-600-500 are, where pertinent, applicable to the modified rear secondary test cords with the following exceptions:

(a) Supervision: The Auxiliary Secondary Test Cord Circuit per SD-56232-01 may be arranged for use with intertoll trunks employing either ringdown or bridged supervision, or both. In the latter case, the sleeve resistance (high or low) of the trunk under test causes the auxiliary cord circuit to arrange itself automatically for the proper type of supervision. The modified rear secondary test cord supervisory lamp indications are:

Supervision Employed	Intertoll Trunk Condition	Cord (RS) Lamp Indication
RINGDOWN	Ring from far end	SECONDARY POSITION KEYS NORMAL: RS lamp lights and is locked in until TALK key is operated
		TALK KEY OPERATED: RS lamp lights for duration of ring
		HOLD KEY OPERATED: RS lamp lights and is locked in until the TALK key is operated and the HOLD key is restored
BRIDGED		TALK KEY OPERATED:
	"Off-hook" from trunk	RS lamp dark
	"On-hook" from trunk	RS lamp lighted

(b) Positional Dialing: Modified rear secondary test cords may be used for testing dial intertoll trunks where the Position Dial Circuit per SD-56238-01 is provided. The operating procedures as presented in chart form, in Section 664-600-500, are applicable to rear test cords associated with this position dial circuit.

(c) Use as Connecting Cords: The front secondary test cords are not affected by the auxiliary rear test cord circuit and may be used with the associated rear test cords for connecting intertoll trunks to transmission measuring circuits and other miscellaneous circuits normally used with the No. 18B toll testboards under the following conditions:

(1) If the TALK-MON key is normal, the auxiliary test cord circuit will be arranged for converting the various supervisory signals received on an intertoll trunk connected to the rear test cord to cord supervisory lamp indications. The tip and ring conductors of the front and rear test cords will be connected together through a transformer in the auxiliary test cord circuit. Transmission measurements made under this condition should be corrected for the added loss of this transformer. When a cord circuit is used to connect a ringdown intertoll trunk to a timed ringing circuit, the rear test cord should be connected to the trunk first to prevent premature operation of the timed ringing circuit.

(2) If the cord circuit MON key is operated, both the front and rear test cord sleeve circuits will be open and all relays in the auxiliary test cord circuit will be normal. The tip and ring conductors of the front and rear test cords will be connected together and no transmission loss will be introduced when they are used as a connecting cord. Under this condition, the secondary test cords should be used to connect only jack ended circuits which will not be affected by an open sleeve circuit.

Associated Equipment Required for Testing Dial Intertoll Trunks

4.11 Rear secondary test cords equipped with the Auxiliary Secondary Test Cord Circuit per SD-56232-01 may be used for testing dial intertoll trunks where the toll testboard is equipped with the Position Dial Circuit per SD-56238-01.

5. TESTING ARRANGEMENTS IN NOS. 9C AND 9D SWITCHBOARD OFFICES

(A) Nos. 9C and 9D Switchboards - Rear Secondary Test Cords Equipped with Auxiliary Secondary Cord Circuit per SD-56162-01 for Testing Ringdown Trunks (Nos. 9C and 9D Switchboards) and Dial Intertoll Trunks (No. 9C Switchboard Only)

Refer to Fig. 13

General

5.01 Installations of the No. 18B toll testboard associated with ringdown and dial intertoll trunks in No. 9C switchboards and ringdown trunks in No. 9D switchboards are equipped with Auxiliary Secondary Cord Circuits per SD-56162-01 in the rear secondary test cords to convert a-c supervision received over the tip and ring conductors of the rear test cords to appropriate cord lamp signals and to convert the d-c ringing functions of the cord circuits to a-c ringing signals over the tip and ring conductors of the rear test cords. When bridged supervision is used in No. 9C switchboards, the auxiliary secondary cord circuit converts the "off-hook" and "on-hook" signals on a connected trunk to appropriate rear cord lamp signals. The auxiliary secondary cord circuit may be arranged to convert either ringdown or bridged supervision signals, or both. In the latter case, the sleeve resistance (high or low) of the intertoll trunk under test causes the auxiliary secondary cord circuit to arrange itself automatically for the proper type of supervision. The modified rear test cords may be used for testing dial intertoll trunks in No. 9C switchboards when the No. 18B toll testboard is equipped with a position dial cord circuit.

5.02 The front secondary test cords are not affected by the modification and may be used for connecting to local trunks, transmission measuring circuits and other miscellaneous circuits used in the No. 18B toll testboard. Transmission measurements made using an associated pair of test cords should be corrected for the loss introduced by the transformer in the auxiliary secondary cord circuit.

Rear Secondary Test Cord and Position Circuit Functions

5.03 The operating procedures for the various test cord and position circuit functions as covered in Section 664-600-500 are, where pertinent, applicable to the modified rear secondary test cords with the following exceptions:

(a) Supervision: The Auxiliary Secondary Cord Circuit per SD-56162-01 may be arranged for intertoll trunks employing ringdown supervision (No. 9C or 9D switchboard),

bridged supervision (No. 9C switchboard only) or both ringdown and bridged supervision (No. 9C switchboard trunks only). In the latter case, the sleeve resistance of the trunk under test causes the auxiliary secondary cord circuit to arrange itself automatically for the proper type of supervision. Typical modified rear secondary test cord supervisory lamp indications are:

Supervision Employed	Trunk Condition	Cord (RS) Lamp Indication
RINGDOWN	Ring from far end	SECONDARY POSITION KEYS NORMAL: RS lamp lights and is locked in until the TALK key is operated
		TALK KEY OPERATED: RS lamp lights for duration of ring
		HOLD KEY OPERATED: RS lamp lights and is locked in until the TALK key is operated and HOLD key is restored
BRIDGED (Intertoll trunks in 9C Swbd. only)	"Off-hook" from trunk	TALK KEY OPERATED: RS lamp dark
	"On-hook" from trunk	RS lamp lighted

(b) Dial Cord Dialing: When testing dial intertoll trunks, the position Dial Cord Circuit per SD-64761-01 is required in addition to the auxiliary secondary cord circuit provided on the rear test cords. The operating procedures for dial cord dialing are:

(1) Start Dialing Supervision: The rear secondary test cord supervisory lamp RS will light steadily when the connected trunk is ready to receive dial pulses. Refer to the chart in Section 664-600-500, which covers the supervisory indications on intertoll dial trunks.

