COMBINED AND COMPLETING MARKER CIRCUITS-PART 22
TESTS USING MASTER TEST FRAME
NO. 5 CROSSBAR OFFICES

1. GENERAL

1.001 This addendum supplements Section 218-122-522, Issue 3. Place this pink sheet ahead of Page 1 of the section.

1.002 The reasons for issuing this addendum are listed below. This addendum does not affect the Equipment Test List(s).

(a) To add to the verification in Steps 15 and 18 of Test CH.
(b) To add a note in Test CI referencing offices equipped with the call data transmitter (CDT).

2. CHANGES TO SECTION

2.001 On Page 15, Steps 15 and 18, add the following under verification:

If ETS provided—
RA2 lamp lighted.

2.002 On Page 16, under Test CI heading, add Note 2 as follows: If office is equipped with call data transmitter (CDT) and traffic sampling feature associated with CDT is being tested, use the procedure given in Test DS, Section 218-122-534.

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1. **GENERAL**

1.01 This section is Part 22 in a series of sections for testing combined and completing markers.

1.02 The reasons for reissuing this section are listed below. Revision arrows are used to emphasize the more significant changes. This reissue affects Equipment Test Lists.

(a) To revise test procedures to include offices arranged with Electronic Translation System (ETS).

(b) To include under Test CG “Line Link Pulsing Features,” a procedure for testing hundreds block translator used for thousands block containing POTS and LLP numbers.

(c) To make minor changes as required.

1.03 The tests covered are:

**CG. Line Link Pulsing Features:** The following features are checked:

1. Intraoffice flat rate and AMA. 2. Line route relay selection in non ETS offices and line route selection if ETS is provided. 3. Restricted station. 4. Line busy. 5. All line circuits busy. 6. Trouble intercept.

**CH. Paired Line Link Frames Feature:** This test checks that the marker will complete a call using mate line link frame junctors. It also checks that the marker recognizes a busy mate line link frame or both frames simultaneously busy.

1.04 **Lettered Steps:** A letter a, b, c, etc, added to a step number in Part 3 of this section indicates an action which may or may not be required depending on local conditions. The condition under which a lettered step or a series of lettered steps should be made is given in the ACTION column, and all steps governed by the same condition are designated by the same letter within a test. Where a condition does not apply, all steps designated by that letter should be omitted.

1.05 The manner of selecting some circuits and test conditions at the master test frame (MTF) and its associated circuits varies depending on the apparatus options furnished with these circuits. Therefore, where variable means of selection are provided, precise instructions for the selection of circuits and test conditions are not given. Precise instructions for the use of these variable means are given in Section 218-106-301.

1.06 The location statement, At MTF—, is used to refer to all apparatus located on the four basic bays of the MTF.

1.07 When the office is arranged for LAMA-C or ETS, the distributors and scanners associated with the marker and trunk used in the test call must be in service or in a maintenance busy condition—not in an out-of-service condition. To change a scanner or distributor from an out-of-service to a maintenance-busy condition, use the procedure given in the following sections for the office arrangement.

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1.08 Additional test procedures are available for verification of leads between the completing marker and the distributor and scanner (DAS). Refer to Section 218-122-531 for DAS application to LAMA-C or Section 218-799-321 for DAS application to ETS.

1.09 When making tests in No. 5 crossbar offices arranged with Electronic Translation System and test verification requires a completing marker trace output (teletype printout or data dump) to determine the data used to process a call, operate the TCPO key at the master test frame (MTF). The data dump received at the maintenance teletypewriters (TTY) may be in a raw form (binary or hexadecimal numbering system), formatted into decimal and written text, or a combination of both. For additional information on data dumps and formats used, refer to Section 218-799-102.

### 2. APPARATUS

#### All Tests

2.01 Master test control circuit, SD-25800-01.

**Test CG**

2.02 322A (make-busy) plugs as required.

**Test Cl**

2.03 Trunk test circuit, SD-25918-01.

### 3. METHOD

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Note:</strong> Refer to paragraphs 1.04 through 1.09.</td>
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<td></td>
</tr>
</tbody>
</table>

**CG. Line Link Pulsing Features**

**Intraoffice—Flat Rate**

1. At MTF—
   - Restore all keys and switches.

2. Momentarily operate RL key. All lamps extinguished.

3. Select ORIG class of test.

4. Operate A_ through G_ digits as required to select an intraoffice route to a PBX station reached by an LLP line circuit.

