MOBILE RADIO

INSTRUCTIONS
FOR
Porta•Mobile II™
CARRIER OPERATED RELAY KIT 19A130600G1 & G2
(OPTIONS 2107 & 2108)

TABLE OF CONTENTS

DESCRIPTION

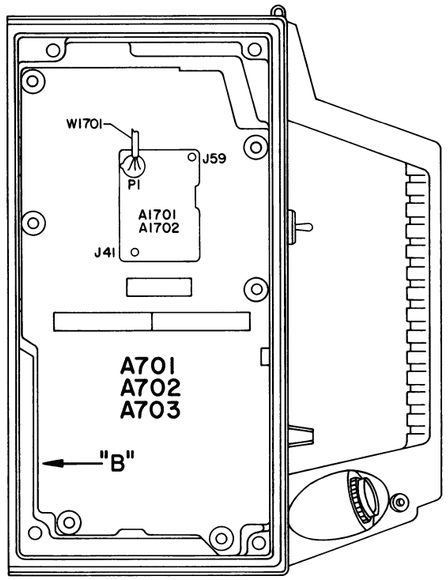
Carrier Operated Relay (COR) Kit 19A130600G1 & G2 is used with Porta•Mobile II™ to control external equipment. COR kit 19A130600G1 provides a single relay with a single set of contact; one normally open and one normally closed. COR Kit 19A130600G2 provides two relays each with a single set of normally open contacts.

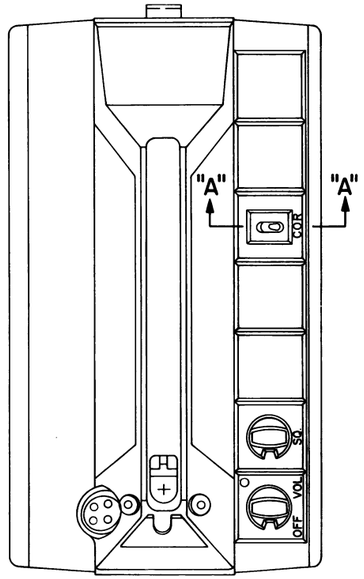
The COR Kit mounts on the system board and the relay pulls-in when the receiver is unsquelched by the squelch control, or the squelch is opened by an RF signal.

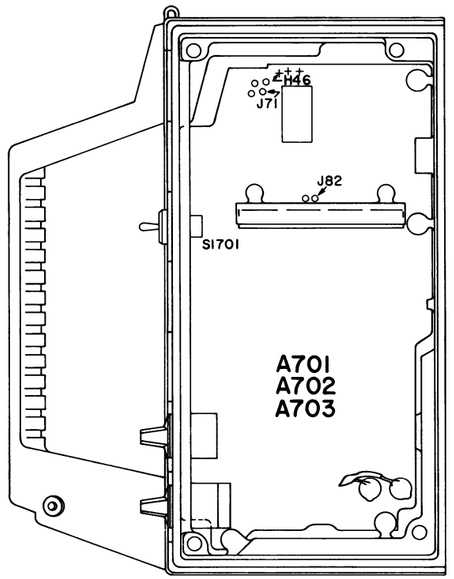
The Installation and Interconnection diagrams contain the necessary information to install a COR Kit (See Table of Contents).

CIRCUIT ANALYSIS

The COR is controlled by the receiver squelch circuit. The base of COR switching transistor Q1 is connected through J1-1 to the receiver tone switch or audio mute output. When the receiver is unsquelched a positive voltage from the receiver squelch circuit is applied to the base of Q1 causing Q1 to conduct. Q1 conducting pulls the relay(s) in.







THESE INSTRUCTIONS COVER THE INSTALLATION OF OPTION PL19A130600G1 & G2. C.O.R.

