AMA TAPE REELS

PIECE-PART DATA AND REPLACEMENT PROCEDURES

CONTENTS PAGE

1. GENERAL

1.01 This section covers the piece-part data and replacement procedures for the ED-40293-70 G1 22-inch, and the G2 16-inch AMA tape reels. It also covers the ED-40008-01 and the ED-40014-01 reels which are Mfr Disc. These reels are used for handling tape in central offices and in automatic message accounting centers.

1.02 The reasons for reissuing this section are listed below. Since this reissue is a general revision, no revision arrows have been used to denote significant changes. The Equipment Test List is not affected.

1. To rate the ED-40008-01 and ED-40014-01 reels Mfr Disc.

2. To correct the titles of Fig. 4 and 5, and change them to Fig. 1 and 2.

3. Fig. 1 and 2 changed to Fig. 4 and 5.

1.03 Part 3 of this section covers the piece-part numbers and the corresponding names of the parts which it is practicable to replace in the field during maintenance of the reels. No attempt should be made to replace parts not designated. Part 3 also contains explanatory figures showing the different parts.

1.04 Part 4 of this section covers the approved procedures for the replacement of the parts covered in Part 3.

2. APPARATUS

2.01 ***List of Tools, Gauges, and Materials***

CODE OR SPEC NO.	DESCRIPTION
TOOLS	
R-2670	3/32-inch hex socket screw wrench
R-2958	5/64-inch hex socket screw wrench
KS-6854	Screwdriver, 3-1/2-inch
—	E screwdriver
GAUGES	
92G	0.020-inch nonmagnetic offset thickness gauge (2 required)
92T	0.005-inch nonmagnetic offset thickness gauge (2 required)

GAUGES

R-8550	6-inch steel scale

MATERIALS

KS-7471	Grease
—	LOCQUIC* cleaner, grade T (Loctite Corporation, Newington, Conn)
—	LOCTITE* sealant, type CVV (Loctite Corporation, Newington, Conn)

*Registered trademark of the Loctite Corporation

3. PIECE-PART DATA

3.01 The figures included in this part show the various piece parts in their proper relation to other parts. The piece-part numbers of the various parts are given together with the names of the parts as listed by the Western Electric Company Merchandise Department.

3.02 When ordering piece parts for replacement purposes, give both the number and name of the piece part. For example:

P-31B810 COLLAR

Do not refer to the section number or to any information shown in parentheses.

3.03 Information enclosed by parentheses is not ordering information but may be references to notes, information pertaining to parts not considered replaceable, or part names generally used in the field if the names differ from those assigned by the manufacturer.

4. REPLACEMENT PROCEDURES

4.01 No replacement procedures are specified for screws or other small parts when the replacement consists of a simple operation.

4.02 ***General:*** Replacing parts of the ED-40293-70 reel (Fig. 1) may be done as follows:

(1) Before replacing parts of the reel, disassembly is required.

(2) Grasp the sleeve (Fig. 3), and pull it away from the reel. This unlocks the two halves of the reel.

(3) To reassemble the two halves of the reel, rotate them as necessary until the plate mounting screws on one half of the reel are in the holes provided in the other half of the reel.

(4) Lock the halves together by pushing the sleeve inward until it snaps in place.

4.03 ***Plate*** (Fig. 2)

(1) With the 4-inch E screwdriver, remove the four plate mounting screws.

(2) Position a new plate.

(3) Install and tighten the four screws.

4.04 ***Segment*** (Fig. 1)

(1) With the 4-inch E screwdriver, remove the segment mounting screws.

(2) If the segment to be replaced is in the reel half containing the plate, remove the plate mounting hardware securing that segment and slide the segment out.

(3) Position the new segment and replace the hardware.

(4) Position the segment so that its surface is lined up with the surfaces of the adjacent segments, and tighten the screws securely.

4.05 ***Shaft*** (Fig. 1)

(1) Loosen the two setscrews in the collar with the R-2958 hex socket screw wrench, and remove the shaft.

(2) Clean the collar and the new shaft with the LOCQUIC cleaner.

(3) Coat the shaft and collar with the LOCTITE sealant in accordance with the sealant manufacturer instructions.

(4) Insert the shaft into the locking assembly, and lock it in place.