(2) Stop Dialing Supervision: The RS lamp serves to indicate the progress of the call during dialing. If the RS lamp is extinguished before the full number of digits has been dialed, it is an indication that the dialing should be halted until the distant switching equipment has obtained a path for the extension of the call. When the path has been obtained the RS lamp will relight and the dialing may be resumed.

(3) Trunk Supervision: The rear secondary test cord RS lamp will give flashing supervision to indicate a BUSY, OVERFLOW or REORDER condition. Refer to the chart in Section 664-600-500, which covers the various indications on intertoll dial trunks.

(c) Use as Connecting Cords: The front secondary test cords are not affected by the auxiliary secondary cord circuit and may be used with the associated rear test cords for connecting intertoll trunks to transmission measuring circuits and other miscellaneous circuits normally used with the No. 18B toll testboard under the following conditions:

(1) If the TALK-MON key is normal, the auxiliary secondary cord circuit will be arranged for converting the supervisory signals received on an intertoll trunk connected to the rear test cord to cord lamp indications. The tip and ring conductors of the front and rear test cords will be connected together through a transformer in the auxiliary secondary cord circuit. Transmission measurements made under this condition should be corrected for the added loss of this transformer. When a cord circuit is used to connect a ringdown intertoll trunk to a timed ringing circuit, the rear test cord should be connected to the trunk first to prevent premature operation of the timed ringing circuit.

(2) If the cord circuit MON key is operated, both the front and rear test cord sleeve circuits will be open and all relays in the auxiliary secondary cord circuit will be normal. The tip and ring conductors of front and rear test cords will be connected together, and no transmission loss will be introduced when they are used as a connecting cord. Under this condition, the secondary cords should be used to connect only jack ended circuits which will not be affected by an open sleeve circuit.

Associated Equipment Required for Testing Dial Intertoll Trunks in No. 9C Switchboards

5.04 Rear secondary test cords equipped with the Auxiliary Secondary Test Cord Circuit per SD-56213-01 may be used for testing dial intertoll trunks in No. 9C switchboards where the toll testboard is equipped with the Dial Cord Circuit per SD-64761-01.

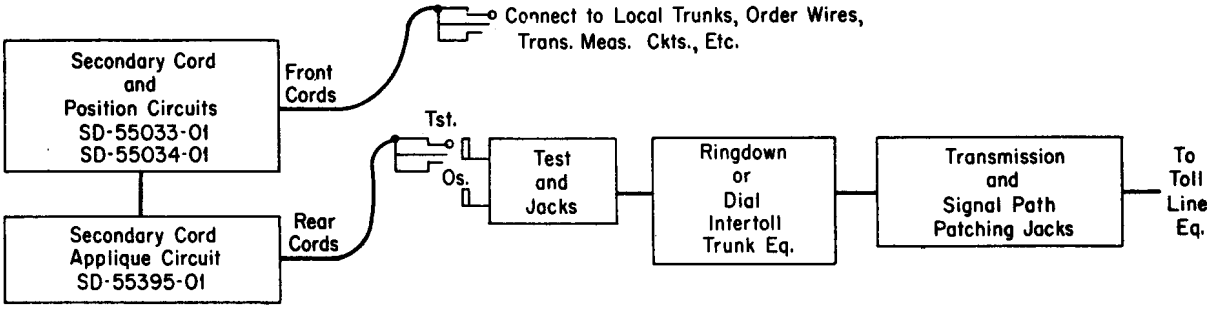


FIG. 5 - NO. 18B TOLL TESTBOARD - SECONDARY CORD APPLIQUE CIRCUIT PER SD-55395-01 TESTING RINGDOWN INTERTOLL TRUNKS IN NO. 1 TYPE TOLL OFFICES AND NOS. 11 (BRIDGED SUPERVISION) AND 12 TYPE OFFICES

