

## WIRE REEL KS-21955

### PIECE-PART DATA

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#### 1. GENERAL

1.01 This section covers the piece-part data for the KS-21955 wire reel (Fig. 1) and the approved procedures for replacement of parts. The KS-21955 wire reel was designed to improve wire dispensing operations in telephone central offices. It is a direct replacement for the KS-8047 wire reel.

1.02 Whenever this section is reissued, the reasons for reissue will be listed in this paragraph. This issue does not affect the Equipment Test List.

1.03 The KS-21955 wire reel consists of five parts; a base, a support arm, an inner and outer flange, and an automatic brake. The wire reel may be used either as a portable unit, or as a frame mounted dispenser. The inner flange is assembled to the support arm and retained with a snap ring. External ribs on the hub section of the inner flange conform to the tapered core on the wire coil to prevent collapsing of the core. The inner section of the hub is threaded in reverse (left hand) and the mating outer flange is assembled by turning it counterclockwise. An automatic type brake mounts on the base and contacts the rim of the inner flange to achieve braking as wire is dispensed, the counterclockwise assembly of the flanges causes the outer flange to tighten when the brake stops the inner flange. This self-tensioning feature maintains pressure on the wire coil as it is used and prevents entanglement otherwise caused by loose wire coils.

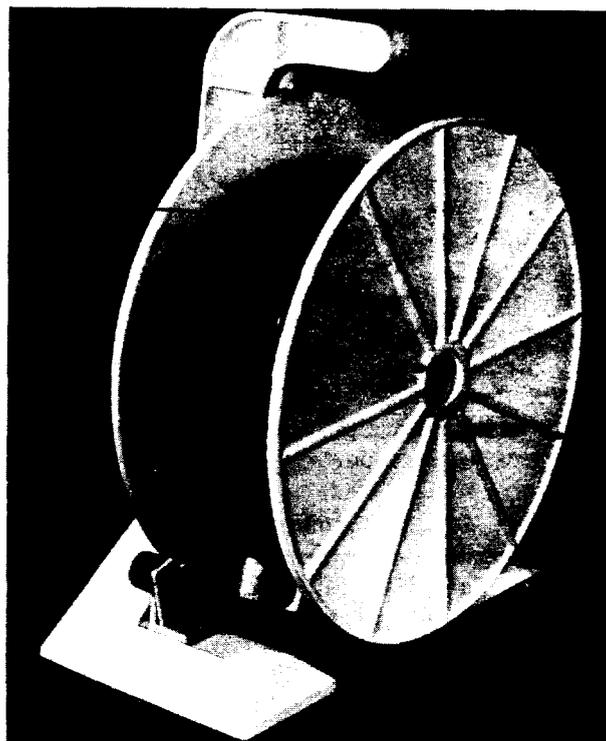


Fig. 1—KS-21955 Wire Reel

1.04 Some of the features of the KS-21955 wire reel are as follows:

- (1) A self-tensioning outer flange maintains uniform pressure on wire coils and results in reduced wire losses.
- (2) Safety yellow color cautions craft personnel of portable reels in aisles.
- (3) Closed web flanges prevent finger entrapment when rewinding wire.
- (4) A reduction in weight provides easier mobility of portable reels.

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- (5) Automatic rim braking improves wire dispensing efficiency with minimal brake adjustment.
- (6) Structural foam plastic eliminates metallic casting imperfections such as warped flanges.
- (7) A lower center of gravity improves stability.
- (8) A friction pad on the base prevents slippage during wire dispensing operations on portable reels.
- (9) Improved appearance and reduction in parts.
- (10) Flame retardant material.

**1.05** Part 2 of this section covers identification of piece parts which can be replaced in the field for maintenance purposes. No attempt should be made to replace parts not designated.

**1.06** Part 3 of this section covers the approved procedures for the replacement of parts covered in Part 2.

### 2. PIECE-PART DATA

**2.01** Fig. 2 shows the various piece-parts in their proper relationship to other parts of the wire reel.

**2.02** When ordering replacement parts, give the part number, the list number, and the name of the part; for example:

#### KS-21955 L5 BRAKE ASSEMBLY

Do not refer to the BSP number or to any information shown in parentheses. Information enclosed by parentheses is not ordering information. This information may be references to notes, or parts referred to in other portions of the section and not considered replaceable, or part names in general use in the field if these names differ from those assigned by the manufacturer.