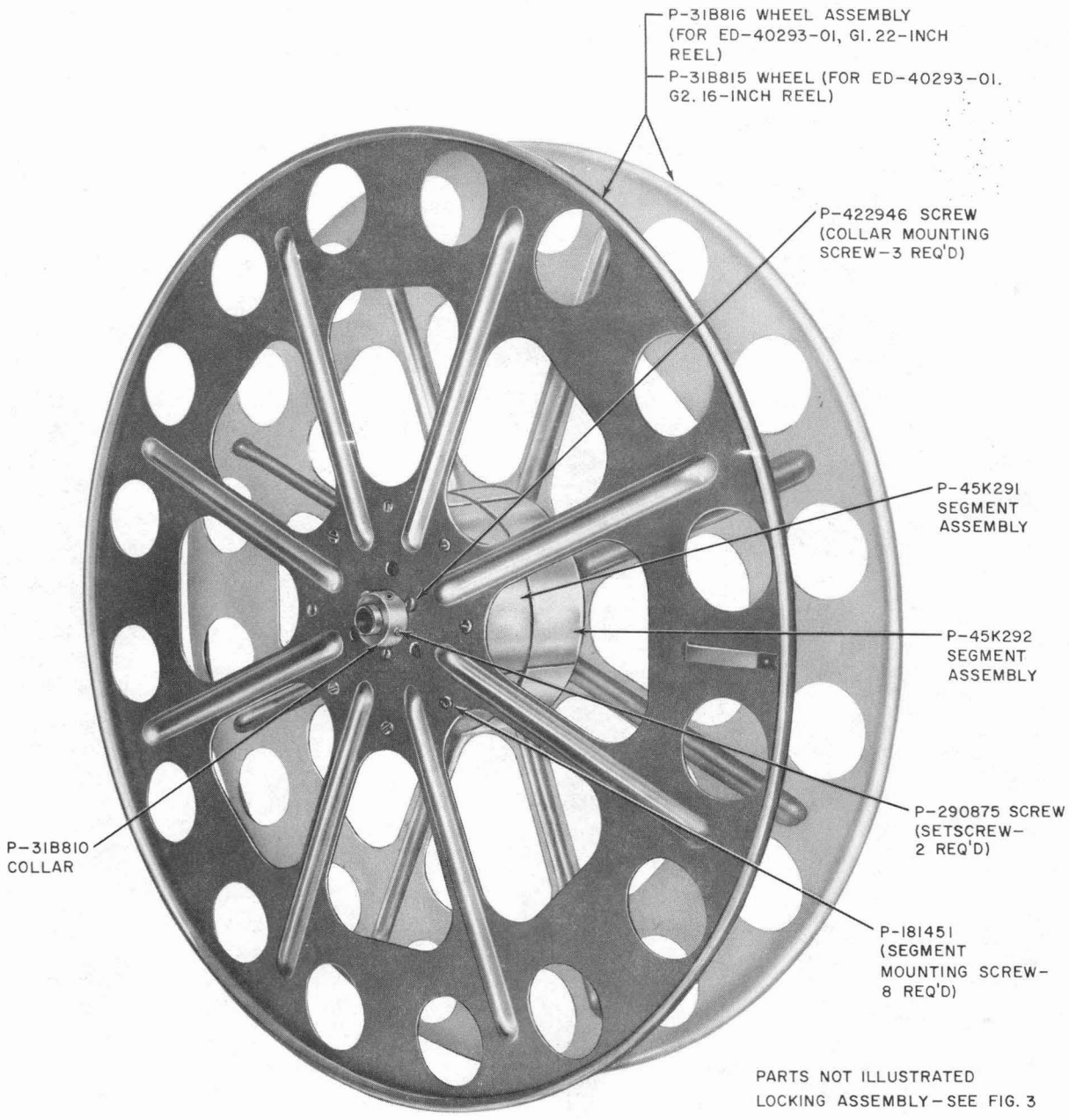

Fig. 1—ED-40293-70 Reel (22-Inch Reel Illustrated)

(5) Insert the other end of the shaft into the other half of the reel assembly and through the collar. Ensure that the segment assembly is snug against the plate.

(6) Tighten the setscrews in the collar.

(7) If the operation of the locking assembly is unsatisfactory when the reel is assembled, loosen the two setscrews and reposition the collar on the shaft as required until the locking assembly locks securely with no clearance between the plate and adjoining segments.

(8) Tighten the setscrews securely.