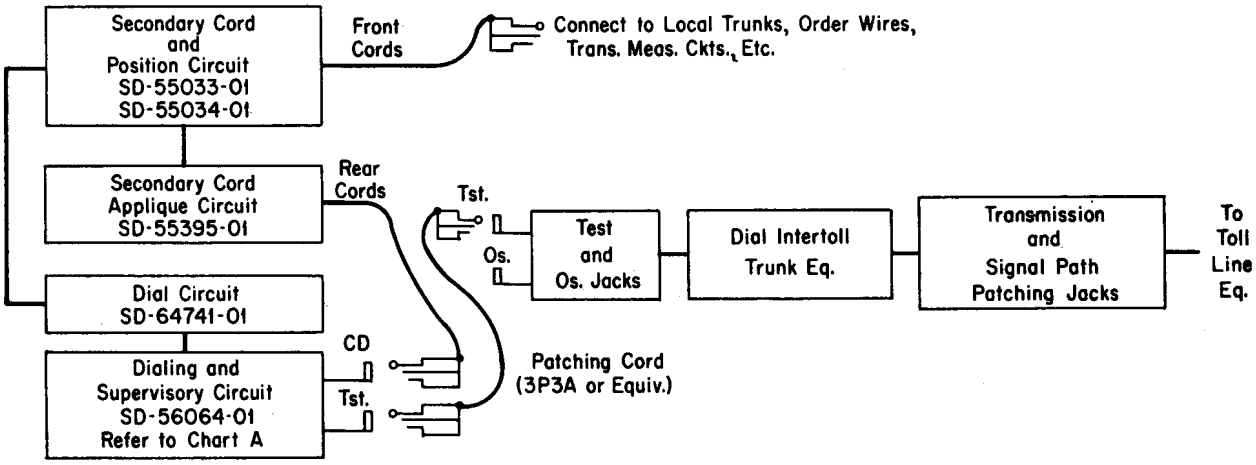


FIG. 6 - NO. 18B TOLL TESTBOARD - SECONDARY CORD APPLIQUE CIRCUIT PER SD-55395-01 - TESTING INTERTOLL TRUNKS IN NO. 1 TYPE TOLL OFFICES - POSITIONAL DIALING

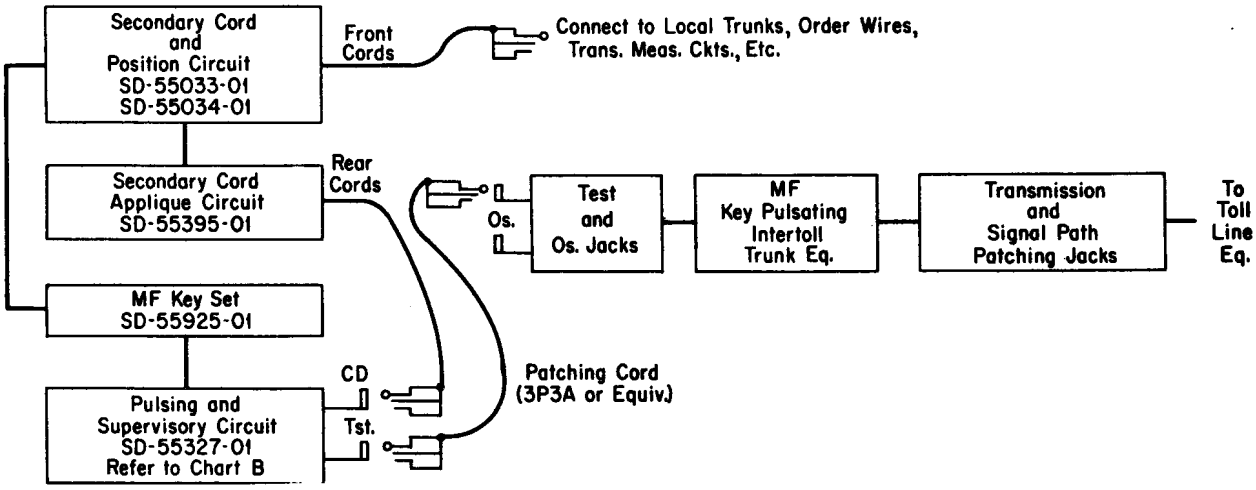


FIG. 7 - NO. 18B TOLL TESTBOARD - SECONDARY CORD APPLIQUE CIRCUIT PER SD-55395-01 - TESTING INTERTOLL TRUNKS IN NO. 1 TYPE TOLL OFFICES - MF KEY PULSE

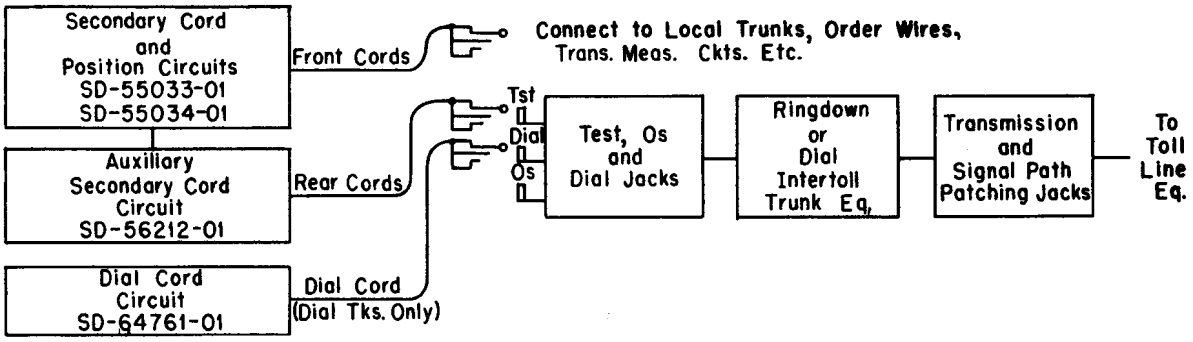


FIG. 8 - NO. 18B TOLL TESTBOARD - AUXILIARY SECONDARY CORD CIRCUIT PER SD-56212-01 - TESTING INTERTOLL TRUNKS IN NO. 1 TYPE TOLL OFFICES - RINGDOWN OR DIAL

