JACKS

92, 229, 292, 510, 511, AND 512 TYPES

REQUIREMENTS AND ADJUSTING PROCEDURES

1. GENERAL

1.01 This section covers the 92-, 229-, 292-, 510-, 511-, and 512-type jacks.

1.02 This section is reissued to include the 510-, 511-, and 512-type jacks. Since this reissue covers a general revision, arrows ordinarily used to indicate changes have been omitted.

1.03 Reference shall be made to Section 020-010-711 for additional information necessary for the proper application of the requirements listed herein.

2. REQUIREMENTS

2.01 *Cleaning:* Flares of jacks should be kept free of dirt, paint, or any other matter which would prevent proper contact between plugs and jacks.

2.02 *Cutout:* With the 113B gauge inserted into the jack, and a 121A cord weight attached to the cord which is connected to the gauge, there shall be no indication of a tip or ring cutout when the gauge is slowly rotated a complete revolution.

2.03 *Sleeve Wear:* The 39 gauge shall not fully enter the sleeve in any position.

2.04 *Butt:* It shall be possible to fully insert the 114B gauge into the jack. It will be satisfactory to rotate this gauge in an effort to insert it into the jack, but the pressure applied shall not exceed that which can be exerted with the gauge held between the thumb and index finger.

2.05 *Cross (all jacks except 229 type):* The 115B gauge shall not cause a cross between the tip and ring springs when fully inserted into the jack. The cord end of the gauge shall be lifted just sufficiently to take up the play in the sleeve.

2.06 *Cutout Test Plug Variation:* With the 113B gauge inserted in the 106A gauge and turned to the position where the needle of the gauge is farthest to the right, no portion of the needle shall be to the right of the green line.

3. ADJUSTING PROCEDURES

3.001 *List of Tools, Gauges, and Test Apparatus*

CODE OR SPEC NO.	DESCRIPTION
TOOLS	
117	Jack Tip and Ring Spring Adjuster
118	Jack Ring Spring Adjuster
GAUGES	
39	Limiting Gauge
106A	Plug Gauge
113B (2 reqd)	Cutout Test Plug
114B	Butt Test Plug
115B	Cross Test Plug
TEST APPARATUS	
121A	325 Gram Cord Weight
—	J94720A Test Set

3.01 *Cleaning* (Reqt 2.01)

(1) Clean jack flares when necessary.

3.02 *Cutout* (Reqt 2.02)
3.03 *Sleeve Wear* (Reqt 2.03)
3.04 *Butt* (Reqt 2.04)
3.05 *Cross* (Reqt 2.05)
3.06 *Cutout Test Plug Variation* (Reqt 2.06)

Cutout Test Plug Variation

(1) To check the 113B gauge with the 106A gauge, insert the 113B gauge into the gauging hole and revolve it through at least

one complete revolution, taking care not to exert sidewise or lengthwise pressure on the gauge.

Cutout

(2) ***All Jacks Except 229 Type:*** Check for cutout, using the 113B gauge in accordance with Section 032-350-502. If the gauge does not contact with the jack springs as indicated by the jack test set, remove the gauge and proceed as follows

(a) If there is a tip cutout, lift the tip spring slightly with the 117 adjuster applied at the crimp of the spring as shown in Fig. 1. When the 117 adjuster is inserted the proper distance into the jack, the scoring on the side of the adjuster will be flush with the face of the jack strip. Exercise care not to lift the tip spring excessively at any time due to the difficulty in adjusting the spring downward.

(b) If the check indicates a ring cutout, lift the ring spring slightly with the 117 adjuster applied to the crimp of the ring spring as shown in Fig. 1 for the tip spring. When the 117 adjuster is inserted the proper distance into the jack, the scoring on the side of the adjuster will be approximately 3/16 inch from the face of the jack strip. Exercise care not to lift the ring spring excessively at any time due to the difficulty in adjusting the spring downward.

(3) ***229-Type Jacks:*** Check for cutout as covered in (2). If the gauge does not make contact with the jack springs, remove the gauge and proceed as follows.

(a) The tip and ring springs are mounted so that the flat surfaces are vertical. The tip spring is on the right side of the jack sleeve center line, viewing the jack from the front, while the ring spring is on the left side of the jack sleeve center line.

(b) If there is a tip cutout, adjust the tip spring slightly toward the center line with the 117 adjuster applied at the crimp of the spring as shown in Fig. 2. When the 117 adjuster is inserted the proper distance into the jack, the scoring on the side of the adjuster will be flush with the face of the jack strip. Exercise care not to bring the spring too close to the jack sleeve center line as it cannot be adjusted away from the center line without removing the jack strip.

