1/30 HP – 110 VOLT DC DRIVE MOTOR FOR 5-D AND 6-A DISTRIBUTORS REPLACEMENT PARTS AND PROCEDURES

1. GENERAL

1.01 This section covers the information necessary for ordering parts to be used in the maintenance of a 1/30 H.P. 110 Volt D.C. drive motor per KS-5039. It also covers approved procedures for replacing these parts.

1.02 This section is reissued to incorporate material from the addendum in its proper location. In this process marginal arrows have been omitted.

1.03 Part 2 of this section covers the various parts which may be replaced in the field in the maintenance of this equipment. Part 2 also contains explanatory figures showing the different replacement parts. This information is called "Replacement Parts". No attempt should be made to replace parts not designated.

1.04 Part 3 of this section covers the approved procedures for the replacement of the parts listed under Part 2. This information is called "Replacement Procedures".

2. REPLACEMENT PARTS

2.01 The figures included in this part show the various replacement parts in their proper relation to other parts of the apparatus with their corresponding names.

2.02 When ordering replacement parts give the name of the part as shown in the figures of this section and also the complete nameplate data of the machine including the serial and "KS" numbers, e.g. two brushes for the motor having the following nameplate data: d.c. motor; model no. 24892; frame 315; h.p. 1/30; type SD; volts 110; rpm 3300; KS-5039; serial no. 1266006.

