

INSTRUCTIONS FOR INSTALLING MODIFICATION
KIT 324677 TO PROVIDE VENTILATION FAN FOR
28 AUTOMATIC SEND-RECEIVE CABINET

1. GENERAL

1.01 The purpose of modification kit 324677, when installed on 28 Automatic Send-Receive Set cabinets, is to provide forced ventilation to equipment within the lower compartment by means of an electrically driven fan. The fan mounts flush on the lower compartment door.

1.02 The kit consists of a fan assembly, fan mounting, cables, connector, mounting bracket, and necessary hardware. The fan assembly consists of a fan block, a grille cover, filter, filter support, two mounting clips for the filter, and two mounting clips for the fan block. The fan block consists of a fan mounted in a molded plastic block, one and one-half inches thick.

1.03 The fan operates a 115 volts, 50 to 60 hertz, alternating current, and draws 14 watts. A 1/4 ampere in-line fuse is used in the fan circuit.

1.04 The 324677 modification kit consists of:

<u>Part No.</u>	<u>Description</u>	<u>Qty Used</u>
1248	Screw (6-40 x 0.424 F.H.)	1
2191	Lockwasher	6
3598	Nut (6-4 Hex)	4
7002	Flat washer	4
70314	Flat washer	2
80709	Screw (6-40 x 1/4 Rd. Hd.)	2
107116	Lockwasher	1
111017	Screw (6-40 x 5/16 Fil)	4
**118510	Fuse, 1/4 ampere	1
121243	Cable clamp	1
122476	Self-tapping screw (#6)	2
129098	Screw (6-4 x 17/64 F.H.)	3
182531	Speed clip	2
193942	Fan set of parts	1
**193994	Fuse holder	1
*196930	Grille	1
*196931	Mounting clips	2
*198092	Fan	1
310729	Air filter	1

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<u>Part No.</u>		<u>Qty Used</u>
310730	Filter support	1
324679	Receptacle mounting bracket	1
324680	Plug bracket	1
326373	Cable assembly with receptacle and fuse holder	1
326760	Cable assembly with plug	1

*Part of 193942 set of parts

**Part of 326373 cable assembly

2. THEORY OF OPERATION

2.01 The fan draws ambient air into the cabinet through the lower compartment front panel, and out through the various cabinet openings.

2.02 This movement of air through the lower compartment of the cabinet conducts heat away from the equipment mounted within the compartment.

3. INSTALLATION

A. Lower Compartment Cabinet Door

3.01 It is necessary to cut a rectangular opening in the lower compartment cabinet door. (Installation will be facilitated if the door is removed.) Use Figure 1 as a template, and Figure 2 for the locating dimensions, for the rectangular opening. (Perform the work on the back side of the door.) Align the dimensions with the inside edges of the door.

3.02 Drill or punch four 0.144 inch diameter holes (#27 drill).

3.03 Cut the rectangular opening in the door.

3.04 Drill or punch two 0.375 inch diameter holes (refer to Figure 2 for locating dimensions) to mount the 324680 plug bracket. Remove bumper and add a 0.140 inch diameter hole 0.375 inch to the left of the two holes used to mount the bumper. Relocate the bumper. (For 0.140 inch diameter hole, use #28 drill.)

Note: Two holes are required in the cabinet upper shelf support brace. (Refer to Paragraph 3.06.)

B. Fan Installation

3.05 Flush mount the fan.

- (a) Attach the spring steel mounting clips (supplied with the fan) to the door as shown in Figure 2, using the 1248 flat head screw, 2191 lockwasher, 7002 flat washer, 121243 cable clamp, and a 3598 nut in the upper right hole (as viewed from the front).
- (b) In the remaining three holes, use the 129098 flat head screws, 7002 flat washers, 2191 lockwashers, and 3598 nuts.
- (c) Install the 324860 plug bracket as shown in Figure 2, using the 80709 round head screws, 2191 lockwashers, and 7002 flat washers.
- (d) Install the 153492 connector plug (part of 326760 cable assembly) on the 324680 plug bracket using the 111017 fillister head screws.
- (e) Route the 326760 cable assembly through the 121243 cable clamp. (Refer to Figure 2.)
- (f) Solder the (skinned, tinned) leads of the 326760 cable assembly to the fan terminals.
- (g) Insert the fan block between the clips so that the formed guide rails on the clips enter the slots on the block. The terminals of the fan should be in the lower right hand corner of the opening with the direction of air flow inward through the opening in the door. Push the block in the clips from the rear of the door until the lugs in the mounting clip snap into the long slot in the approximate center of the fan block. Push the fan block forward until it is approximately 3/8 inch behind the front surface of the door.