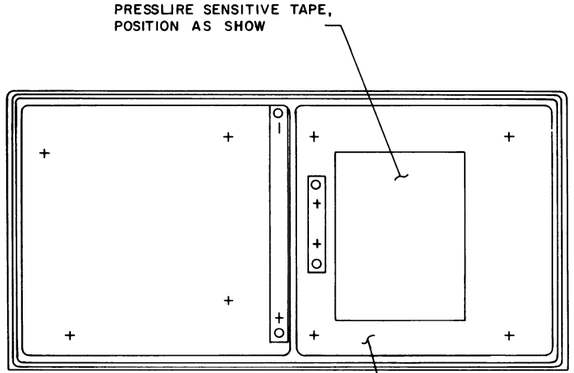
CONNECTIONS CHART			
	FROM	TO	WIRE COLOR
W1701	P2	A701,A702,A703-J82	T28-W-V
	P1-2	✱ J703/J704-4	T28-W-BK
	P1-3	✱ J703/J704-5	T28-W-BR
	P1-5	✱ J703/J704-8	T28-W-O
	P1-6	✱ J703/J704-6	T28-W-Y
	P3	A701,A702,A703-J71	T28-W-R
	P1-8	S1701-2 ✱ ✱	T28-BK
✱ ✱ S1701-1		▲ A701,A702,A703-H46	T28-BK

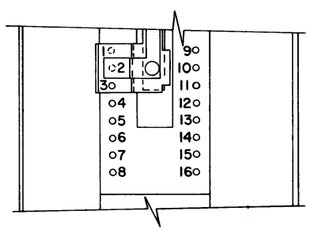
✱ SEE NOTE 11

✱ ✱ SEE NOTE 12

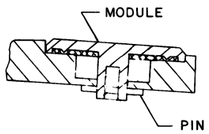
▲ TERMINATE PER DETAIL 'C'

PRESSURE SENSITIVE TAPE, POSITION AS SHOW

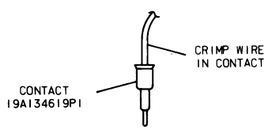




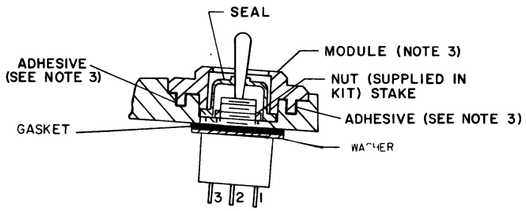
VIEW OF J704



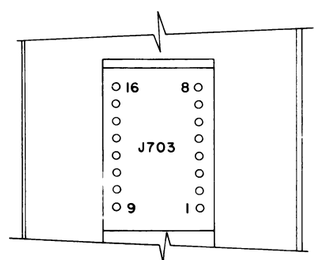
SECTION "A-A"
BEFORE SWITCH ASM
(PARTIAL)



DETAIL 'C'



SECTION "A-A"
AFTER S1701 ASM
(PARTIAL)



VIEW AT "B"

INSTRUCTIONS:

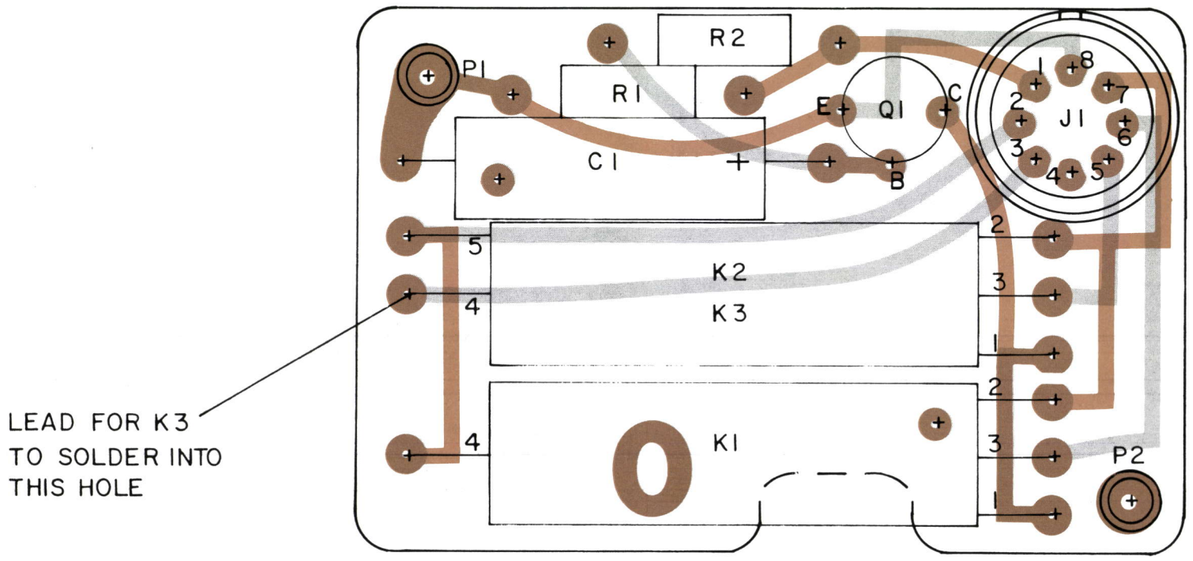
1. REMOVE FRONT AND BACK COVERS IF PRESENT.
2. REMOVE PIN, GASKET AND DUMMY AT POSITION SHOWN AND DISCARD.
3. ASSEMBLE WASHER AND GASKET TO S1701, SEAL AND MODULE (PART OF KIT 19A130600) IN POSITION SHOWN. FILL KEYING SLOT IN THREADED SWITCH BUSHING WITH RTV PER P15E-EA106P OR P2. DISCARD LOCKING RING THAT IS PART OF SWITCH. APPLY ADHESIVE TO CAVITIES AS SHOWN PER CPD PROCESS P15F-EA106P4 AND ASSEMBLE MODULE TO CASE. OVERFLOW OF ADHESIVE BETWEEN MODULE AND CASE SURFACES IS PERMISSIBLE CLAMP MODULE DURING THE CURING CYCLE.
4. ASSEMBLE INSULATOR AND COR BOARD (PART OF KIT 19A130600) TO J41 AND J59 AS SHOWN.
5. MAKE CONNECTIONS PER CHART ABOVE.
6. SOLDER ALL ELECTRICAL CONNECTIONS.
7. PLUG W1701-P1 TO A1701/A1702-J1 AS SHOWN.