### 3. PROCEDURES

#### 3.01 LIST OF TOOLS AND MATERIAL

#### CODE OR SPEC NO.

#### DESCRIPTION

#### TOOLS

AT-7739

B Screwdriver

R-2975

Pliers, Snap-Ring, Adjustable

#### MATERIAL

KS-19139 L1

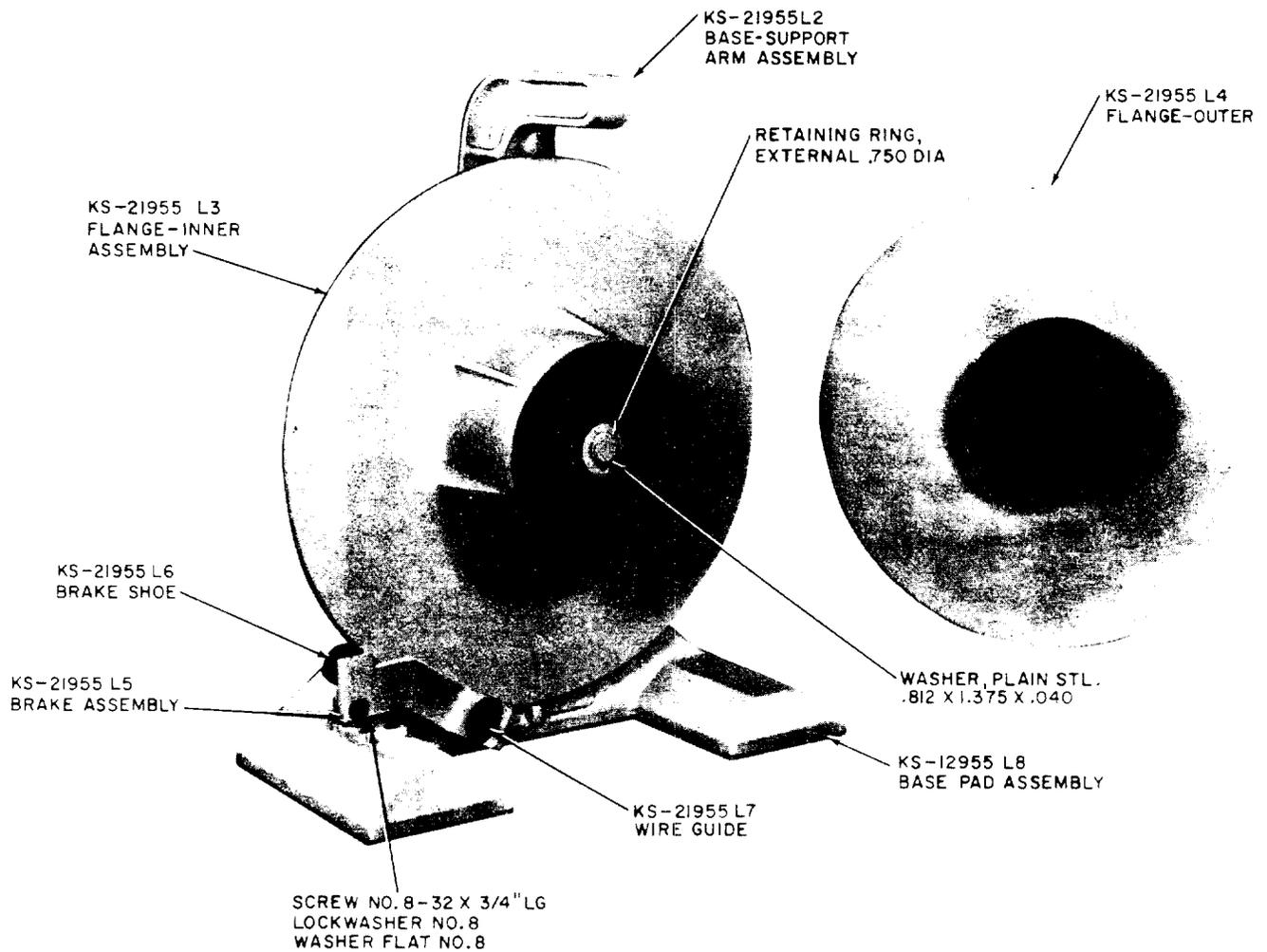
Lubricant (Molybdenum Disulfide Type)

**3.02** No replacement procedures are specified for screws or parts where replacement procedures are obvious from visual examination of the apparatus and the illustration.