Note: If the block must be removed, pry the spring tabs carrying the lugs away from the block with a screwdriver. The block can then be pushed out.
- (h) Install the 310729 air filter behind the screen of the 196930 grille. Place the 310730 filter support over the 310729 air filter. Install the 182531 speed clips adjacent to the center vertical cross member of the 310730 filter support with the tabs of the 182531 speed clips facing inward. Be sure the tabs of the 182531 speed clip are formed so that they will not interfere with the blades of the fan.
- (i) Press the 196930 grille with filter down between the clip on the outside of the door. It is held in place by retaining fingers on the clips.

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C. Lower Compartment of Cabinet

- 3.06 It is necessary to drill or punch two 0.111 inch diameter (#34 drill) holes in the right side of the upper shelf reinforcing bracket. Refer to Figure 3 for dimension locations.
- 3.07 Install the 324679 receptacle bracket using the 122476 round head self-tapping screws, as shown in Figure 3.
- 3.08 Install the 108953 receptacle (part of the 326373 cable assembly) using the 111017 filister head screw as shown in Figure 3.
- 3.09 Route the 326373 cable assembly back and up through the opening in the right rear corner of the upper shelf, and connect it to the cabinet terminal block. Refer to 8324WD for terminal designation.

4. ADJUSTMENTS AND LUBRICATION

A. Adjustment

- 4.01 With the door in its installed closed position, the plug should be fully seated with its receptacle. Adjust as follows: With the mounting screws of the receptacle mounting bracket friction tight, insert the plug mounted on its mounting bracket into the receptacle mounted in the cabinet. Pull the receptacle mounting bracket as far forward as possible in its mounting slot. Carefully close the door, moving the receptacle mounting bracket to its proper position. Insert the 80709 screws, 2191 lockwashers, and 70314 flat washers which mount the plug mounting bracket to the door. Open the door and tighten the receptacle mounting bracket mounting screws.

B. Lubrication

- 4.02 The fan should be lubricated once a year using the 194853 oil injector.
 - (a) Remove cap from end of oil injector.
 - (b) Place needle at the center of the circle marked on the gold label.
 - (c) Position the needle at an angle of approximately 45° to the surface of the label.
 - (d) Pierce the label and the concealed self-sealing rubber cap located under the label.

- (e) Depress the plunger of the oil injector slowly to allow approximately 1/8 inch of oil to escape.

C. Filter Cleaning

4.03 The air filter mounted in the 196930 grille must be cleaned every 30 days. In dusty locations, it may have to be cleaned more often. To clean air filter, remove grille from front of fan. Wash in warm (not hot) mild, soapy water. Rinse with clear water and allow to drip dry. Replace grille on fan.