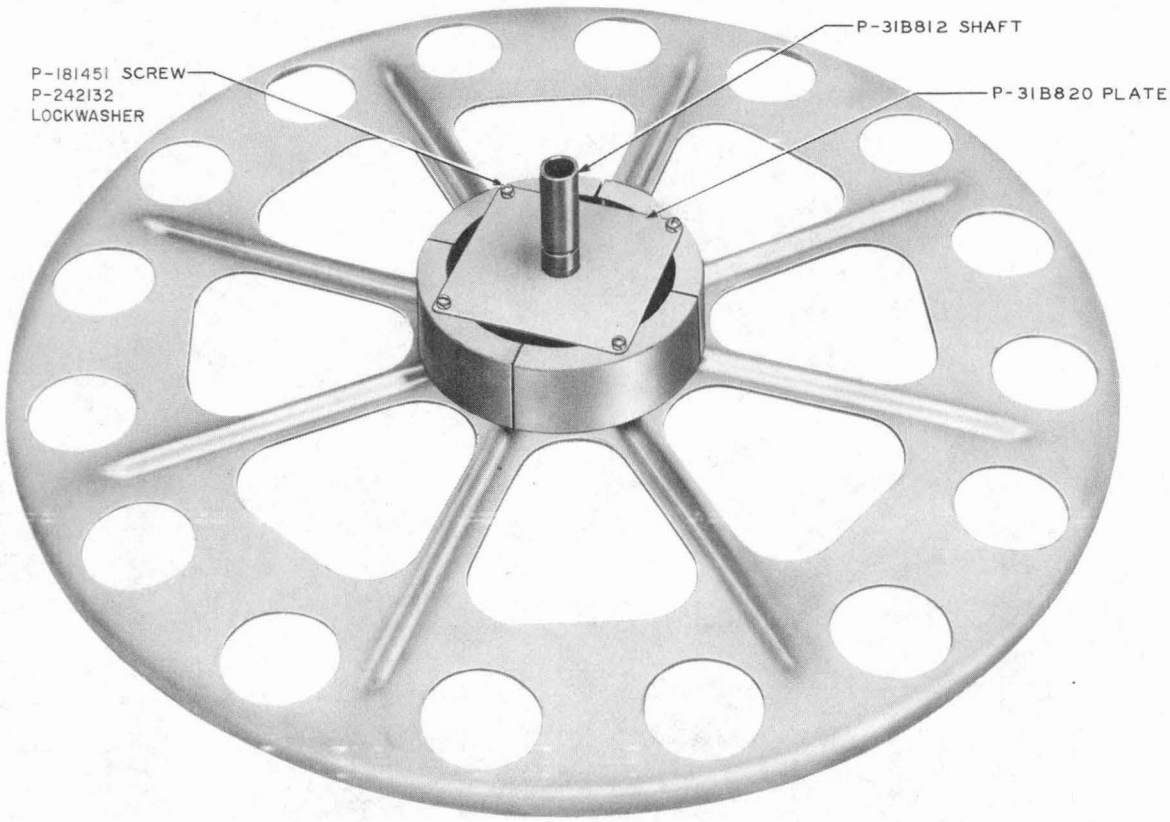

Fig. 2—Half of ED-40293-70 Reel (22-inch Reel Illustrated)

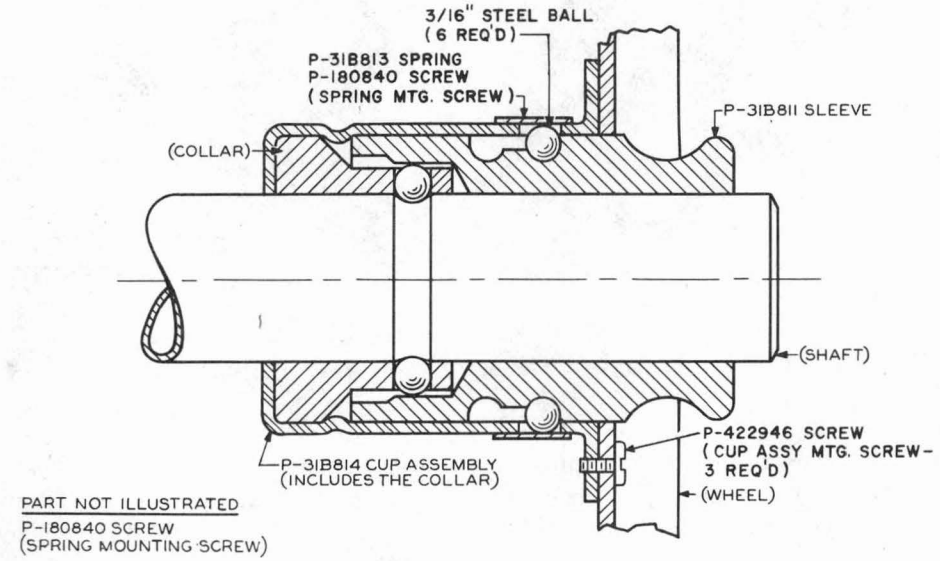

Fig. 3—Locking Assembly

4.06 Collar (Fig. 1)

(1) Remove the plate and shaft (3.03 and 3.05).