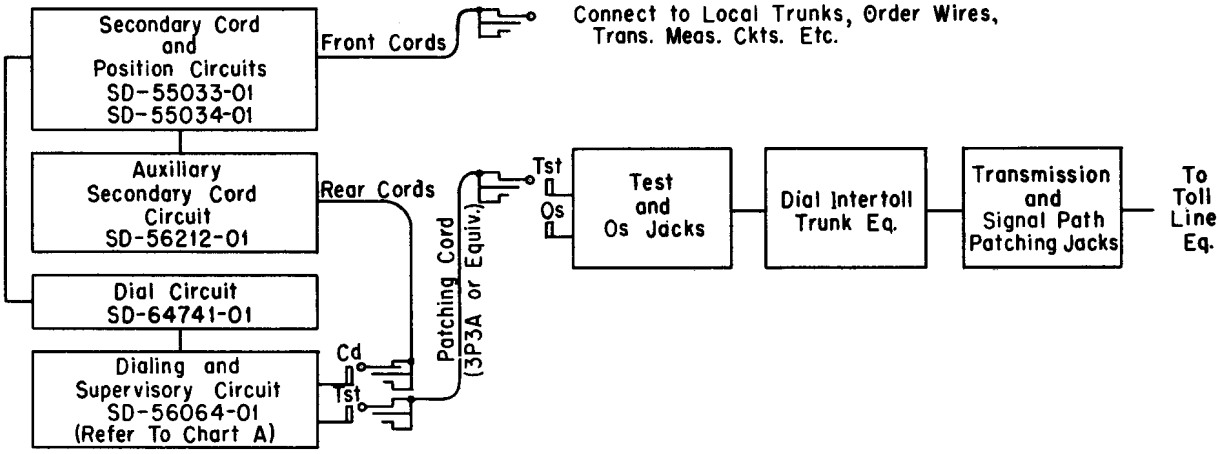


FIG. 9 - NO. 18B TOLL TESTBOARD - AUXILIARY SECONDARY CORD CIRCUIT PER SD-56212-01 - TESTING DIAL INTERTOLL TRUNKS IN NO. 1 TYPE TOLL OFFICES

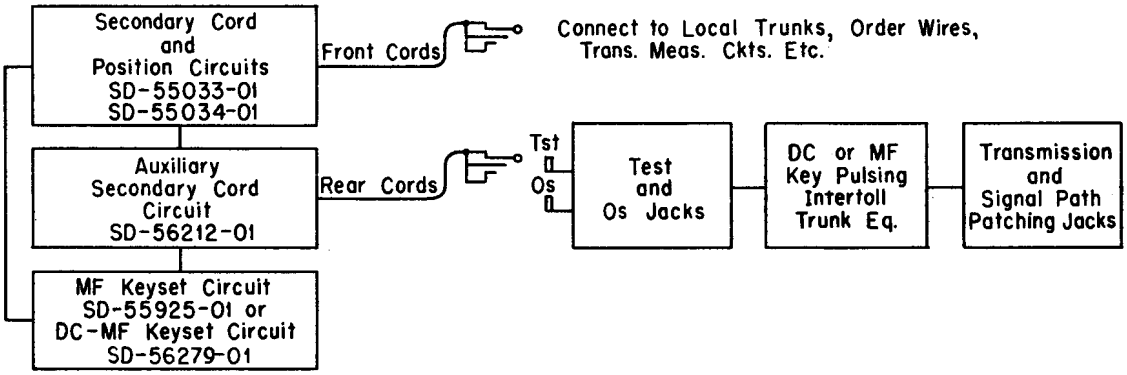


FIG. 10 - NO. 18B TOLL TESTBOARD - AUXILIARY SECONDARY CORD CIRCUIT PER SD-56212-01 - TESTING INTERTOLL TRUNKS IN NO. 1 TYPE TOLL OFFICES - DC OR MF KEY PULSING

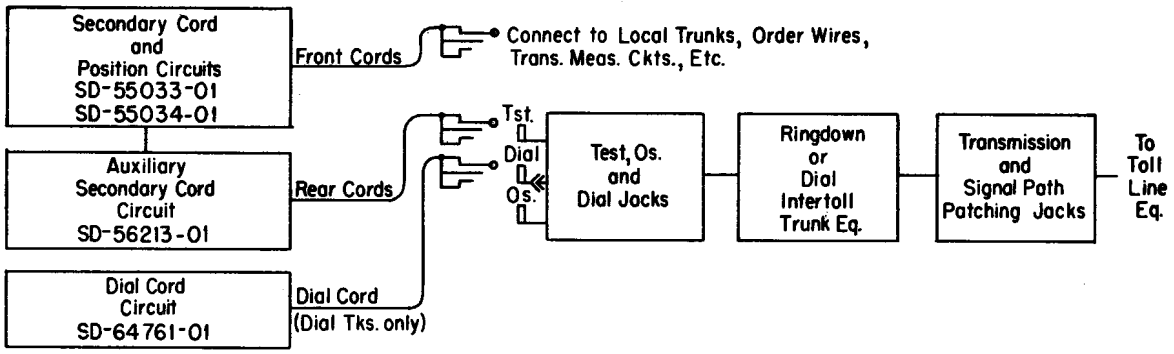


FIG. 11 - NO. 18B TOLL TESTBOARD - AUXILIARY SECONDARY CORD CIRCUIT PER SD-56213-01 - TESTING INTERTOLL TRUNKS IN NO. 2 TYPE TOLL SWITCHBOARD OFFICES AND NOS. 1D 10, 11 (BRIDGED SUPERVISION) AND 12 SWITCHBOARD OFFICES - RINGDOWN OR DIAL