**3.03** To mount the KS-21955 wire reel on the distributing frame, two clearance holes are provided in the support arm assembly, one above the shaft and one below. Use P-423927 screw, hex cap stl 1/2-13 UNC x 4" with hex nuts, plain washers and lockwashers, two each.

**3.04** To install wire on the KS-21955 wire reel, remove the outer flange by turning it clockwise. Place a coil of wire over the tapered ribs on the inner flange and replace the outer flange by turning it counterclockwise until it is tight. Insert the end of the wire through the wire guide on the brake without changing direction. Wire may be dispensed in either of two directions, over the reel to the left or under the reel to the right. As wire is withdrawn, the brake releases, and the reel turns counterclockwise as shown in Fig. 1. Slack in the wire causes the brake to activate as the brake arm drops and engages the rim of the inner flange as shown in Fig. 3. The momentum of the inner flange forces the brake shoe in the direction of rotation, which causes a wedging action between the brake and the inner flange resulting in the stopping of the reel. Since the outer flange is independent, it tends to continue rotating in a counterclockwise direction, thereby tightening the wire coil. This self-tensioning feature maintains pressure on the wire coil as it is used and prevents entanglement otherwise caused by loose wire coils.

**3.05** To replace the KS-21955 L5 brake assembly, use the AT-7739 screwdriver and remove the two screws, lockwasher, and flat washer. Replace the brake assembly, screws, and washers.



**Fig. 2—KS-21955 Wire Reel With Outer Flange Removed**

When the braking action is too abrupt or slow, the brake assembly may be adjusted by loosening the locking screws on the base and moving the brake assembly forward to decrease the braking force or backward to increase the braking force. In either case, adequate clearance between the flange and brake shoe is required for rotation when the brake is released.

**3.06** To replace the inner flange, remove the retaining ring using the R-2975 pliers. Remove the flat washer and slide the inner flange off the steel shaft. Lubricate the steel shaft with KS-19139 L1 lubricant, position a new inner flange on the shaft, and replace the flat washer and retaining ring.

**3.07** To replace the KS-21955 L7 wire guide, use the R-2975 pliers and remove the retaining ring and wire guide. Insert a new wire guide, and replace retaining ring.

**3.08** To replace the KS-21955 L6 brake shoe, use the R-2975 pliers and remove the retaining ring and flat washer, position the new brake shoe on the brake arm, and replace the flat washer and retaining ring.

**3.09** When lubricating the steel shaft or the brake arm pivot, use KS-19139 L1 lubricant.

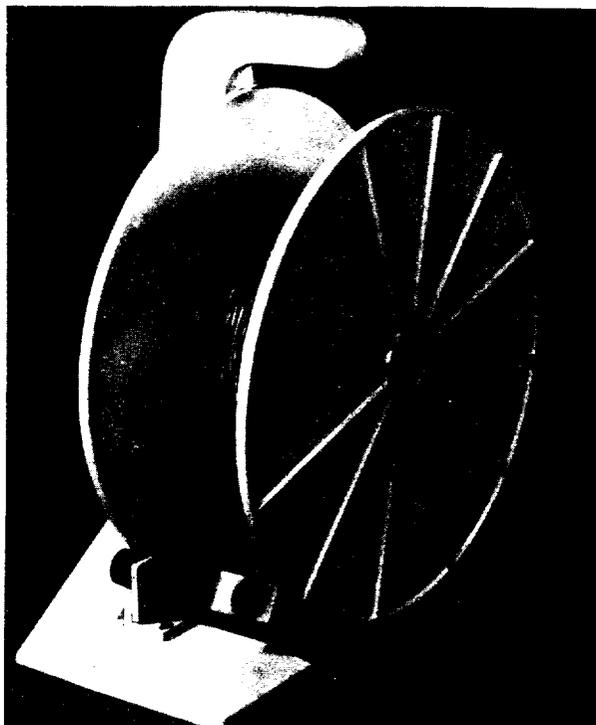


Fig. 3—KS-21955 Wire Reel With Brake Engaged