(2) Remove the three collar mounting screws, securing the collar to the wheel assembly with the 4-inch E screwdriver, and remove collar.

(3) Position the new collar and replace the screws.

(4) Reassemble the plate and the shaft (3.03 and 3.05).

4.07 *Locking Assembly Parts* (Fig. 3)

(1) Remove the spring mounting screws with the KS-6854 screwdriver.

(2) Remove the spring and the two associated steel balls by sliding the spring off the cup assembly with a rotary motion.

(3) Remove the sleeve by sliding it out of the cup assembly, taking care not to lose any of the four steel balls which are released.

(4) Remove the steel balls with the KS-8511 tweezers.

(5) Remove the cup assembly mounting screws with the 4-inch E screwdriver.

(6) Replace new parts as required.

(7) Position the cup assembly and secure it with its associated screws.

(8) Place the wheel and attached cup assembly with the segments facing downward.

(9) With the KS-8511 tweezers, insert the four steel balls into the holes in the collar of the cup assembly. A small amount of KS-7471 grease applied to each ball will facilitate assembly by keeping the balls in place.

(10) Slide the sleeve in place.

(11) Slide the spring over the cap assembly without covering the two holes.

(12) Insert the two steel balls in the holes in the cup assembly, and slide the spring into position to cover them.

(13) Insert and tighten the spring mounting screw.

(14) If the operation of the locking assembly is unsatisfactory, shift the position of the collar on the shaft [3.05 (7)].

4.08 *Wheel Assembly* (Fig. 1)

(1) With the 4-inch E screwdriver, dismount the wheel assembly by removing the eight segment screws and the three screws that hold the wheel to the collar (or cup assembly).

(2) Position the new wheel assembly, and replace the associated parts (3.03 through 3.06).

ED-40008-01 and ED-40014-01 (Mfr Disc.)

4.09 *Reel Spool Assembly*

(1) Remove the wheel assembly by unlocking the three fasteners (Fig. 4).

(2) Remove the reel spool assembly (Fig. 5).

(3) Slide the new reel spool assembly into position on the hub assembly so that the notch in the reel spool assembly is lined up with the stop screw.

(4) Remount the wheel assembly, and lock the fasteners.

4.10 *Sleeve* (Fig. 4)

(1) With the R-2670 hex socket screw wrench, remove the setscrews from the sleeve and mount them in the new sleeve.

(2) Hold the associated bronze bearing in the hub assembly in contact with the sleeve on the other end of the shaft, and remove the sleeve from the shaft.

(3) Slide the replacement sleeve on the shaft with the beveled side of the sleeve facing away from the hub assembly.

(4) Insert two 92T gauges between the new sleeve and the associated bronze bearing, one on each side of the shaft, to obtain uniform clearance between the two parts. The replacement