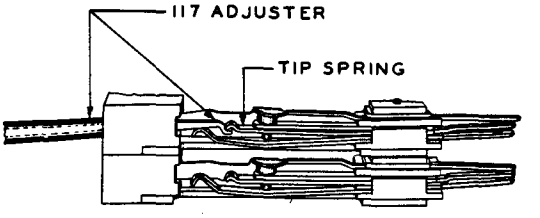

Fig. 1 – Method of Adjusting Tip Spring Up in 92-, 292-, 510-, 511-, and 512-Type Jacks

(c) If the check indicates a ring cutout, adjust the ring spring in a similar manner as the tip spring adjustment in (b), using the 117 adjuster. When the 117 adjuster is inserted the proper distance into the jack, the scoring on the side of the adjuster will be approximately 3/16 inch from the face of the jack strip.

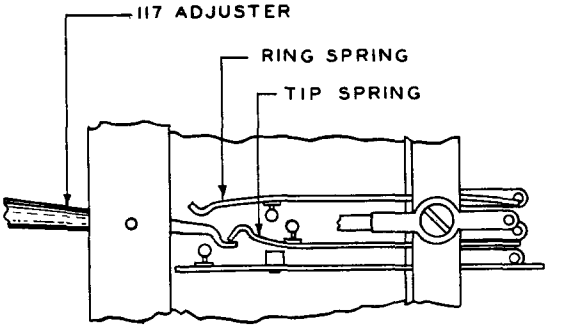

Fig. 2 – Method of Adjusting Tip Spring in a 229-Type Jack

Butt

(4) ***All Jacks Except 229 Type***

(a) Insert the 114B gauge with a rotary motion and check to determine that the tip spring has not been lifted sufficiently to cause a butting condition. If, from the resistance offered to the gauge in this test, it is felt that the tip spring connot be raised much higher without causing a butt condition, do not attempt to adjust the tip spring.

If the gauge enters with too little resistance, make a further attempt to lift the tip spring as oulined in (2) (a).

(b) If the tip spring is found to be too high as indicated by the butting test, force the tip spring down slightly with the 117 adjuster applied at the crimp of the spring so as to eliminate the butting condition.

(c) If the butting condition is caused by the ring spring, adjust it downward as follows. The difference between the butting condition on the ring spring and the butting condition on the tip spring can be noted from the position of the 114B gauge in the jack at the time the butting occurs. Insert the 118 adjuster as far as possible into the jack beneath the jack being adjusted so that it rests firmly against the underside of the spring to be adjusted. While holding the 118 adjuster in this position, insert the 117 adjuster into the jack to be adjusted applying it at the crimp of the spring as shown in Fig. 3. Depress the ring spring until the butting condition is eliminated. In the case of jacks in strips mounted at the bottom of the multiple or above strips of lamps, it will not be possible to use the 118 adjuster. Adjust the ring spring down using the 117 adjuster. When the 117 adjuster is inserted the proper distance into the jack, the scoring on the side of the adjuster will be approximately 3/16 inch from the face of the jack strip. In adjusting the ring spring take care not to introduce a ring cutout. If a check indicates a ring cutout, adjust the ring spring up slightly with the 117 adjuster applied at the crimp of the spring. After making this adjustment, recheck for a butting condition.

(5) ***229-Type Jacks:*** Insert the 114B gauge into the jack with a rotary motion and check to determine that there is no butt condition due to any adjustment of the springs. If a butt condition exists, refer the matter to the supervisor to determine whether to remove the jack strip from the multiple in order to adjust the springs, or to replace the jack strip.

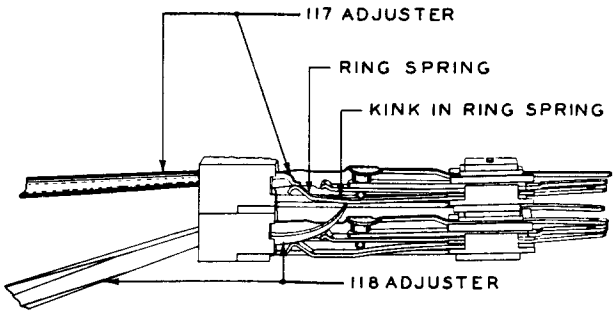

Fig. 3 – Method of Adjusting Ring Spring Down

Cross

(6) ***All Jacks Except 229 Type:*** Insert the 115B gauge into the jack with a rotary motion and lift it sufficiently to take up the play in the jack sleeve. If the tip and ring springs of the jack cross as indicated by the jack test circuit, remove the jack strip from the multiple and observe the shape of the ring spring. If the ring spring does not have a definite kink in it across the spring approximately two thirds the distance from the insulators to the crimped end of the springs as shown in Fig. 3, replace the jack strip.

Sleeve Wear

(7) Check the jack for sleeve wear with the 39 gauge. If the gauge enters the jack, gauge the sleeves of the other jacks in the strip. If the sleeves of several jacks are found to be outside the limits, refer the matter to the supervisor to determine whether the defective sleeves should be replaced or the jack strip replaced. If any jack sleeves are to be replaced, proceed as covered in Section 032-350-801. When the adjustments and replacements, if any, are completed, recheck the jack to see that it meets the requirements which apply.