5. Select OR class of call with translator indication as required for access to selected route.

6. Select line location for access to selected route.

7. Select class of service and rate treatment as required for access to selected route.

8a • If ETS provided—
   - Operate PCS key. •

Page 2
9 Select marker under test.

10 Operate REC key.

11b If ETS provided and CM dump is required—Operate TCPO key.

Note: See paragraph 1.09.

12 Momentarily operate ST key.

13 Momentarily operate RL key.

14c If office is equipped for 10-digit local completion—Operate A_ through K_ digits as required to select an intraoffice route to a PBX station reached by an LLP line circuit.

15c Repeat Steps 12 and 13.

16 Restore all keys and switches.

17 Perform Steps 1 through 11b.

18 Momentarily operate ST key.

MRL lamp lighted.
Two trouble records taken.
FS_, TS_, TB_, TG_, LC_, LV_, FAK/FBK designations perforated indicating line location of B appearance of intraoffice trunk (first trouble card), A appearance (second trouble card).

If ETS provided—TG_ designation not perforated.
FTT_, FUT_, VGT_, HGT_, VFT_ designations perforated indicating line location of line circuit.
RS_(0/1), RS_(2-8) silent level, LRA, TBS_, FK, OSG_, CL_, DL_, CP_ designations perforated as required (first trouble card).

If ETS provided—
TBS_, DL_, CP_ designations not perforated.

All lamps extinguished.

LAMA-C and ETS* not provided
MRL lamp lighted.
Trouble record taken.
FS_, TS_, TG_, TB_, LC_, LV_, FAK/FBK designations perforated indicating location of outgoing end of outgoing-incoming trunk.
LRA, GS_, CP_, MB_, RN_, DL_, CL_, AR_, BR_, CR_, OSG_, AMA designations perforated as required.
19 Momentarily operate RL key.

20c If office is equipped for 10-digit local completion—
Operate A_ through K_ digits as required to select an intraoffice route to a PBX station reached by an LLP line circuit.

21c Repeat Steps 18 and 19.

22 Restore all keys and switches.

**LAMA-C provided**

- MRL lamp lighted.
- Two trouble records taken.
- \(FS_\), \(TS_\), \(TB_\), \(TG_\), \(LC_\), \(LV_\), FAK/FBK designations perforated indicating line location of B appearance of intraoffice trunk (first trouble card), A appearance (second trouble card).
- \(FTT_\), \(FUT_\), \(VGT_\), \(HGT_\), \(VFT_\) designations perforated indicating line location of line circuit.
- \(RS_\)(0/1), \(RS_\)(2-8) silent level, LRA, TBS_, FK, OSG_, CL_, DL_, CP_ designations perforated as required (first trouble card).

**ETS provided**

- MRL lamp lighted.
- Two trouble records taken.
- \(FS_\), \(TS_\), \(TB_\), \(LC_\), \(LV_\), FAK/FBK designations perforated indicating line location of B appearance of intraoffice trunk (first trouble card), A appearance (second trouble card).
- \(FTT_\), \(FUT_\), \(VGT_\), \(HGT_\), \(VFT_\) designations perforated indicating line location of line circuit.
- \(RS_\)(0/1), \(RS_\)(2-8) silent level, LRA, FK, OSG_, CL_, designations perforated as required (first trouble card).

All lamps extinguished.

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**Treatment by Office Code—Operation of LR_ Relay From Code Point—$^\text{ETS Not Provided}$**

23 At MTF—
Restore all keys and switches.

24 Momentarily operate RL key.

25 Select INC class of test.
STEP | ACTION | VERIFICATION

26 | Select A_ through G_ digits as required to direct call to an unrestricted LLP station with translation determined by office code. | MRL lamp lighted.
27 | Select INC class of call with translator indication as required for completion to called line. | Trouble record taken.
28 | Select incoming trunk class as required for completion to called line. | FTT_, FUT_, VGT_, HGT_, VFT_ designations perforated indicating line location of line link pulsing circuit used in test.
29 | Select any trunk link frame. | RS_(0/1), RS_(2-8) silent level, LRA, TBS_, FK, OSG_, CL_, DL_, CP_ designations perforated.
30 | Select marker under test. | All lamps extinguished.
31 | Operate $CCT, REC keys. | All lamps extinguished.
32 | Momentarily operate ST key. | All lamps extinguished.
33 | Momentarily operate RL key. | All lamps extinguished.
34 | Restore all keys and switches. | All lamps extinguished.