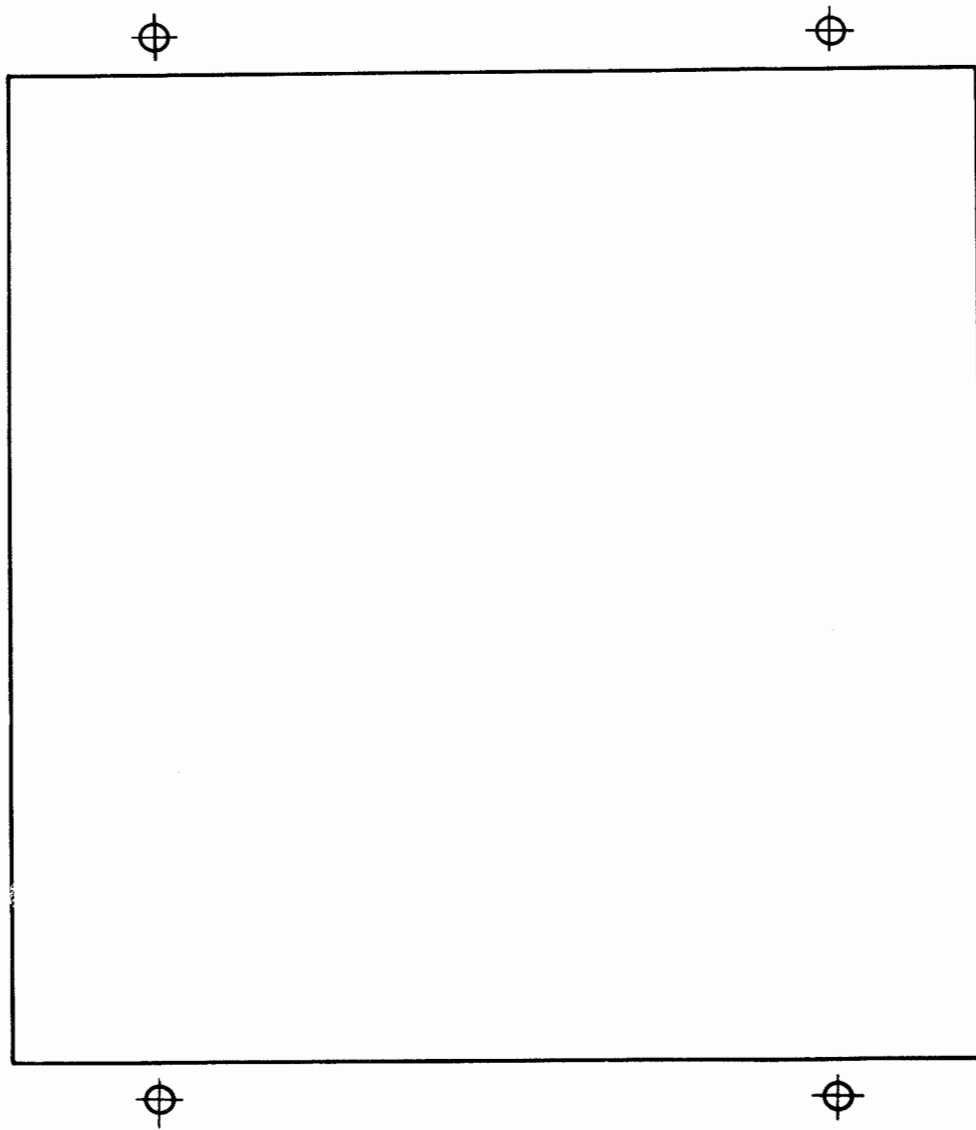


Figure 1 - Template for Fan Modification Kit

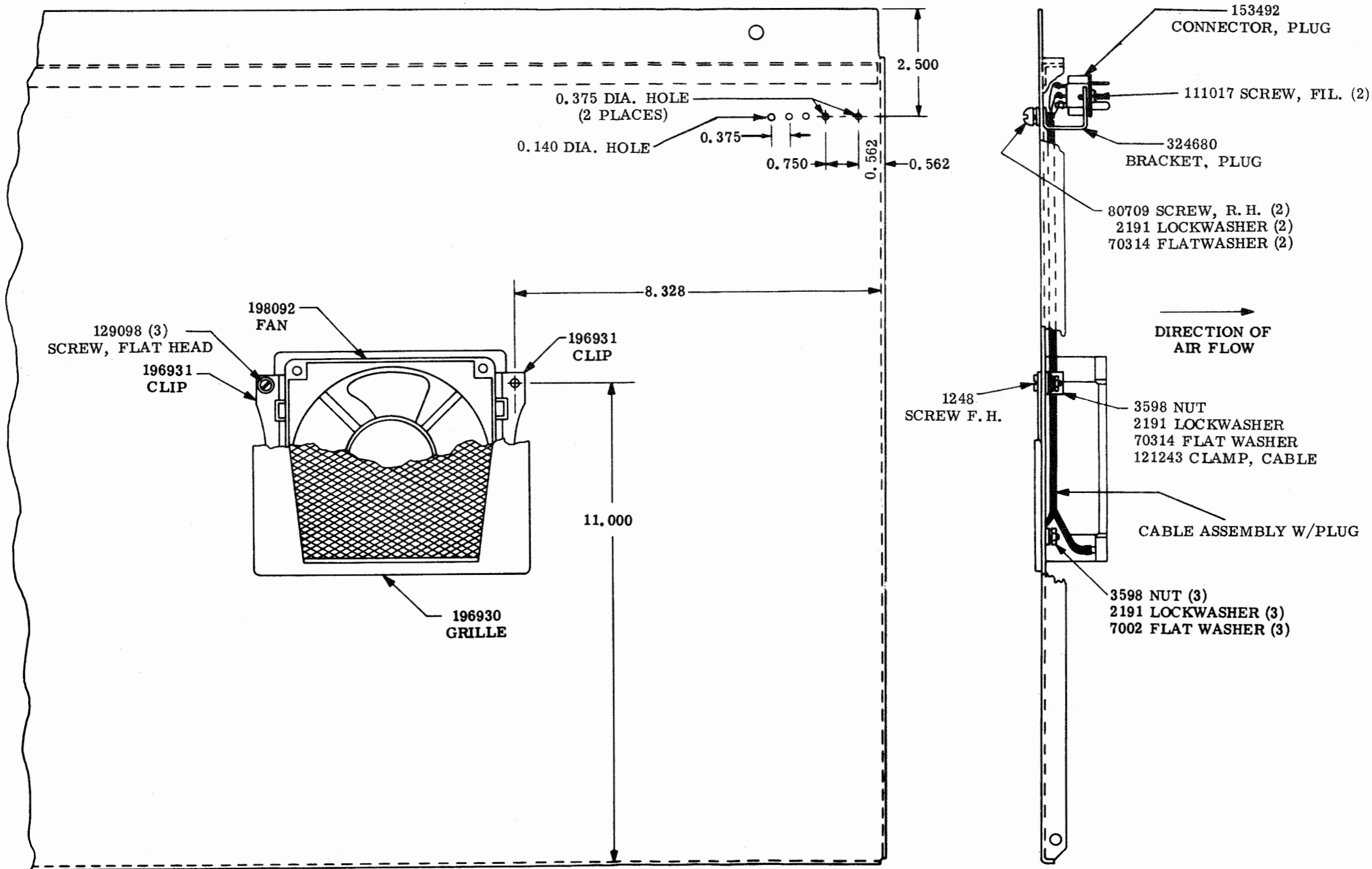


