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## 1. INTRODUCTION

- 1.01 This specification contains general requirements applicable to the recovery and repair for reissue {class C} of station and outside plant products.
- 1.02 Specifications covering individual items will refer to this specification and will include such additional requirements as may be necessary for the recovery or repair of such items. When such reference is made, each requirement of this specification shall be applied to all products of such design as to be affected by that requirement.
- 1.03 While this general requirement specification is intended to reduce the bulk of specifications required on specific items, in no way does it alter the intent of the individual specifications. In all cases, the requirements listed in the specifications covering the individual items will take precedence over the requirements appearing in either this specification or the listed SUPL SPECS.
- 1.04 When the indices of specifications covering individual items list SUPL SPECS, the applicable requirements of such listed specifications shall be followed even though no further reference is made to these specifications in the individual BSRS.

### Requirements Needing Special Consideration by Telephone Company

- 1.05 This specification includes certain requirements which need special consideration and, in some cases, action on the part of the telephone company. The paragraph numbers and a brief description of these requirements are shown in the following table:

<u>Paragraph No.</u>	<u>Requirement</u>
2.02	Product accessories
2.06	Product listed by Underwriters' Laboratories
2.07	Appearance standards
5.05	Repair marking

- 1.06 Items referred to in quotes and initial caps, e. g., "Acrylic Lacquer" are Laboratories approved. Specific instructions for conformance are covered in the appropriate R.S. Specifications.

## 2. GENERAL

- 2.01 The removal of parts or components to facilitate shop operations shall not cause them to be subjected to requirements other than those they would have to meet if they had not been removed.



2.02 Unless otherwise specified by the telephone company or in the applicable individual BSRS, the product shall not be reissued with accessories or features not part of the standard code.

2.03 Replacement of parts shall be made in accordance with the manufacturing information specified for the individual product or with an approved equivalent which would be specified in the individual BSRS.

However, unless specifically prohibited in the individual BSRS, parts and components which previously were standard for the particular product may be used as replacements.

2.04 New or repaired parts and components may be used as replacements.

2.05 Omitted on Issue 4 of this page.

2.06 In cases where the individual BSRS states that the product is listed by Underwriter's Laboratories, Incorporated, it is recommended that the telephone companies give special consideration to any proposed deviations before issuance. The Underwriter's Laboratories does not reinspect listed products once they have left the factory; and, in order to keep repaired products in conformance with established Underwriter's electrical requirements, the telephone companies shall give serious consideration to any replacements, additions, or changes in connection with repair to insure that the product, as repaired, shall conform to Underwriter's standards.

### Appearance Standards

2.07 The telephone company shall establish appearance standards covering the minimum acceptable appearance of all surfaces that are exposed to view in service.

2.08 Surfaces exposed to view in service shall meet or be superior to the minimum established appearance standards.

### 3. MECHANICAL

3.01 All parts and components shall be securely and properly assembled and/or attached.

3.02 Components, parts of components, hardware, and fastenings shall not be broken, cracked, deformed, or otherwise damaged, nor the parts so worn or altered as to prevent the unit from performing its proper function.

3.03 All parts and components shall be free of splinters, rough areas, sharp burrs, and sharp edges, except where peculiar to the design of the parts.



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### 3. MECHANICAL

3.01 All parts and components shall be securely and properly assembled and/or attached.

3.02 Components, parts of components, hardware, and fastenings shall not be broken, cracked, deformed, or otherwise damaged. In addition, the above-mentioned items shall not be so worn or altered as to prevent the unit from performing its proper function.

3.03 All parts and components shall be free of splinters, rough areas, sharp burrs, and sharp edges, except where peculiar to the design of the parts.



- 3.04 Contacting surfaces of feet or base pads on which the product rests shall be free of foreign matter which may mar the surface on which the unit may be placed.
- 3.05 Screw slots may be distorted, provided the screw can be properly engaged and tightened securely with a screwdriver.
- 3.06 Nuts and heads of bolts may be distorted provided they can be properly engaged and tightened securely with a wrench.
- 3.07 Threads shall not be stripped. Tapped holes having worn or stripped threads may be reconditioned by ring staking and retapping if necessary.
- 3.08 Movable parts shall function as intended without binding, jamming, or any other form of mechanical interference.
- 3.09 Connections shall be in accordance with BSP Section 800-612-154 unless otherwise specified.
- 3.10 Wire ends from previous installations shall be removed from terminals.
- 3.11 Cables, skinners, and wiring shall be positioned or dressed so as not to cause mechanical interference.
- 3.12 Defective Insulation