9. ASSEMBLE FRONT AND REAR COVERS IF REQUIRED.
10. FOR CONTROL WIRE CLAMPING INFORMATION REFER TO DRAWING 10D423115 NOTE 7.
11. SUPPORT WIRES SOLDERED TO J703 BY STAKING IN PLACE WITH A COATING OF ADHESIVE PER P15F-EA106P2.
12. SLEEVE WIRES TO S1701 USING 19C301208 SLEEVING.

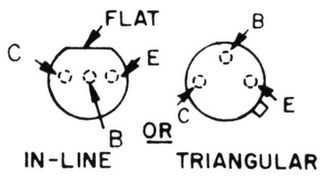
(19D423220, Rev. 8)

INSTALLATION DIAGRAM

CARRIER OPERATED RELAY 19A130600G1 & G2



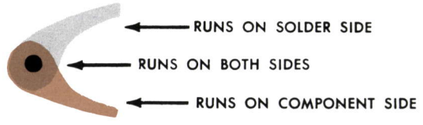
LEAD IDENTIFICATION FOR



TOP VIEW

NOTE: LEAD ARRANGEMENT, AND NOT CASE SHAPE, IS DETERMINING FACTOR FOR LEAD IDENTIFICATION.

(19C327811, Rev. 0)
(19C321516, Sh. 2, Rev. 0)
(19C321516, Sh. 3, Rev. 0)