Figure 2 - 324677 Fan Modification Kit

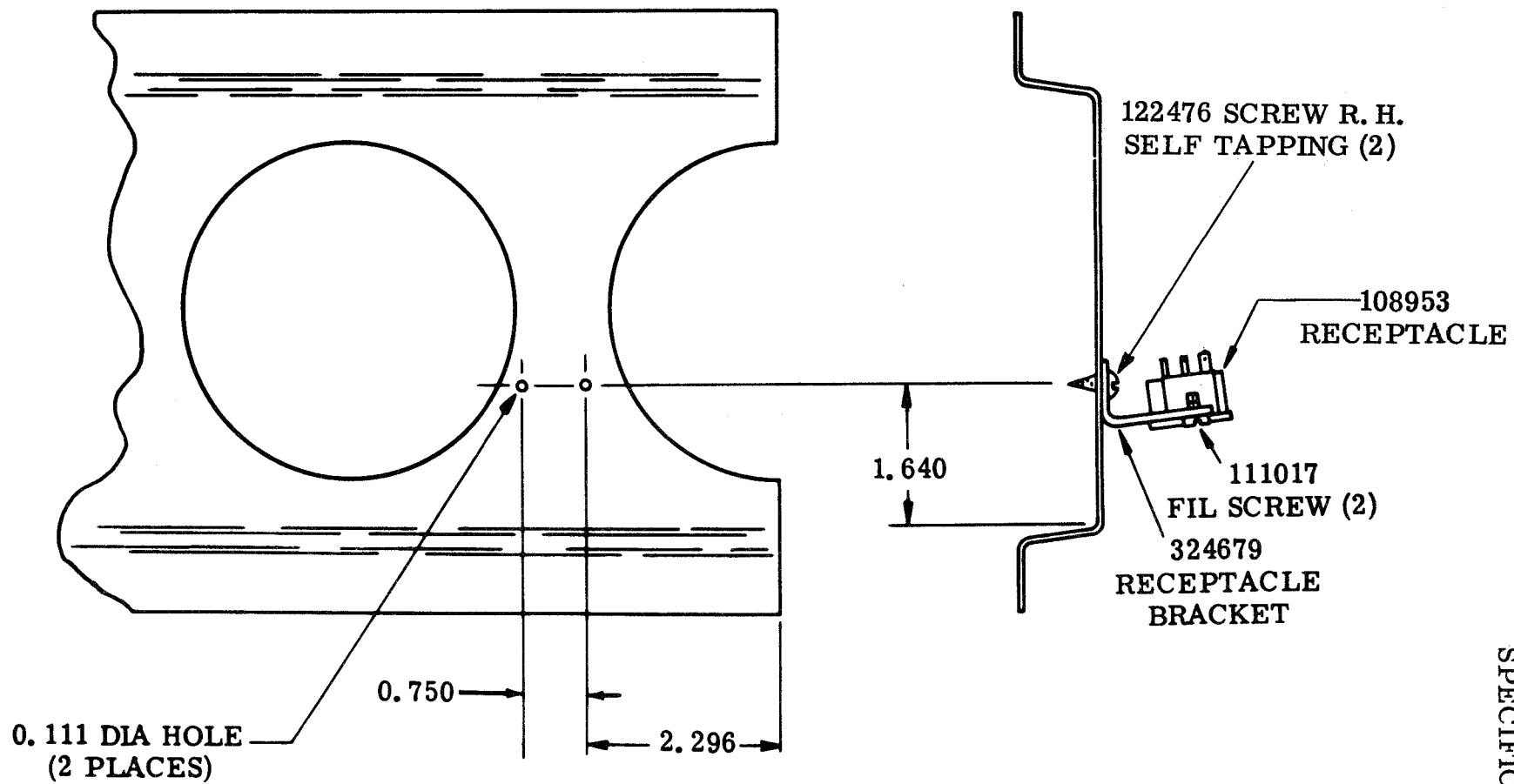


Figure 3 - Connector