(a) Conductors - Except Power Cords

The insulation of any conductor shall not be worn or frayed to such an extent that there is a possibility of a bare portion of the wire touching adjacent terminals, wire, or apparatus. Where the insulation when smoothed out along the wire is found to be defective for a distance not exceeding 1/2 inch per defect, it may be repaired by wrapping with at least two turns of tape as specified in Table A and coating with Pyroxylin cement. The tape shall overlap the damaged portions of the insulation by at least 1/8 inch except that damaged portions of the insulation extending to the shank of cord tips shall have the tape extending to and not on the tip. PVC insulation may be repaired by an application of RM-725624 Vinyl Base Touchup Paint or #10-1092 Sticktite Cement (Minnesota Paints Inc., Park Ridge, Ill.). Rubber insulated conductors shall be replaced when the insulation becomes worn or frayed.



(b) Cord and Cable Jackets

(1) Jackets and textile outer covers of power cords, adapter cords, patching cords, and interconnecting cables shall not be frayed, abraded, or cut sufficiently to reveal the insulation on the individual conductors. When the jackets are so damaged, except on power cords, they may be repaired by wrapping the defective area with tape as specified in Table A and coating with Pyroxylin cement. However, jackets made of rubber or neoprene which have obvious spongy, brittle, or deteriorated areas shall be replaced.

(2) Defective power cords shall be replaced.

TABLE A

Insulation	Tape
Rubber or Neoprene	Friction Tape of any suitable color per A-565491. Scotch No. 33 Electrical Tape
Polyvinyl Chloride	KS-14090 List 7 Tape or Scotch No. 33 Electrical Tape.
Textile Braid	KS-8950, List 1 Acetate Cloth Tape, (Brown). LRM 250, Grade 1A Tape 1/2 (Black or White).

Contact Alignment

3.13 If contacts require adjustment, the pile-ups shall be checked for tightness and for alignment as follows:

(a) Point-Disc Contacts: The point of the contact shall fall wholly within the boundary of the opposing contact (see B-906205, Figure 1).

(b) Disc Type Contacts: Opposing contacts having the same diameter shall not have their centers out of alignment by more than 25 per cent of the contact diameter (see B-906205, Figure 2).

(c) Standard Bar Contacts: The width of the contacting surface of each contact bar shall fall wholly within the length of the contacting surface of the opposing contact bar (see B-906205, Figure 3).



(d) Heavy Bar Contacts: The contact bar shall be aligned so that the full width of one contact bar shall project wholly within the length of the opposing contact bar, and at least two-thirds of the width of the opposing contact bar shall project within the length of the first contact bar (see B-906205, Figure 4).

(e) Bifurcated Spring Adjustment: Both contacts on the same spring shall make with their mating contacts at approximately the same time.

3.14 All electrical contacting surfaces or contacts (except stud-type contacts) having a circuit function, which make mechanically but test open shall be "Cleaned with Noncorrosive, Nonfilmproducing Cleaning Fluid". Stud-type contacts which test open or which require cleaning shall be cleaned and treated in accordance with BSP Section 069-321-801.

3.15 Terminating plugs or receptacles shall be capable of providing positive electrical contact with their respective mating contacts.

3.16 Terminal screws and nuts which are not captive shall be run down to prevent loss.

#### Cleaning

3.17 The interior of the product shall be free of insects. Foreign material resulting from the presence of insects shall be "Cleaned by Brushing". However, firmly adhering or inaccessible material and/or discolorations caused by insects on surfaces and parts that are not exposed to view in service need not be removed.

3.18 Interior of units showing evidence of loose foreign material or flaky rust or corrosion, shall be "Cleaned". However, firmly adhering rust spots, discoloration, and tarnish need not be removed unless unit operation indicates that removal is necessary.

#### 4. ELECTRICAL

4.01 Continuity Test: Products having electrical circuits including switching functions shall meet a "Standard Electrical Test for Continuity". "Continuity" tests need not be applied to connections which are shown to be continuous in other tests. When applicable, "Limits of Testing Current for Magnetic Core Coils and Transformers" shall be observed when making continuity tests.

4.02 Recovery Ground Test: Information for making this test covered in BSRS-350.003.

4.03 Dual-coded resistors (KS 20810-237A), when defective in apparatus or equipment shall be replaced only with KS 20810 resistors.



## 5. MARKING AND PACKING

5.01 After recovery or repair, unless otherwise specified in the BSRS for the individual product and as approved by the Western Electric Planning and Development-Service Centers (P&D-SC), the apparatus or equipment shall be packed in accordance with the specified national packing instructions issued by P&D-SC.

