

## GENERAL SAFETY PRECAUTIONS BREAKDOWN TEST SETS

### 1. GENERAL

1.01 This section states the PNB Company Policy concerning Breakdown Test Set procedures. ***Failure to observe the precautions stated below, may result in serious injury to personnel, equipment damage, service interruption and possible damage to subscriber property.***

1.02 Whenever this section is reissued, this paragraph will give the reasons for the change.

1.03 The use of the Breakdown Test Set in a proper and safe manner will expedite the clearance of cable trouble. It will help restore service to our customers more rapidly than other trouble locating methods that we have available to us at this time.

1.04 Central office forces, as well as outside forces, become involved in the tests and must be familiar with the necessary precautions. The procedures for use of the Breakdown Test Sets are covered in BSP Sections 634-305-501 and Appendix 1 to Section 660-003-012.

### 2. PNB POLICY ON THE USE OF BREAKDOWN TEST SETS

2.01 Under no circumstances is it permissible to couple breakdown test sets together to obtain higher breakdown voltages or currents. Unauthorized or unapproved power supplies and breakdown test equipment shall not be used.

2.02 Breakdown voltage shall not be applied to any cable in which there are temporary openings unless the openings are tightly wrapped and the proper sheath bonds are in place.

2.03 The test set should not be connected to one side of a cable pair and ground. This could place high voltage on adjacent working pairs.

2.04 Cable pairs to be subjected to breakdown tests must be isolated from central office equipment. The methods to be used on various types of protector frames are provided in Section 634-305-501.

2.05 Where practicable the cable pairs under test should also be isolated in the outside plant by opening them at cross-connect points and other accessible terminating points.

2.06 Other appearances of the cable pairs under test shall be protected by insulators, tags, warning markers, etc., as specified in the BSP.

2.07 Before conducting breakdown tests, the employee shall call the test desk to determine whether other employees are working in the test section. These individuals shall be advised to suspend work operations in the test section until the test is completed. At underground locations, employees shall be advised to stay out of the manhole while the test is in progress.

2.08 The breakdown test set should not be applied to aluminum cable conductors. The high voltage tends to burn them open instead of welding them together.

2.09 Do not attempt to break down cable pairs that have plastic insulation. For testing PIC cable, use the Dynatel 710A test set described in Section 634-305-514.

2.10 If there is a cable form in the test section, there is a possibility of a fire starting in the form or in the skinners. Therefore, either the person applying the voltage or an observer must be in a position to watch the form and terminate the test immediately if there is any arcing or smoke.

2.11 The breakdown test set should not be applied to cable pairs equipped with special devices such as build-out networks and SNC neutralizing transformers.

2.12 ***Failure to observe the above precautions may result in serious injury to personnel, equipment damage, service interruptions unknown to the tester, and possible damage to subscriber property.***

**CAUTION:** The Breakdown test set voltage is 630 volts dc.