Treatment by Thousands Block—All Numbers in Thousands Block Associated With Same LR_ Relay—
$ETS Not Provided$

35 | At MTF— 
Restore all keys and switches. | All lamps extinguished.
36 | Momentarily operate RL key. | All lamps extinguished.
37 | Select INC class of test. | All lamps extinguished.
38 | Select A_ through G_ digits as required to direct call to unrestricted LLP station associated with a thousands block containing only LLP numbers associated with same LR_ relay. | All lamps extinguished.
39 | Select INC class of call with translator indication as required for completion to called line. | All lamps extinguished.
40 | Select incoming trunk class as required for completion to called line. | All lamps extinguished.
41 | Select any trunk link frame. | All lamps extinguished.
<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>42</td>
<td>Select marker under test.</td>
<td>MRL lamp lighted.</td>
</tr>
<tr>
<td>43</td>
<td>Operate •CCT• REC keys.</td>
<td>Trouble record taken.</td>
</tr>
<tr>
<td>44</td>
<td>Momentarily operate ST key.</td>
<td>FTT_, FUT_, VGT_, HGT_, VFT_ designations perforated indicating line location of line link pulsing circuit used in test.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RS_(0/1), RS_(2-8) silent level, LRA, TBS_, FK, OSG_, CL_, DL_, CP_ designations perforated.</td>
</tr>
<tr>
<td>45</td>
<td>Momentarily operate RL key.</td>
<td>All lamps extinguished.</td>
</tr>
<tr>
<td>46</td>
<td>Restore all keys and switches.</td>
<td></td>
</tr>
</tbody>
</table>

**Thousands Block Contains Only LLP Numbers—Number Group Determined by Hundreds Digit—All Numbers in Hundreds Block Associated With Same LR_ Relay—•ETS Not Provided•**

<table>
<thead>
<tr>
<th></th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>47</td>
<td>At MTF—</td>
<td>All lamps extinguished.</td>
</tr>
<tr>
<td></td>
<td>Restore all keys and switches.</td>
<td></td>
</tr>
<tr>
<td>48</td>
<td>Momentarily operate RL key.</td>
<td></td>
</tr>
<tr>
<td>49</td>
<td>Select INC class of test.</td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>Select A_ through G_ digits as required to direct call to unrestricted LLP station associated with a number group selected depending on hundreds digit.</td>
<td></td>
</tr>
<tr>
<td>51</td>
<td>Select INC class of call with translator indication as required for completion to called line.</td>
<td></td>
</tr>
<tr>
<td>52</td>
<td>Select incoming trunk class as required for completion to called line.</td>
<td></td>
</tr>
<tr>
<td>53</td>
<td>Select any trunk link frame.</td>
<td></td>
</tr>
<tr>
<td>54</td>
<td>Select marker under test.</td>
<td></td>
</tr>
<tr>
<td>55</td>
<td>Operate •CCT• REC keys.</td>
<td>MRL lamp lighted.</td>
</tr>
<tr>
<td>56</td>
<td>Momentarily operate ST key.</td>
<td>Trouble record taken.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FTT_, FUT_, VGT_, HGT_, VFT_ designations perforated indicating line location of line link pulsing circuit used in test.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RS_(0/1), RS_(2-8) silent level, LRA, TBS_,</td>
</tr>
</tbody>
</table>
•

STEP | ACTION
--- | ---
57 | Momentarily operate RL key.
58 | Restore all keys and switches.

Thousands Block Contains Only LLP Numbers—Number Group Determined by Hundreds Digit and all Hundreds Blocks Require Individual Treatment—ETS Not Provided

59 | At MTF—
   | Restore all keys and switches.
60 | Momentarily operate RL key.
61 | Select INC class of test.
62 | Select A_ through G_ digits as required to direct call to unrestricted LLP station associated with a number group selected depending on hundreds digit and more than one LR_ relay associated with hundreds block.
63 | Select INC class of call with translator indication as required for completion to called line.
64 | Select incoming trunk class as required for completion to called line.
65 | Select any trunk link frame.
66 | Select marker under test.
67 | Operate CCT, REC keys.
68 | Momentarily operate ST key.
69 | Momentarily operate RL key.
70 | Restore all keys and switches.