Bracket Mounting

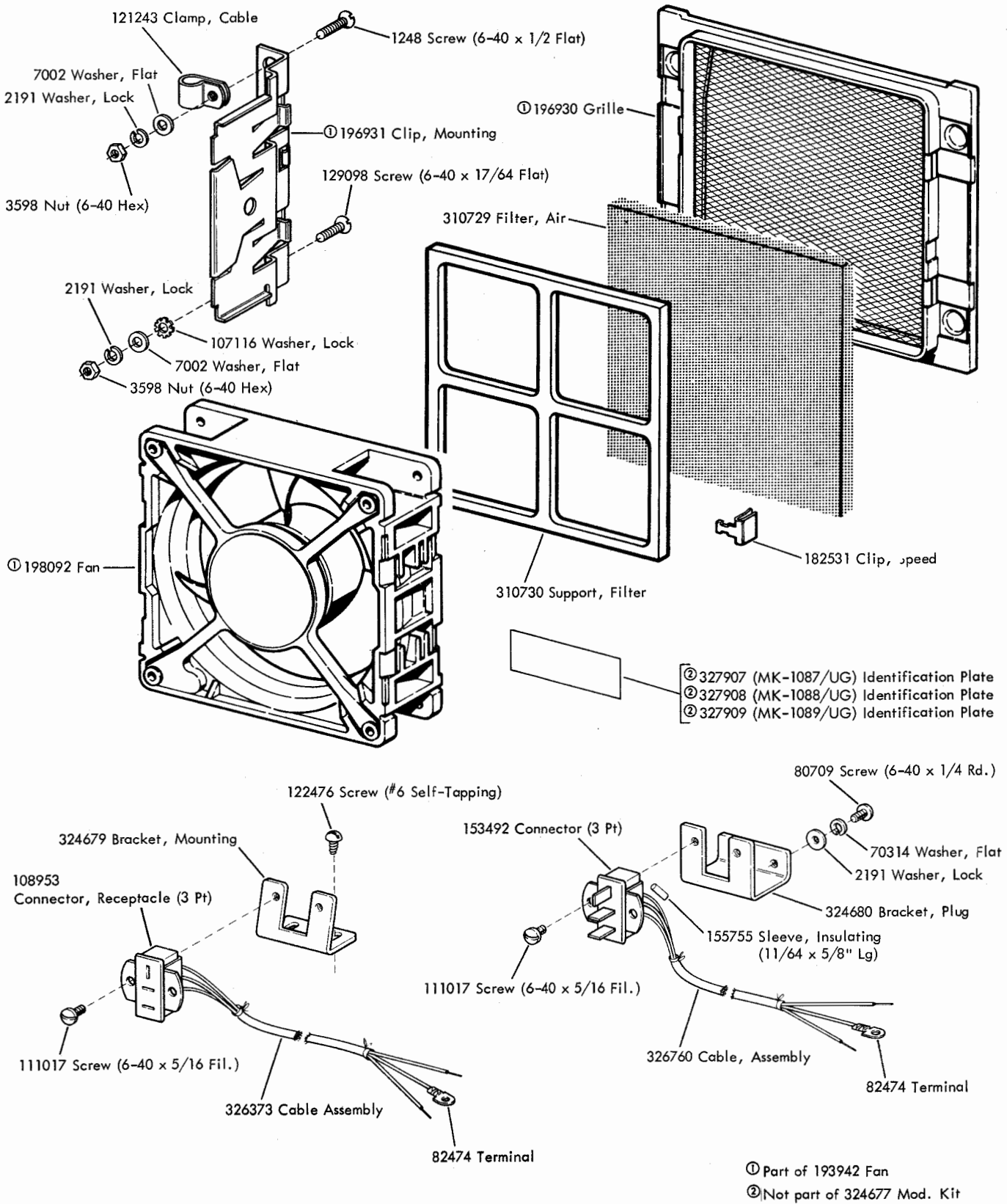


Figure 4 - 324677 Modification Kit to Add Fan to LAAC