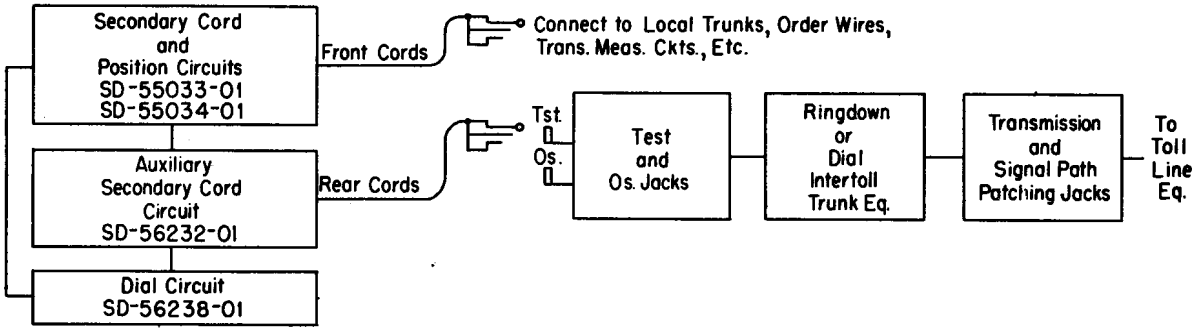


FIG. 12 - NO. 18B TOLL TESTBOARD - AUXILIARY SECONDARY CORD CIRCUIT PER SD-56232-01 - TESTING INTERTOLL TRUNKS IN NO. 10 AND NO. 11 (BRIDGED SUPERVISION) TYPE SWITCHBOARD OFFICES - RINGDOWN OR POSITIONAL DIALING

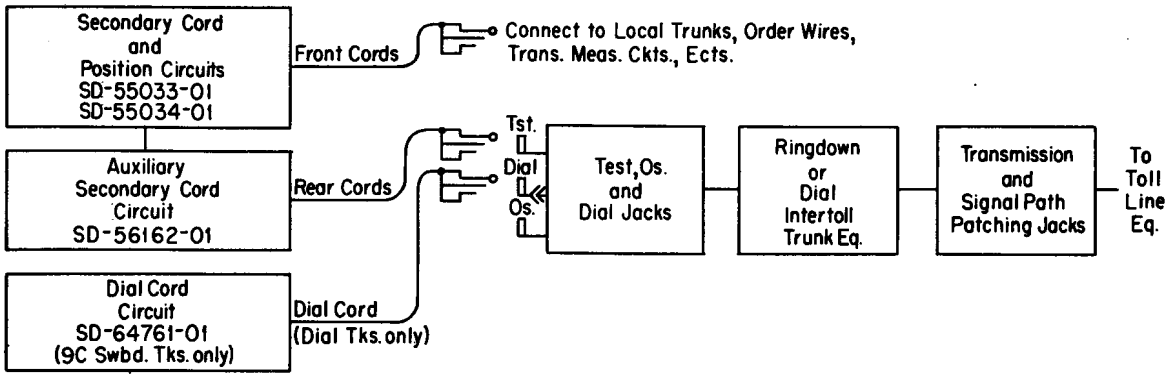
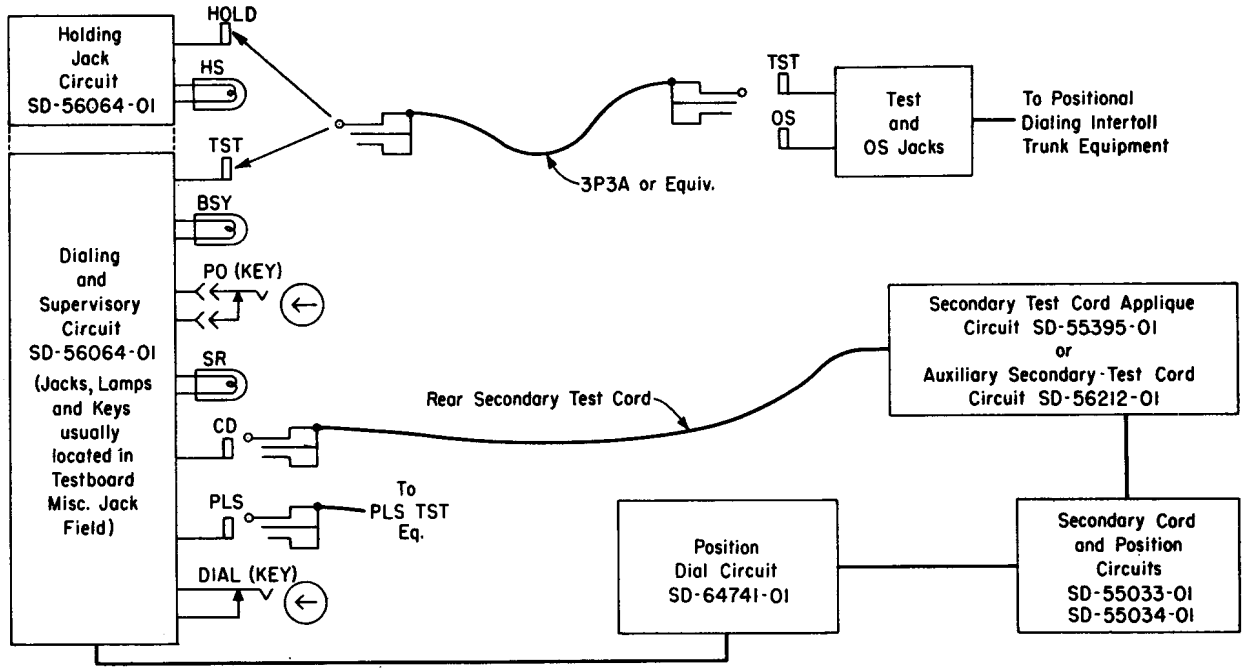


FIG. 13 - NO. 18B TOLL TESTBOARD - AUXILIARY REAL SECONDARY CORD CIRCUIT PER SD-56162-01 - TESTING INTERTOLL TRUNKS IN NO. 9C OR 9D TYPE SWITCHBOARD OFFICES - RINGDOWN OR DIAL