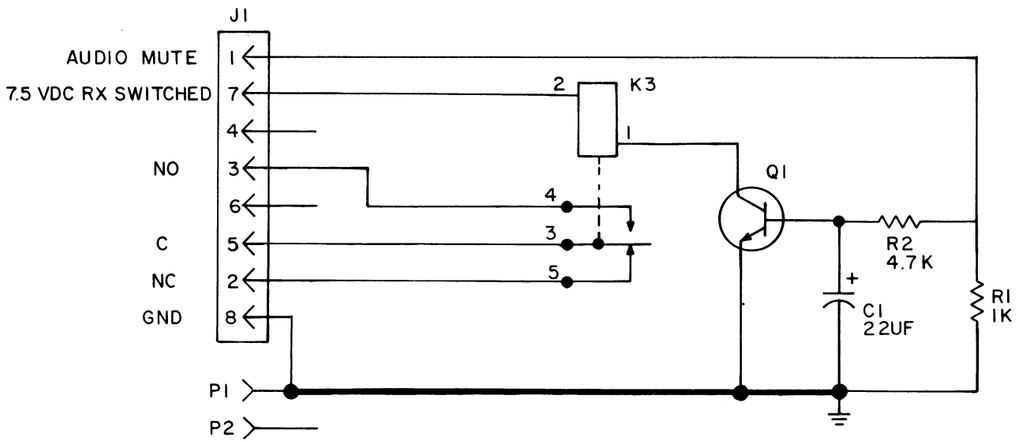


OUTLINE DIAGRAM

CARRIER OPERATED RELAY
19A130600G1 & G2

4 Issue 1

SINGLE RELAY

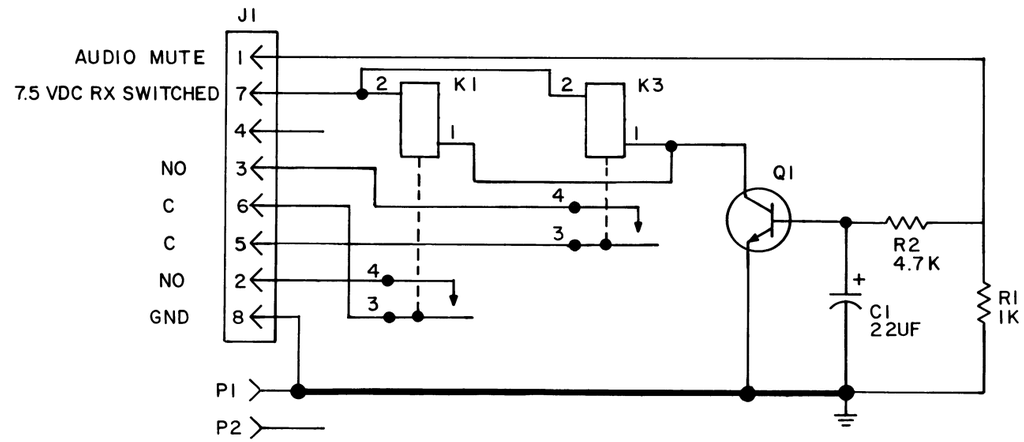


ALL RESISTORS ARE 1/4 WATT UNLESS OTHERWISE SPECIFIED AND RESISTOR VALUES IN OHMS UNLESS FOLLOWED BY K=1000 OHMS OR MEG = 1,000,000 OHMS. CAPACITOR VALUES IN PICOFARADS (EQUAL TO MICROMICROFARADS) UNLESS FOLLOWED BY UF = MICROFARADS. INDUCTANCE VALUES IN MICROHENRYS UNLESS FOLLOWED BY MH= MILLIHENRYS OR H=HENRYS.

IN ORDER TO RETAIN RATED EQUIPMENT PERFORMANCE, REPLACEMENT OF ANY SERVICE PART SHOULD BE MADE ONLY WITH A COMPONENT HAVING THE SPECIFICATIONS SHOWN ON THE PARTS LIST FOR THAT PART.

(19B226801, Rev. 1)

DOUBLE RELAY



ALL RESISTORS ARE 1/4 WATT UNLESS OTHERWISE SPECIFIED AND RESISTOR VALUES IN OHMS UNLESS FOLLOWED BY K=1000 OHMS OR MEG = 1,000,000 OHMS. CAPACITOR VALUES IN PICOFARADS (EQUAL TO MICROMICROFARADS) UNLESS FOLLOWED BY UF = MICROFARADS. INDUCTANCE VALUES IN MICROHENRYS UNLESS FOLLOWED BY MH= MILLIHENRYS OR H=HENRYS

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(19B226802, Rev. 1)