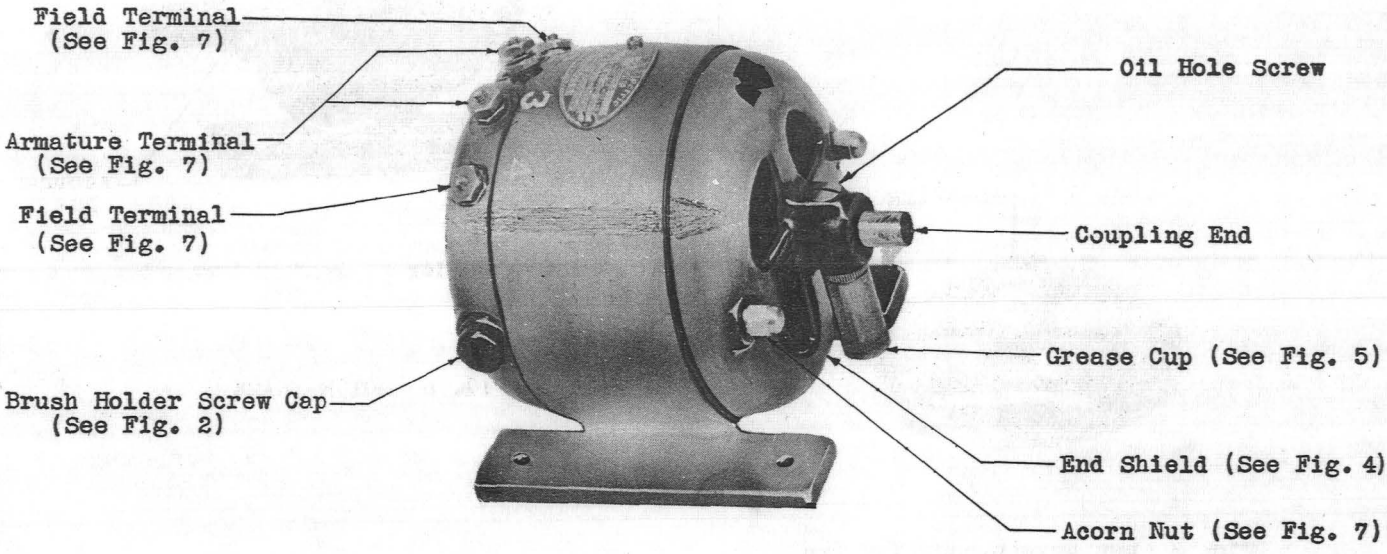

FIG. 1 GENERAL ASSEMBLY

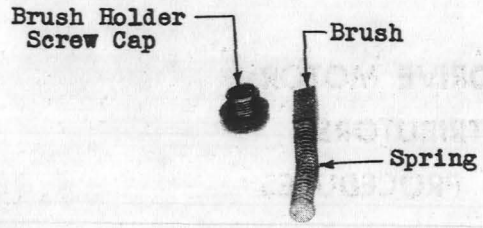

FIG. 2 BRUSH-DETAILS

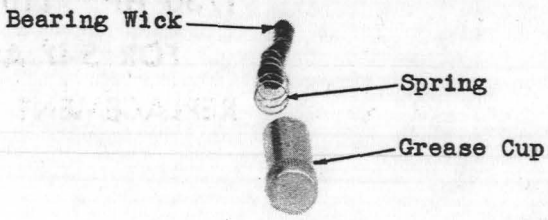

FIG. 5 GREASE CUP-DETAILS

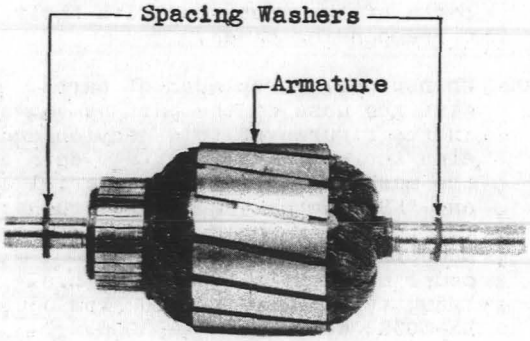

FIG. 3 ARMATURE ASSEMBLY

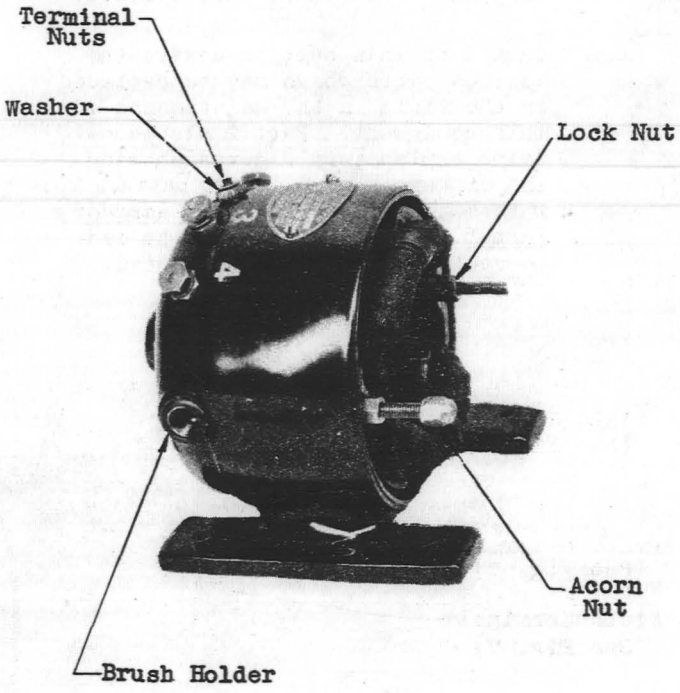

FIG. 6 MOTOR FRAME

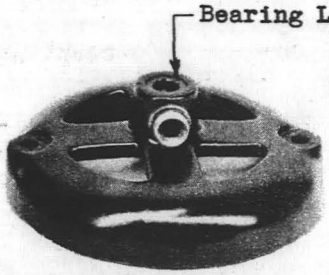

FIG. 4 END SHIELD-COUPLING END

3. REPLACEMENT PROCEDURES

TOOLS

Hammer, Claw, 1 lb.
Screw-driver, 3-1/2", cabinet style, per A. T. & T. standard drawing 46-X-40
Wood, Soft Block
Wrench, Socket, 5/16", code number 45

MATERIALS

Cheesecloth or Equivalent
Veedol Medium Cup Grease
Petroleum Spirits

3.001 After making any replacement of parts the apparatus should be checked, and when necessary, readjusted to meet the requirements specified in Section 159-408-701.

BRUSHES

3.01 BRUSHES

M-1 To replace a brush remove the screw cap which holds the brush and spring in place, withdraw the old brush and spring, insert a new brush and spring and replace the screw cap.

3.02 ARMATURE

M-1 To replace an armature first loosen the motor mounting screws noting the position of any shims under the feet of the motor so that the correct alignment may be obtained when reassembling. Remove the coupling from the motor shaft. Remove the brushes, grease cups and bearing wicks. Mark the brushes so that the same brush may be inserted in the same position and in the same brush holder when reassembled. Remove the acorn nuts from the end shield on the coupling end using the No. 45 socket wrench. Remove the end shield. If it sticks, pry it off by inserting a screw-driver in the small opening on the side between the frame and the end shield. Note the location of all parts which may be removed so that they may be replaced in their proper positions. Slide the armature out, taking care not to lose any spacing washers which may be on the shaft.

M-2 Wipe off any grease and clean the end shields, bearings and bearing housings with a clean piece of cheesecloth moistened with petroleum spirits. If the grease is caked or sticks in the bearings, use may be made of a small stiff brush moistened with petroleum spirits. Wipe the motor frame and field windings with a clean dry cheesecloth.

M-3 Replace the old armature with a new or reconditioned one. Reassemble the parts in the reverse order from that in which they were taken down, making certain that all associated parts are assembled in their same relative positions. See that the armature turns freely in its bearings. Refill the grease cups with Veedol medium cup grease if necessary and place the motor back into service.

3.03 BEARING LINING

M-1 To replace a bearing lining in the end shield on the coupling end first remove the grease cup and bearing wick and then remove the end shield as outlined in paragraph 3.02. After removal place the end shield, inner face down, on two pieces of wood sufficiently high and so arranged as not to block the bearing bushing when pressed or driven out. Place a piece of hard wood on the outer end of the bearing bushing and tap with a hammer until the bushing is driven out of the bearing housing. Turn the end shield over and drive the new bushing into the bearing housing in a similar manner until the bearing lining rests firmly against the shoulder on the inside of the end shield. Care should be taken not to injure the new lining bushing in putting it in and to see that the oil hole and hole for the bearing wick line up with the corresponding openings in the bearing housing. Reassemble the motor and make certain that the armature rotates without binding and that there is adequate lubrication for the shaft.

M-2 To replace the bearing lining in the housing on the commutator end it will be necessary to first remove the armature as outlined in paragraph 3.02. Drive out the bushing lining in a manner similar to that outlined in M-1 being careful not to injure the motor windings. Put in the replacing

bushing observing the precautions noted in M-1 and reassemble the motor.

3.04 GREASE CUPS

M-1 A grease cup may be replaced without disturbing the motor by unscrewing in a counter-clockwise direction. Replace by turning in a clockwise direction.

3.05 BEARING WICK

M-1 To replace a bearing wick remove the grease cup as outlined in paragraph 3.04. Release the pressure from that part of the coil spring which holds the wick firmly. Replace with new wick and compress that portion of the spring that comes in contact with the wick. Replace the wick and cup, making sure that the wick does not bind and that it presses against the motor shaft.