TESTBOARD NO. 18B - DEVIATIONS FROM NORMAL SECONDARY TEST CORD FUNCTIONS IN NO. 1 TOLL SWITCHBOARD OFFICES

CHART A: DIALING AND SUPERVISORY CIRCUIT PER SD-56064-01 FOR TESTING DIAL INTERTOLL TRUNKS IN NO. 1 TYPE TOLL OFFICES EMPLOYING POSITIONAL DIALING

This dialing and supervisory circuit in connection with No. 18B toll testboard rear secondary cords equipped with the applique circuit per SD-55395-01 or auxiliary circuit per SD-56212-01 provides means for dialing, talking, signaling, holding and monitoring on dial intertoll and community dial trunks.



(1) BUSY TEST

STEP	PROCEDURE	REMARKS
1	Connect an appliqued rear secondary test cord to the CD jack of the dialing and supervisory circuit.	
2	Connect one end of a 3-conductor patching cord (3P3A or equivalent) to the TST jack of the dialing and supervisory circuit and touch the plug tip of the other end of that cord to the sleeve of the TST jack of the trunk.	The BSY lamp associated with the dialing and supervisory circuit will light if the trunk is busy.

(2) CONNECTING DIALING AND SUPERVISORY CIRCUIT TO DIAL INTERTOLL TRUNKS AND SECONDARY CORDS

STEP	PROCEDURE	REMARKS
1	Proceed in accordance with STEPS 1 and 2 under (1) of CHART A and, after testing for busy, if the desired trunk is idle, connect the end of the patch cord used for the busy test to the TST jack of the desired trunk.	

(3) MONITORING AND TALKING

The normal operating procedures for monitoring and talking on secondary cord circuits as covered in Section 664-600-500, are applicable to dial intertoll trunks connected to appliqued rear cord circuits through the dialing and supervisory circuit.

CHART A

CHART A: DIALING AND SUPERVISORY CIRCUIT PER SD-56064-01 FOR TESTING DIAL INTERTOLL TRUNKS IN NO. 1 TYPE TOLL OFFICES EMPLOYING POSITIONAL DIALING (Contd.)

(4) SUPERVISION

When an appliqued rear cord with its sleeve circuit closed (e.g., KEYS NORMAL, TALK key operated, HOLD key operated or MON and CLOSE 3RD key operated) is connected through the dialing and supervisory circuit to a dial intertoll trunk, an on-hook condition on the trunk will be indicated by the lighting of the SR lamp associated with the dialing and supervisory circuit.

(5) DIALING

STEP	PROCEDURE		REMARKS
1	Test the dial intertoll trunk for busy in accordance with STEPS 1 and 2 under (1) of CHART A. If the trunk is idle, connect it to the dialing and supervisory circuit in accordance with STEP 1 under (2) of CHART A.		
2	Operate the TALK key of the secondary cord circuit used and operate the DIAL key associated with the dialing and supervisory circuit.	(1) START DIAL SUPERVISION: In general the DP lamp associated with the position dial circuit will light steadily when the connected trunk is ready to receive pulses. Refer to the chart in the basic section of this practice, 664-600-500, titled, TOLL TESTBOARD NO. 18B - SECONDARY TEST CORD FUNCTIONS - CORD CIRCUIT SUPERVISORY LAMP INDICATIONS ON DIAL INTERTOLL TRUNKS which describes the various "delay dial" and "start dial" supervisory indications received when testing dial intertoll trunks.	
3	When the DP lamp lights, dial the digits of the desired number.	(1) STOP-START DIALING SUPERVISION: On an intertoll dial trunk arranged for stop-start dialing supervision, the DP lamp will serve to indicate the progress of the call during dialing. Thus when it is extinguished it will inform the operator to stop dialing. When the DP lamp relights it will be an indication to resume dialing. (2) TROUBLE RELEASE: If an error is made during dialing, the DIAL key should be restored and the patch cord removed from the trunk TST jack to release the connection. Then proceed as for a new call. (3) FLASHING SUPERVISORY INDICATIONS: If, during dialing on intertoll trunks, flashing supervision is received on the DP lamp, a BUSY, OVERFLOW or REORDER condition exists. Refer to the chart in the basic section of this practice, 664-600-500, titled TOLL TESTBOARD NO. 18B - SECONDARY TEST CORD FUNCTIONS - CORD CIRCUIT SUPERVISORY LAMP INDICATIONS ON DIAL INTERTOLL TRUNKS which covers the identification of these conditions and action to be taken.	
4	When all of the digits have been dialed and, if the DP lamp does not flash, restore the DIAL key and wait for the distant end to answer.	(1) DISASSOCIATION OF POSITION DIAL CIRCUIT: When the DIAL key is restored to normal, the position dial circuit will be disconnected from the dialing and supervisory circuit and supervision will be obtained on the dialing and supervisory circuit SR lamp. (2) CALLED NUMBER ANSWERS: When the called number answers, an "off-hook" signal will be received from the distant end and the dialing and supervisory circuit SR lamp will go out. (3) RECALL: Some classes of intertoll trunks provide for rering the distant point after a call has been answered. On such trunks, this may be accomplished by momentarily operating the RING key associated with the test cord used.	

CHART A (Contd.)

CHART A: DIALING AND SUPERVISORY CIRCUIT PER SD-56064-01 FOR TESTING DIAL INTERTOLL TRUNKS IN NO. 1 TYPE TOLL OFFICES EMPLOYING POSITIONAL DIALING (Contd.)