SCHEMATIC DIAGRAMS

CARRIER OPERATED RELAY
19A130600G1 & G2

Issue 1

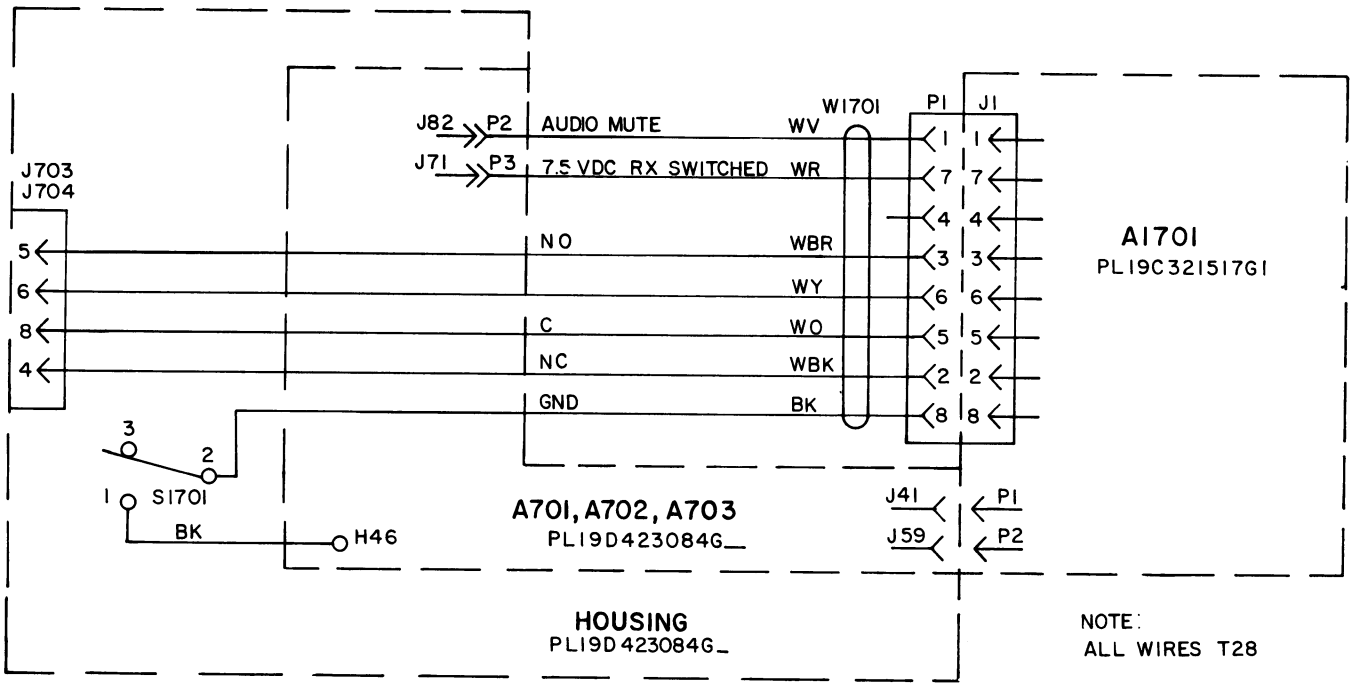
PARTS LIST

LBI30421A

CARRIER OPERATED RELAY KIT
19A130600G1 SINGLE RELAY
19A130600G2 DOUBLE RELAY

SYMBOL	GE PART NO.	DESCRIPTION
A1701 and A1702		COMPONENT BOARD 19C321517G1 SINGLE RELAY 19C321517G2 DOUBLE RELAY (Not part of kit, must be ordered separely)
		- - - - - - - - - - CAPACITORS - - - - - - - - - -
C1	5496267P10	Tantalum: 22 µf ±20%, 15 VDCW; sim to Sprague Type 150D.
		- - - - - - - - JACKS AND RECEPTACLES - - - - - - - -
J1	19A116122P1	Terminal, feed-thru: sim to Warren Co. 1-B-2994-4.
		- - - - - - - - - - - - RELAYS - - - - - - - - - - -
K1	19B209566P1	Reed: 630 ohms ±10% coil res, 6 VDC nominal, 1 form A contact; sim to Electronic Instrument & Specialty Corp. 2172-6.
K2	19B209566P2	Reed: 325 ohms +15% -10% coil res, 6 VDC nominal, 1 form C contact; sim to Electronic Instrument & Specialty Corp. 2275-6.
K3	19B209566P1	Reed: 630 ohms ±10% coil res, 6 VDC nominal, 1 form A contact; sim to Electronic Instrument & Specialty Corp. 2172-6.
		- - - - - - - - - - - - PLUGS - - - - - - - - - - -
P1 and P2	19A115834P4	Contact, electrical: sim to AMP 2-332070-9.
		- - - - - - - - - - TRANSISTORS - - - - - - - - -
Q1	19A115910P1	Silicon, NPN; sim to Type 2N3904.
		- - - - - - - - - - RESISTORS - - - - - - - - - -
R1	3R152P102J	Composition: 1K ohms ±5%, 1/4 w.
R2	3R152P472J	Composition: 4.7K ohms ±5%, 1/4 w.
		- - - - - - - - - - SWITCHES - - - - - - - - - -
S1701	19A116648P5	Toggle: SPDT; sim to C & K Components 7101SDG.
		- - - - - - - - - - - - CABLES - - - - - - - - - - -
W1701		CABLE, RELAY ASSEMBLY 19B226806G1
		- - - - - - - - - - - - PLUGS - - - - - - - - - - -
P1	19A127569G1	Plug: 8 contacts.
P2 and P3	19A115834P4	Contact, electrical: sim to AMP 2-332070-9.
		- - - - - - - - - - MISCELLANEOUS - - - - - - - - - -
	NP276504P8	Nameplate, COR.
	19B226358G8	Carrier Operated Relay Lens.
	19B227435G1	Insulator.
	19C320975P1	Seal.
	19A127319P4	Nut: thd. size 1/4-40.
	19B216316P1	Insulator. (Used with J1 on A1701, A1702).