VERIFICATION

FK, OSG_, CL_, DL_, CP_ designations perforated.

All lamps extinguished.

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All lamps extinguished.

MRL lamp lighted.
Trouble record taken.
FTT_, FUT_, VGT_, HGT_, VFT_ designations perforated indicating line location of line link pulsing circuit used in test.
RS_(0/1), RS_(2-8) silent level, LRA, TBS_, FK, OSG_, CL_, DL_, CP_ designations perforated.

All lamps extinguished.
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**Number Group Determined by Hundreds Digit and Using Thousands Digit of an Unequipped Number Group (AST Relay Operated) — ETS Not Provided**

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>71</td>
<td>At MTF—&lt;br&gt; Restore all keys and switches.</td>
</tr>
<tr>
<td>72</td>
<td>Momentarily operate RL key.</td>
</tr>
<tr>
<td>73</td>
<td>Select INC class of test.</td>
</tr>
<tr>
<td>74</td>
<td>Select A_ through G_ digits as required to direct call to unrestricted LLP station associated with a number group selected depending upon the hundreds digit and using a thousands digit of an unequipped number group.</td>
</tr>
<tr>
<td>75</td>
<td>Select INC class of call with translator indication as required for completion to called line.</td>
</tr>
<tr>
<td>76</td>
<td>Select incoming trunk class as required for completion to called line.</td>
</tr>
<tr>
<td>77</td>
<td>Select any trunk link frame.</td>
</tr>
<tr>
<td>78</td>
<td>Select marker under test.</td>
</tr>
<tr>
<td>79</td>
<td>Operate (\text{CCT}^\dagger \text{REC} ) keys.</td>
</tr>
<tr>
<td>80</td>
<td>Momentarily operate ST key.</td>
</tr>
</tbody>
</table>

**Verification**

- All lamps extinguished.
- MRL lamp lighted.
- Trouble record taken.
- \(\text{FTT}_\cdot, \text{FUT}_\cdot, \text{VGT}_\cdot, \text{HGT}_\cdot, \text{VFT}_\cdot\) designations perforated indicating line location of line link pulsing circuit used in test.
- \(\text{RS}_{(0/1)}, \text{RS}_{(2-8)}\) silent level, \(\text{LRA, TBS}_\cdot, \text{FK}, \text{OSG}_\cdot, \text{CL}_\cdot, \text{DL}_\cdot, \text{CP}_\cdot\) designations perforated.

**\(\text{Hundreds Block Translator Used for Thousands Block Containing POTS and LLP Numbers—Number Group Determined by Hundreds Digit—ETS not Provided}**

<table>
<thead>
<tr>
<th>STEP</th>
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</tr>
</thead>
<tbody>
<tr>
<td>81</td>
<td>Momentarily operate RL key.</td>
</tr>
<tr>
<td>82</td>
<td>Restore all keys and switches.</td>
</tr>
<tr>
<td>83</td>
<td>At MTF—&lt;br&gt; Restore all keys and switches.</td>
</tr>
<tr>
<td>84</td>
<td>Momentarily operate RL key.</td>
</tr>
<tr>
<td>85</td>
<td>Select INC class of test.</td>
</tr>
</tbody>
</table>

**Verification**

- All lamps extinguished.
Select A_ through G_ digits as required to direct call to unrestricted LLP station associated with a number group depending on hundreds digit selected.

Select INC class of call with translator indication as required for completion to called line.

Select incoming trunk class as required for completion to called line.

Select any trunk link frame.

Select marker under test.

Operate •CCT,• REC keys.

Momentarily operate ST key.

Momentarily operate RL key.

Select A_ through G_ digits as required to direct call to POTS station associated with a number group depending on hundreds digit selected.

Momentarily operate ST key.

Momentarily operate RL key.

Restore all keys and switches.

MRL lamp lighted.

Trouble record taken.

FTT_, FUT_, VGT_, HGT_, VFT_ designations perforated indicating line location of line link pulsing circuit used in test.

RS_(0/1), RS_(2-8) silent level, LRA, TBS_, FK, OSG_, CL_, CP_ designations perforated.

All lamps extinguished.

MRL lamp lighted.

Trouble record taken.

FTT_, FUT_, VGT_, HGT_, VFT_ designations perforated indicating line location of POTS station selected in Step 94.

All lamps extinguished.

At MTF—

Restore all keys and switches.