(5) DIALING (Contd.)

STEP	PROCEDURE	REMARKS
4	Contd. Note: Continuous pulses are specified in the course of some maintenance tests on dial intertoll trunks. This may be accomplished by proceeding in accordance with STEPS 1 through 3 except that the DIAL key associated with the dialing and supervisory circuit should not be returned to normal after dialing. Continuous pulses may then be sent by patching from the LP out jack of the pulsing test set to the PLS jack of the pulsing and supervisory circuit, connecting to the pulsing test set first to avoid releasing the trunk under test.	(4) PAD CONTROL: If the connected trunk is arranged for pad control, the pad may be removed by operating the PO key associated with the dialing and supervisory circuit. (5) MOMENTARY ON-HOOK SIGNAL TOWARD THE DISTANT END: In the course of some signaling and supervision tests on dial intertoll trunks, a momentary "on-hook" condition is specified after reaching the 103 test line at the distant end. On trunks arranged for reringing, this may be accomplished by momentarily operating the RING key associated with the cord used. (6) RELEASE OF CONNECTION: The circuit will be under control of the originating end and will be held until released by restoring the TALK key and pulling down the test cord used.

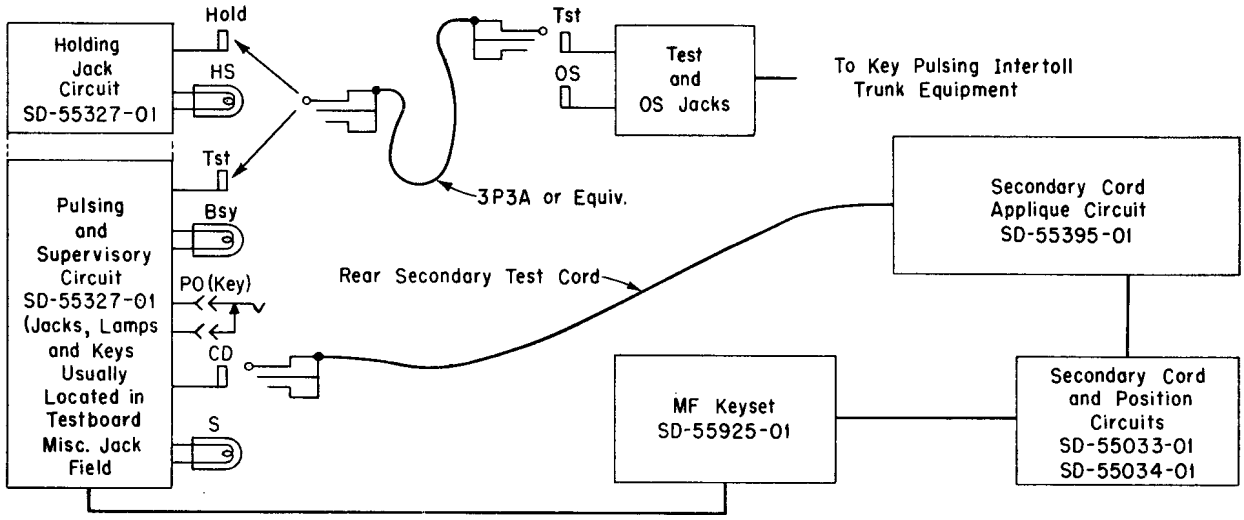
(6) HOLDING TRUNK CONNECTIONS

Where a holding jack with supervisory circuit is provided with the dialing and supervisory circuit, established dial intertoll connections may be held at the toll testboard.

STEP	PROCEDURE	REMARKS
1	Insert an out-of-service plug into the OS jack of the trunk it is desired to hold to avoid releasing the connection while patches are being made. Any switchboard or testboard connections to the trunk may then be disconnected.	
2	Patch from the HOLD jacks of the holding circuit to the TST jacks of the trunk it is desired to hold.	The HS lamp associated with the holding jack will give "on-hook" (lamp lighted) and "off-hook" (lamp dark) supervision on the held connection.
3	The out-of-service plug may be removed from the OS jack if desired. However, the connection will be released when the patch cord is removed from the TST jack, if the out-of-service plug is not reinserted before the patch is taken down.	

CHART B: MF KEY PULSING USING PULSING AND SUPERVISORY CIRCUIT PER SD-55327-01 (Required only with rear secondary cords equipped with applique circuit per SD-55395-01)

This pulsing and supervisory circuit in connection with No. 18B toll testboard rear secondary cords equipped with the applique circuit per SD-55395-01 provides means for MF key pulsing, talking, signaling, holding and monitoring on MF key pulsing intertoll trunks.



(1) BUSY TEST

STEP	PROCEDURE	REMARKS
1	Connect an appliqued rear secondary cord to the CD jack of the pulsing and supervisory circuit.	
2	Connect one end of a 3-conductor patching cord (3P3A or equivalent) to TST jack of the pulsing and supervisory circuit and touch the plug tip of the other end of that cord to the sleeve of the TST jack of the trunk.	The BSY lamp associated with the pulsing and supervisory circuit will light if the trunk is busy.

(2) CONNECTING PULSING AND SUPERVISORY CIRCUIT TO MF KEY PULSING INTERTOLL TRUNKS

STEP	PROCEDURE	REMARKS
1	Proceed in accordance with STEPS 1 and 2 under (1) of CHART B and, after testing for busy, if the desired trunk is idle, connect the end of the patch cord used for the busy test to the TST jack of the trunk.	

(3) MONITORING AND TALKING

The normal operating procedures for monitoring and talking on secondary cord circuits as covered in Section 664-600-500 are applicable to MF pulsing intertoll trunks connected to appliqued rear cord circuits through the pulsing and supervisory circuit.