*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES



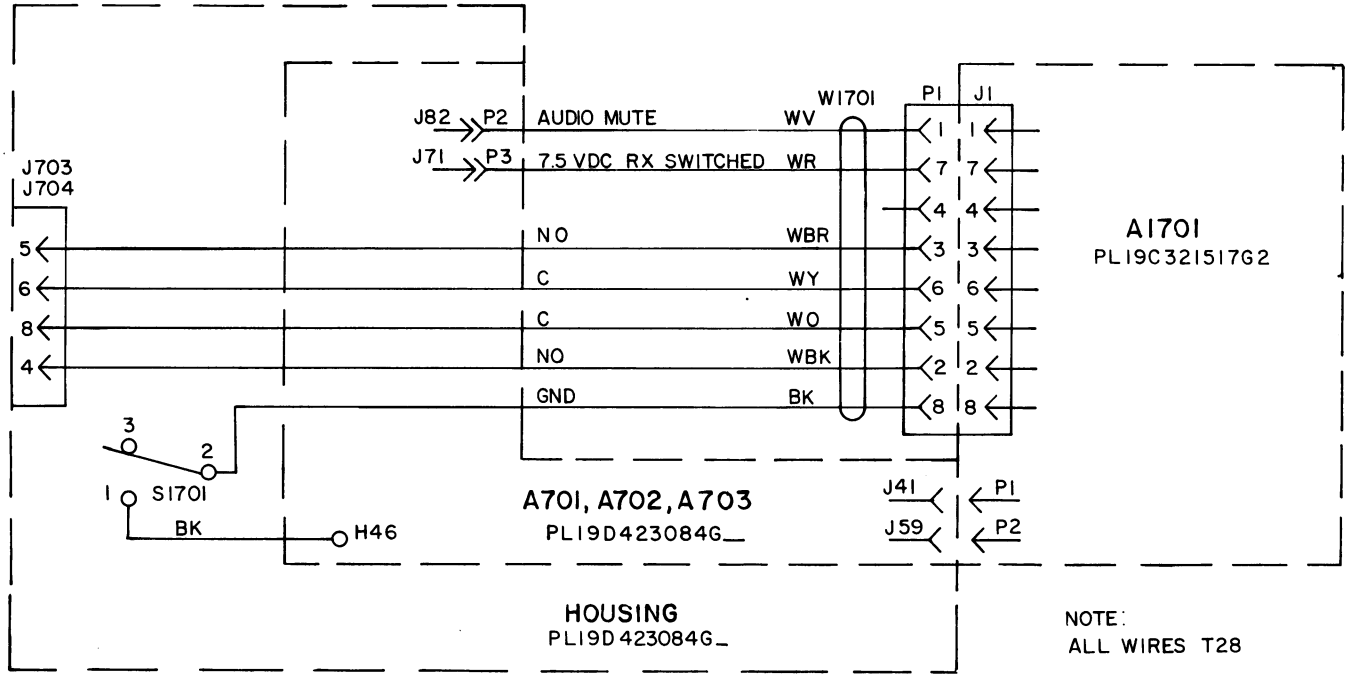
IN ORDER TO RETAIN RATED EQUIPMENT PERFORMANCE, REPLACEMENT OF ANY SERVICE PART SHOULD BE MADE ONLY WITH A COMPONENT HAVING THE SPECIFICATIONS SHOWN ON THE PARTS LIST FOR THAT PART.

(19B227267, Rev. 2)

INTERCONNECTION DIAGRAM

CARRIER OPERATED SINGLE RELAY

Issue 1



(19B227268, Rev. 2)

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INTERCONNECTION DIAGRAM

CARRIER OPERATED DOUBLE RELAY