Momentarily operate RL key.

Select INC class of test.
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<th>STEP</th>
<th>ACTION</th>
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</thead>
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<tr>
<td>101</td>
<td>Select A_ through G_ digits as required to direct call to unrestricted LLP station.</td>
<td></td>
</tr>
<tr>
<td>102</td>
<td>Select INC class of call with translator indication as required for completion to called line.</td>
<td></td>
</tr>
<tr>
<td>103</td>
<td>Select incoming trunk class as required for completion to called line.</td>
<td></td>
</tr>
<tr>
<td>104</td>
<td>Select any trunk link frame.</td>
<td></td>
</tr>
<tr>
<td>105</td>
<td>Select marker under test.</td>
<td></td>
</tr>
<tr>
<td>106</td>
<td>Operate CCT, REC keys.</td>
<td></td>
</tr>
<tr>
<td>107d</td>
<td>If CM dump is required— Operate TCPO key.</td>
<td></td>
</tr>
<tr>
<td>108</td>
<td>Momentarily operate ST key.</td>
<td>MRL lamp lighted.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Trouble record taken.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FTT_, FUT_, VGT_, HGT_, VFT_ designations perforated indicating line location of line link pulsing circuit used in test.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RS_(0/1), RS_(2-8) silent level, LRA, FK, OSG_, CL_ designations perforated.</td>
</tr>
<tr>
<td>109</td>
<td>Momentarily operate RL key.</td>
<td>All lamps extinguished.</td>
</tr>
<tr>
<td>110</td>
<td>Restore all keys and switches.</td>
<td></td>
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</tbody>
</table>

**Call to Restricted Station**

<table>
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<th>STEP</th>
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<th>VERIFICATION</th>
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</thead>
<tbody>
<tr>
<td>111</td>
<td>At MTF— Restore all keys and switches.</td>
<td></td>
</tr>
<tr>
<td>112</td>
<td>Momentarily operate RL key.</td>
<td>All lamps extinguished.</td>
</tr>
<tr>
<td>113</td>
<td>Select INC class of test.</td>
<td></td>
</tr>
<tr>
<td>114</td>
<td>Select A_ through G_ digits as required to direct call to restricted station reached by a line link pulsing line circuit.</td>
<td></td>
</tr>
<tr>
<td>115</td>
<td>Select INC class of call with translator indication as required for completion to called line.</td>
<td></td>
</tr>
<tr>
<td>116</td>
<td>Select incoming trunk class as required for completion to called line.</td>
<td></td>
</tr>
<tr>
<td>117</td>
<td>Select any trunk link frame.</td>
<td></td>
</tr>
<tr>
<td>118</td>
<td>Select marker under test.</td>
<td></td>
</tr>
</tbody>
</table>
STEP | ACTION | VERIFICATION
--- | --- | ---
119 | Operate *CCT, REC keys. | MRL lamp lighted.
120b | *If ETS provided and CM dump is required— Operate TCPO key.* | Trouble record taken.

121 | Momentarily operate ST key. | FTT, FUT, VGT, HGT, VFT designations perforated indicating line location of announcement, intercept, or attendant trunk.

122 | Momentarily operate RL key. | TER, BN, PAN, RIP or ATT designations perforated.
123 | Restore all keys and switches. | *If ETS provided— PAN or RIP designation not perforated.*

**Call to Busy Line**

124 | At MTF— Restore all keys and switches. | All lamps extinguished.
125 | Momentarily operate RL key. | All lamps extinguished.
126 | Select INC class of test. | 
127 | Select A through G digits as required to direct call to station reached by a line link pulsing line circuit. | 
128 | Select INC class of call with translator indication as required for completion to called line. | 
129 | Select incoming trunk class as required for completion to called line. | 
130 | Select any trunk link frame. | 
131 | Select marker under test. | 
132 | Operate LB, *CCT, REC keys.* | 
133b | *If ETS provided and CM dump is required— Operate TCPO key.* | BY, MRL lamps lighted.

134 | Momentarily operate ST key. | Trouble record taken.