5.02 The product code marking shall be present on all units.

5.03 All required markings shall be readable under average lighting conditions.


5.04 The location and size of restamped marking shall be the same as specified for manufactured product. However, orange colored ink may be used in lieu of aluminum or black.

5.05 The repair, modification, conversion or remanufacture data marking shall be in accordance with the following:

(a) When required by the Telephone Company or when specified in the individual BSRS, each time that equipment or apparatus other than Telephone Sets, Telephone Bases and Telephone Set Bases (covered in BSRS 350.003) is repaired, modified, converted or remanufactured on a routine basis, it shall be marked with the appropriate symbols by rubber stamping in 1/8 inch characters using "Printers Ink" that gives suitable contrast to the surface. The stamping shall be accomplished in any convenient and conspicuous location, providing that the marking is (1) uniform for the same product (2) not on a cover and (3) not visible from the outside of the unit under its normal operating conditions. Symbols used shall be as follows: R = Repair; M = Modification; C = Conversion; RM = Remanufacture; N = No trouble found. Date marking shall consist of Arabic numerals representing the month and year. The stamping sequence is : (symbol)(year)(location)(month). For example, a unit repaired at St. Louis during June 1980 would be stamped R80ST6.

(b) All equipment and apparatus returned on a repair and return basis per Complaint No. GEC 8400 (Green Stripe Tag Routine) shall be rubber-stamped with the "R" or "N" symbol and date of repair as specified in (a) above.



(c) Previous repair dates shall be retained except where stamping space is limited. Under this condition a number of 1/8 inch (+ 1/16 inch) diameter dots equal to the number of deleted repair dates shall be rubber-stamped adjacent to the current repair date, except that any Green Stripe Tag warranty dates stamped in accordance with Paragraph 5.05 (b) must be retained for a minimum of one year. 

5.06 When Common Language Equipment (CLE) identification code designations are required to be added by the individual product's BSRS, this marking shall be accomplished in accordance with BSP Section 800-613-150.



FIGURE 1  
POINT-DISC CONTACTS

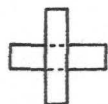


FIGURE 2  
DISC CONTACTS

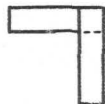


FIGURE 3  
STANDARD BAR CONTACTS

NOTE: CONTACTS MAY BE IDENTIFIED BY WIDTH OF CONTACT SURFACE OF APPROXIMATELY 0.010 TO 0.020 INCHES.



IDEAL



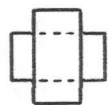
MAXIMUM  
PERMISSIBLE  
MISALIGNMENT



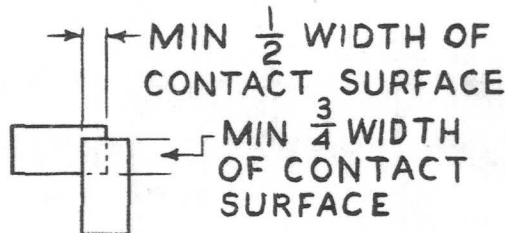
NOT  
PERMISSIBLE

FIGURE 4  
HEAVY BAR CONTACTS

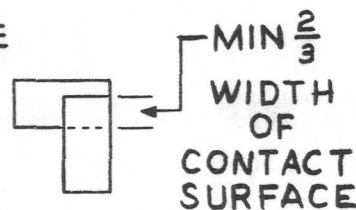
NOTE: CONTACTS MAY BE IDENTIFIED BY WIDTH OF CONTACT SURFACE OF APPROXIMATELY 0.040 TO 0.050 INCHES.



IDEAL



MAXIMUM PERMISSIBLE  
MISALIGNMENT OF NOS.  
286 & 886 CONTACTS



MAXIMUM PERMISSIBLE  
MISALIGNMENT OF ALL  
OTHER CONTACTS

ENG. R. SLINGERFELDT	ISSUE 1	6-17-54	A.G.K.	FILE NOS. NOT SPECIFIED	C.J.	1562	10-11-54	A.G.K.	MISALIGNMENT DIMENSIONS SPECIFIED AND OTHER CLARIFICATIONS	C.J.	F.A.L.	1553	12-1-64	DWG	CONTACT ALIGNMENT	
DRAWN G. CARTER														SCALE	WESTERN ELECTRIC COMPANY, INC. ENGINEER OF MANUFACTURE	
													USED ON	BELL TELEPHONE LABORATORIES INCORPORATED		
													BOS-110.001	B-906205		
													NO. OF SHEETS PER SET	SEE SHEET 1		
													SHEET			