(4) SUPERVISION

When an appliqued rear cord with its sleeve circuit closed (e.g., KEYS NORMAL, TALK key operated, HOLD key operated or MON and CLOSE 3RD key operated) is connected through the pulsing and supervisory circuit to a busy MF key pulsing trunk, an "on-hook" condition on the trunk will be indicated by the lighting of the S lamp associated with the pulsing and supervisory circuit. An "off-hook" condition will be indicated by a dark lamp.

CHART B: MF KEY PULSING USING PULSING AND SUPERVISORY CIRCUIT PER SD-55327-01 (Required only with rear secondary cords equipped with applique circuit per SD-55395-01) (Contd.)

(5) MF KEY PULSING

STEP	PROCEDURE	REMARKS
1	Test the intertoll trunk for busy in accordance with STEPS 1 and 2 under (1) of CHART B. If the trunk is idle, connect a rear secondary cord with the TALK key operated to the trunk through the pulsing and supervisory circuit in accordance with (2) of CHART B.	(1) SENDER ATTACHED INDICATION: In general the S lamp associated with the pulsing and supervisory circuit will light when a sender has been attached at the distant end of the trunk. Refer to the chart in Section 664-600-500, titled, TOLL TESTBOARD NO. 18B - SECONDARY TEST CORD FUNCTIONS - CORD CIRCUIT SUPERVISORY LAMP INDICATIONS ON INTERTOLL DIAL TRUNKS, which covers the various "delay-dial" and "start-dial" indications received.
2	When the S lamp associated with the pulsing and supervisory circuit lights, momentarily operate the position KP key to the rear.	(1) KEYSET ASSOCIATION: The KR lamp associated with the position keyset circuit will light when the keyset has been connected to the pulsing and supervisory circuit. (2) START KEYING SUPERVISION: The S lamp associated with the position keyset circuit will light to indicate that the KP tone has been transmitted to the distant sender to prepare it to receive pulses.
3	When the S lamp associated with the keyset circuit lights, proceed with the registration of the desired number.	(1) STOP-START KEYING SUPERVISION: When keying through crossbar tandem to intertoll dial trunks arranged for stop-start dialing supervision, keying must be stopped when the S lamp, associated with the pulsing and supervisory circuit, is extinguished after the directing code has been keyed. When the distant sender is ready for pulsing the S lamp will relight as an indication that keying may be resumed. (2) TROUBLE RELEASE: If an error is made in registration, the patch cord should be removed from the TST jack of the trunk to release the connection and the ST key associated with the keyset circuit momentarily operated to release the keyset. Then proceed as for a new call. (3) FLASHING SUPERVISORY INDICATIONS: If, during registration, flashing supervision is received on the S lamp associated with the pulsing and supervisory circuit, a BUSY, OVERFLOW or REORDER condition exists. Refer to the chart in Section 664-600-500, titled, TOLL TESTBOARD NO. 18B - SECONDARY TEST CORD FUNCTIONS - CORD CIRCUIT SUPERVISORY LAMP INDICATIONS ON INTERTOLL DIAL TRUNKS, which covers the identification of these conditions and action to be taken.
4	When the digits of the desired number have been registered, operate the ST key associated with the keyset to disconnect the keyset from the pulsing and supervisory circuit and wait for the distant end to answer.	(1) RELEASE OF KEYSET: The KR and S lamps associated with the keyset circuit will go out to indicate that the keyset has been disconnected from the pulsing and supervisory circuit. (2) CALLED NUMBER ANSWERS: When the called number answers, an "off-hook" signal will be received from the distant end and the S lamp associated with the pulsing and supervisory circuit will go out. (3) RECALL: Some classes of trunks provide for reringing the distant point after a call has been answered. This may be accomplished by momentarily operating the RING key associated with the test cord used.

CHART B: MF KEY PULSING USING PULSING AND SUPERVISORY CIRCUIT PER SD-55327-01 (Required only with rear secondary cords equipped with applique circuit per SD-55395-01) (Contd.)

(5) MF KEY PULSING (Contd.)

STEP	PROCEDURE	REMARKS
4	Contd.	(4) PAD CONTROL: If the connected trunk is arranged for pad control, the pad may be removed by operating the PO key associated with the pulsing and supervisory circuit. (5) SHORT DURATION "ON-HOOK" CONDITION: In the course of some signaling and supervision tests on dial intertoll trunks, an "on-hook" condition of short duration is specified after reaching the 103 test number at the distant end of the trunk. On trunks arranged for reringing, this may be accomplished by momentarily operating the RING key associated with the cord used. (6) RELEASE OF CONNECTION: The circuit will be under control of the originating end and will be held until released by restoring the TALK key and disconnecting the patch cord from the TST jacks of the intertoll trunk under test.

(6) HOLDING TRUNK CONNECTIONS

Where a holding jack is provided with the pulsing and supervisory circuit, established intertoll dial connections may be held at the toll testboard.

STEP	PROCEDURE	REMARKS
1	Insert an out-of-service plug into the OS jack of the trunk it is desired to hold to avoid releasing the connection while patches are being made. Any switchboard or testboard connections to the trunk may then be disconnected.	
2	Patch from the HOLD jack of the holding circuit to the TST jacks of the trunk it is desired to hold.	The HS lamp associated with the holding jack circuit will give "on-hook" (lamp lighted) and "off-hook" (lamp dark) supervision on the held connection.
3	The out-of-service plug may be removed from the OS jack of the trunk if desired. However, the connection will be released when the patch cord is removed, if the out-of-service plug is not reinserted before the patch is taken down.	