FTT, FUT, VGT, HGT, VFT designations perforated indicating line location of tone trunk.
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</thead>
<tbody>
<tr>
<td>135</td>
<td>Momentarily operate RL key.</td>
<td>All lamps extinguished.</td>
</tr>
<tr>
<td>136</td>
<td>Restore all keys and switches.</td>
<td></td>
</tr>
</tbody>
</table>

**All Line Circuits Busy—ETS Not Provided**

137 At MTF—
   Restore all keys and switches.
138 Momentarily operate RL key. All lamps extinguished.
139 Select INC class of test.
140 Select A_ through G_ digits as required to select route using an LLP line circuit.
141 Select INC class of call with translator indication as required for completion to called line.
142 Select incoming trunk class as required for completion to called line.
143 Select any trunk link frame.
144 Set TBT_, TBU_ switches to select LLP line circuit within a tens block.
145 Select marker under test.
146 Operate EBH, CCT, REC keys.
147 Momentarily operate ST key.
   MRL lamp lighted. Trouble record taken. If office is arranged to return overflow for all line circuits busy—
   OV designation perforated. If office is not arranged to return overflow for all line circuits busy—
   LB, BY designations perforated.
148 Momentarily operate RL key. All lamps extinguished.
149 Restore all keys and switches.
150 Select ORIG class of test.
151 Select A_ through G_ digits as required to select an LLP line circuit within a tens block.
152 Select OR class of call with translator indication as required for access to selected route.

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STEP | ACTION | VERIFICATION
--- | --- | ---
153 | Select line location as required having access to selected route. | MRL lamp lighted.
154 | Select class of service and rate treatment as required for access to selected route. | Trouble record taken.
155 | Set TBT, TBU switches to select LLP line circuit within a tens block. | If office is arranged to return overflow for all line circuits busy—
156 | Select marker under test. | OV designation perforated.
157 | Operate EBH, REC keys. | If office is not arranged to return overflow for all line circuits busy—
158 | Momentarily operate ST key. | LB, BY designations perforated.
159 | Momentarily operate RL key. | All lamps extinguished.
160 | Restore all keys and switches. | All lamps extinguished.

**Trouble Intercept—ETS Not Provided**

161 | Determine from office records an LLP customer group number and associated LN (00-119) ST marker cross-connection. (If possible, select a customer group routed to trouble intercept.) | All lamps extinguished.
162 | At MTF— | All lamps extinguished.
163 | Restore all keys and switches. | Restore all keys and switches.
164 | Momentarily operate RL key. | Select ORIG class of test.
165 | Select A_ through G_ digits as required to direct an intraoffice call to LLP customer group number selected in Step 161. | Insert make-busy plug into MMB_ jack of marker being tested.
166e | If a customer group which is routed to trouble intercept is not available— | At marker frame—
167e | Insert make-busy plug into MMB_ jack of marker being tested. | Disconnect LN (00-119) ST cross-connection associated with LLP customer group number.
<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>to be used in test and temporarily cross-connect to BNTH.</td>
<td>MRL lamp lighted. Two trouble records taken. First trouble record—BN or RI designation perforated.</td>
</tr>
<tr>
<td>168</td>
<td>At MTF—Select line location as required having access to number selected.</td>
<td>All lamps extinguished.</td>
</tr>
<tr>
<td>169</td>
<td>Select class of service and rate treatment as required having access to number selected.</td>
<td></td>
</tr>
<tr>
<td>170</td>
<td>Select OR class of call with translator indication as required for access to number selected.</td>
<td></td>
</tr>
<tr>
<td>171</td>
<td>Select marker under test.</td>
<td></td>
</tr>
<tr>
<td>172</td>
<td>Operate REC key.</td>
<td></td>
</tr>
<tr>
<td>173</td>
<td>Momentarily operate ST key.</td>
<td></td>
</tr>
<tr>
<td>174</td>
<td>Momentarily operate RL key.</td>
<td></td>
</tr>
<tr>
<td>175e</td>
<td>If a customer group which is routed to trouble intercept is not available—At marker frame—Remove temporary cross-connection placed between LN (00-119) ST to BNTH and replace cross-connection which was removed in Step 167e.</td>
<td>Caution: Verify that cross-connection has been replaced and that LLP customer group is working properly before proceeding to next step.</td>
</tr>
<tr>
<td>176e</td>
<td>At MTF—Remove make-busy plug from MMB_ jack of marker tested.</td>
<td></td>
</tr>
<tr>
<td>177</td>
<td>Restore all keys and switches.</td>
<td></td>
</tr>
</tbody>
</table>

**CH. Paired Line Link Frames Feature**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>At MTF—Restore all keys and switches.</td>
</tr>
<tr>
<td>2</td>
<td>Momentarily operate RL key. All lamps extinguished.</td>
</tr>
<tr>
<td>3</td>
<td>Select ORIG class of test.</td>
</tr>
</tbody>
</table>
4. Select A_ through K_ digits as required to direct call to outgoing route.