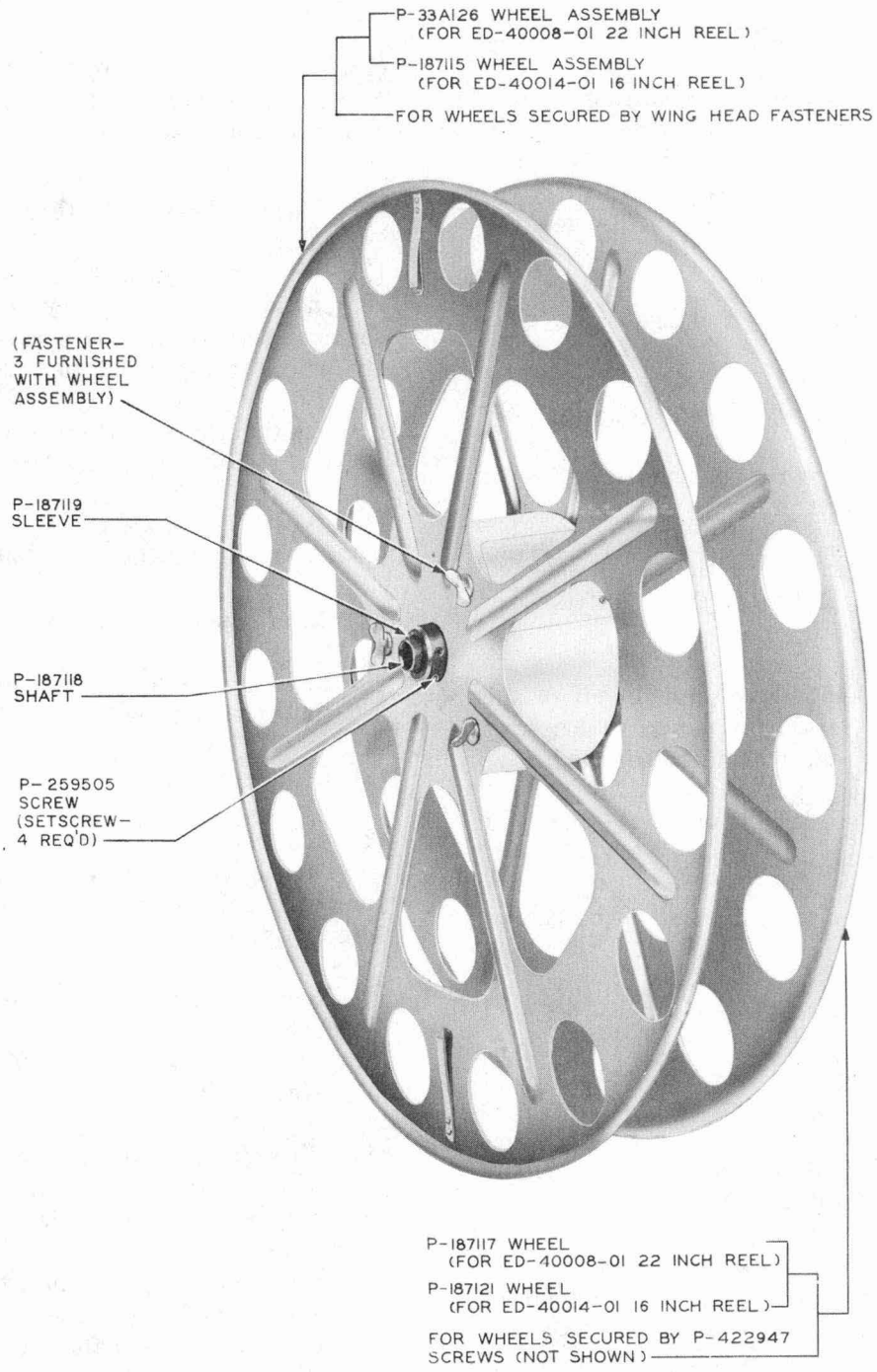

Fig. 4—ED-40008-01 and ED-40014-01 (Mfr Disc.) (22-Inch Reel Illustrated)

sleeve should rest on but not be tight against the gauges.

(5) Tighten the setscrews in the sleeve, and remove the gauges.

4.11 ***Shaft*** (Fig. 4)

(1) Loosen the setscrews in the two sleeves with the R-2670 hex socket screw wrench.