5. Select an originating line location on paired line link frame.

6. Select class of service and rate treatment as required for access to selected route.

7a.  **If ETS provided—**  
   Operate **PCS key.**

8. Select originating class of call with translator indication as required for access to selected route.

9. Select marker under test.

10. Operate STP2, REC keys.

11b.  **If ETS provided and CM dam p is required—**  
      Operate **CM key.**

   **Note:** See paragraph 1.09.

12. Momentarily operate ST key.


14. Operate MPEB key.

15. Momentarily operate ST key.


17. Restore MFEB key; operate MFSB key.

18. Momentarily operate ST key.

19. Momentarily operate RL key.

20. Restore all keys and switches.

VERIFICATION

MRL lamp lighted.  
Trouble record taken.  
STP2, JG1 designations perforated.  
STP lamp lighted if provided.

All lamps extinguished.

RBT1, RA1, BT-OF lamps lighted.  
Trouble record taken.  
STP2, JG1 designations perforated.

All lamps extinguished.

RBT1, RA1, BT-OF lamps lighted.  
Trouble record taken.  
STP2, JG1 designations perforated.  
STP lamp lighted if provided.

All lamps extinguished.
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Cl. Traffic Sampling Feature by Selected Customer Group—ETS Not Provided

Note: When LAMA-C features are being tested, the distributors and scanners (part of SD-28083-01) associated with the marker and trunk used in the test calls must be in service or a special procedure must be followed to obtain a valid test. The special procedure is in the BSP on taking LAMA-C equipment out of service under the title, Changing Distributors or Scanners From Out of Service to Maintenance Busy.

Intraoffice Routes

1. At MTF—
   Restore all keys and switches.

2. Momentarily operate RL key.
   All lamps extinguished.

3. Select IAO class of test.

4. Select class of service and rate treatment as required associated with traffic sampling.

5. Select OR class of call with LT translator indication.

6. Operate GPA/GPB key as required for selected group when trunk is in an allotted subgroup.

7. Select marker under test.

8. Operate TLK, TTL, RC1, SMPL, REC keys.

9a. If AMA intraoffice routes are provided—
   Operate A_ through C_ digits as required for intraoffice code associated with AMA route.

10a. Select route advance as required for access to AMA intraoffice route.

11a. Momentarily operate ST key.
   AS lamp lighted.
   If LAMA-C is provided—
      SI lamp lighted.
   If LAMA-C is not provided—
      IE, T_, U_, RN_ lamps lighted.
   Two trouble records taken.
   FS_, TS_, TG_, TB_, LC_, LV_, FAK/FBK designations perforated indicating location of B appearance of intraoffice trunk (first trouble
STEP 12a Momentarily operate RL key.

STEP 13b If non-AMA intraoffice routes are provided and marker is arranged to route advance to AMA route on sample request—
Repeat Steps 9a through 11a for a non-AMA route arranged to route advance marker to AMA route on sample request.

STEP 14b Momentarily operate RL key.

STEP 15c If non-AMA intraoffice routes are provided and marker is arranged to cancel sampling on sample request—
Repeat Steps 9a through 11a for a non-AMA route arranged to cancel sampling on sample request.

STEP 16c Momentarily operate RL key.

STEP 17 Restore all keys and switches.

OUTGOING ROUTES

STEP 18 At MTF—
Restore all keys and switches.

STEP 19 Momentarily operate RL key.

STEP 20 Select OGT class of test.