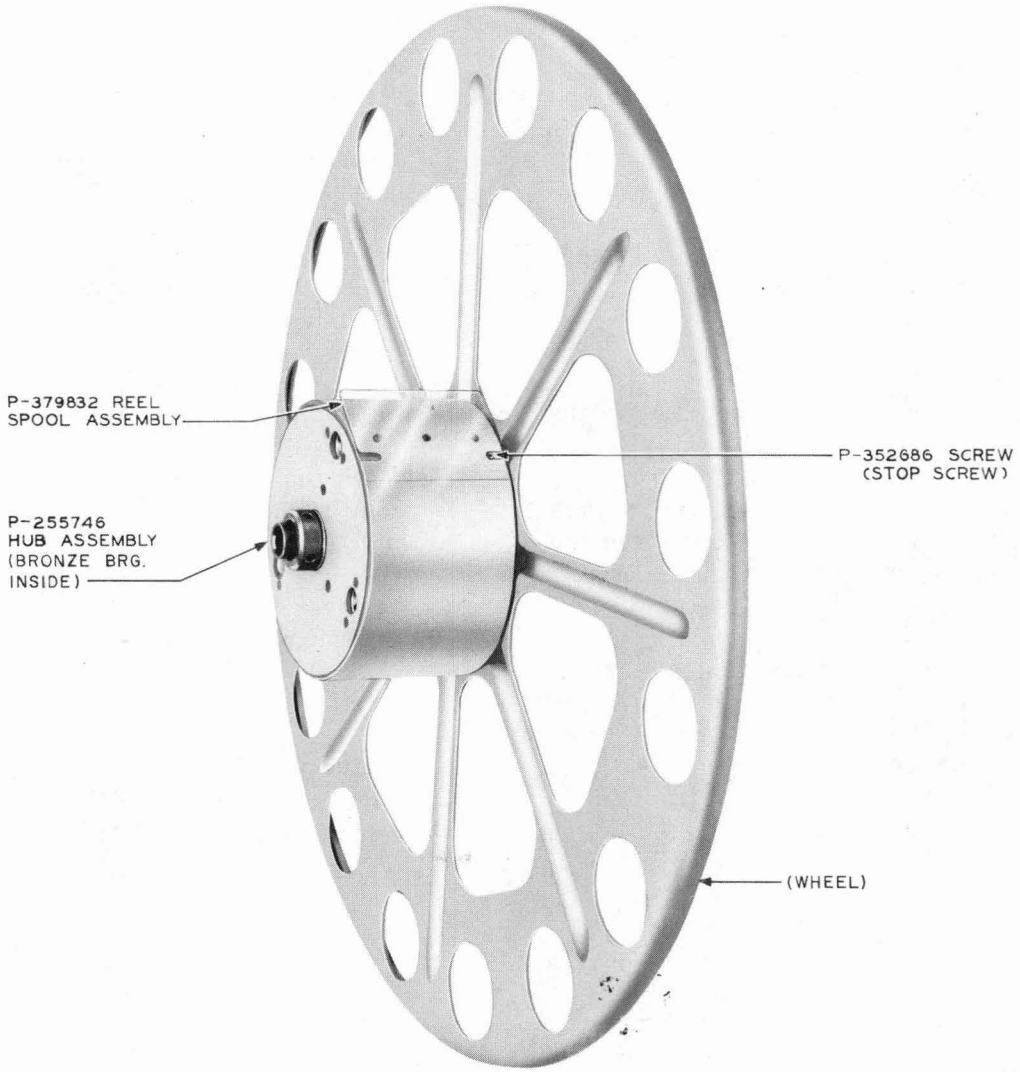

Fig. 5—ED-40008-01 and ED-40014-01 (Mfr Disc.) (22-Inch Reel Illustrated With Wheel Assembly Removed)

(2) Remove the sleeves.

(3) Remove the shaft from the hub assembly.

(4) Slide one sleeve on the new shaft. The shaft shall protrude from the beveled side of the sleeve 7/32 inch ±1/64 inch.

(5) Tighten the setscrews in the sleeve.

(6) Enter the longer end of the shaft into the bronze bearings of the hub assembly. The mounted sleeve shall be in contact with the bronze bearing.

(7) Mount the second sleeve as in 3.10.

4.12 ***Wheel Assembly*** (Fig. 4)

(1) Unlock the three fasteners and remove the wheel assembly.

(2) Position the new wheel assembly against the hub assembly so that the three guide holes and the three fasteners line up with their associated holes in the hub assembly.

(3) Insert two 92G gauges under the head of a fastener, one on each side of the fastener shaft, to obtain uniform clearance.

(4) Lock the fastener, keeping the gauges in place.

(5) Unlock the fastener and remove the gauges.

(6) Repeat the procedure (3) through (5) on each of the remaining fasteners.

(7) Lock all three fasteners.

(8) If the wobble at the rim of the wheel exceeds 1/8 inch, replace the hub.

4.13 ***Wheel*** (Fig. 4)

(1) With the 4-inch E screwdriver, remove the four screws and wheel.

(2) Position the new wheel against the hub assembly so the three guide holes and the four screw holes line up with their associated holes in the hub assembly.

(3) Install the four screws and tighten securely.

(4) If wobble at the rim of the wheel exceeds 1/8 inch, replace the hub assembly.

4.14 ***Hub Assembly*** (Fig. 5)

(1) With the R-2670 hex socket screw wrench, loosen the two setscrews in one of the sleeves and remove the sleeve.

(2) Remove the shaft and remaining sleeve as a unit by sliding the shaft out of the hub assembly.

(3) Unlock the fasteners and remove the wheel assembly.

(4) Slide the reel spool assembly off the hub assembly.

(5) With the 4-inch E screwdriver, remove the four screws holding the wheel to the hub assembly.

(6) Assemble the parts to the new hub assembly (3.09, 3.11, 3.12 and 3.13).

(7) If the wobble at the rim of the wheel or wheel assembly exceeds 1/8 inch, replace the respective part.