STEP 21 Select class of service and rate treatment as required associated with traffic sampling.
## SECTION 218-122-522

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>22</td>
<td>Select originating class of call with translator indication as required for access to selected route.</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>Operate GPA/GPB key as required for selected group when trunk is in an allotted subgroup.</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>Select marker under test.</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>Operate KY, TLK, SMPL, REC keys.</td>
<td></td>
</tr>
<tr>
<td>26d</td>
<td>If 4-wire route is selected— Operate 4W key.</td>
<td></td>
</tr>
<tr>
<td>27e</td>
<td>If AMA outgoing route not requiring AMA record but requiring traffic sampling is provided— Select A_ through K_ digits as required to direct call to AMA route not requiring AMA record but requiring traffic sampling.</td>
<td></td>
</tr>
<tr>
<td>28e</td>
<td>Momentarily operate ST key.</td>
<td>If LAMA-C is not provided— AS, IE, RN_, T_, U_ lamps lighted. If LAMA-C is provided— AS, S1 lamps lighted. Trouble record taken. FS, TS, TG, TB, LC, LV, FAK/FBK designations perforated indicating location of outgoing trunk for route selected. If LAMA-C is not provided— CP, MB, RN, OSG, AMA designations perforated.</td>
</tr>
<tr>
<td>29e</td>
<td>Momentarily operate RL key.</td>
<td>All lamps extinguished.</td>
</tr>
<tr>
<td>30f</td>
<td>If non-AMA outgoing routes are provided and marker is arranged to route advance to AMA route on sample request— Select A_ through K_ digits as required for a non-AMA route arranged to route advance marker to AMA route on sample request.</td>
<td></td>
</tr>
<tr>
<td>31f</td>
<td>Momentarily operate ST key.</td>
<td>If LAMA-C is not provided— AS, IE, RN_, T_, U_, RA1 lamps lighted. If LAMA-C is provided— AS, RA1, S1 lamps lighted. Trouble record taken. FS, TS, TG, TB, LC, LV, FAK/FBK designations perforated indicating location of outgoing trunk for route selected. If LAMA-C is not provided—</td>
</tr>
</tbody>
</table>
STEP | ACTION | VERIFICATION
--- | --- | ---
32f | Momentarily operate RL key. | 
33g | If non-AMA outgoing route for which marker is arranged to cancel sampling on sample request is provided— Repeat Step 27e for a non-AMA route arranged to cancel sampling on sample request. | All lamps extinguished.
34g | Momentarily operate ST key. | AS lamp lighted. Trouble record taken. FS_, TS_, TG_, TB_, LC_, LV_, FAK/FBK designations perforated indicating location of outgoing trunk for route selected. CP_, OSG_ designations perforated.
35g | Momentarily operate RL key. | All lamps extinguished.
36 | Restore all keys and switches. | 

**Tandem Routes**

37 | Restore all keys and switches. | All lamps extinguished.
38 | Momentarily operate RL key. | 
39 | Select OGT class of test. | 
40 | Select incoming class of call and translator indication as required associated with traffic sampling. | 
41 | Select any trunk link frame. | 
42 | Select trunk number as required having access to selected route. | 
43 | Operate GPA/GPB key as required for selected group when trunk is in an allotted subgroup. | 
44 | Select route advance as required for outgoing route. | 
45 | Select marker under test. | 
46 | Operate KY, REC, SMPL, TLK keys. | 
47d | If 4-wire route is selected— Operate 4W key. | 

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VERIFICATION

CP_, MB_, RN_, OSG_, AMA designations perforated.

All lamps extinguished.
If AMA tandem route not requiring AMA record but requiring traffic sampling is provided—
Select A_ through K_ digits as required to direct call to AMA route not requiring AMA record but requiring traffic sampling.

Momentarily operate ST key.

If non-AMA tandem routes are provided and marker is arranged to route advance to AMA route on sample request—
Select A_ through K_ digits as required to direct call to non-AMA route arranged to route advance marker to AMA route on sample request.

Momentarily operate RL key.

If LAMA-C is not provided—
AS, IE, RN_, T_, U_ lamps lighted.

If LAMA-C is not provided—
AS, S1 lamps lighted.

Trouble record taken.

FS_, TS_, TG_, TB_, LC_, LV_, FAK/FBK designations perforated indicating location of outgoing trunk for route selected.

VG_, HG_, VF_ designations perforated corresponding to trunk number selected.

If LAMA-C is provided—
CP_, MB_, RN_, OSG_, AMA designations perforated.

All lamps extinguished.

Note: If office is arranged to send 00X number to AMA equipment instead of trunk number VG0, HG0, VF_ designations will be perforated.

If LAMA-C is provided—
CP_, MB_, RN_, OSG_, AMA designations perforated.
<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>53i</td>
<td>Momentarily operate RL key.</td>
<td>All lamps extinguished.</td>
</tr>
<tr>
<td>54</td>
<td>Restore all keys and switches.</td>
<td></td>
</tr>
</tbody>
</table>