MOUNTING EQUIPMENT
PERFORATOR UNITS
AND 14 TYPE REPERFORATORS

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2. GENERAL

2.1 Scope

2.11 This section covers the procedures for mounting KS-13834 Perforator units on No. 4 and 5 Crossbar and Step-by-Step with AMA installations. It also covers mounting and aligning the gears and motor for 14 Type Reperforators in No. 5 Crossbar offices.

2.12 Apparatus covered by this section shall be located in accordance with information furnished the job.

2.13 Refer to the Associated Handbook Information Chart for the location of other information to which reference may be necessary when performing operations covered by this section.

2.2 Precautions

2.21 General safety precautions against personal injury and equipment damage are outlined in Handbook 0 and the "General" section in this handbook. These precautions are to be observed at all times as they apply to the operations being performed. Specific precautions to be taken are covered in this section.

2.3 Arrangement of Tools

2.31 Prior to starting operations covered by this section, the tools and other items required should be arranged at the work locations so as to minimize fatigue and inconvenience when handling.

2.4 Verification

2.41 Items for the verification of the equipment installed by the operations covered in this section are listed in Section 50V.

2.42 The items in Section 50V also may be used as a self-check guide when performing operations covered by this section.

3. INSTALLING EQUIPMENT

3.1 Tools

3.11 The tools listed below will be required for the operations listed in this section. Other tools, available in the General Tool Kits, may also be needed.

R-81438	Chain, Hoisting, Sender Unit (Note)
R-2092	Chisel, Ripping
R-9430	Hammer, Claw
R-1844	Hoist, Chain, 1/4 Ton
R-2975	Pliers, Snap Ring, Adjustable (Note)
R-1324	Screwdriver. 8"
R-2599	Truck, Dolly
R-2812	Wrench, Allen, 3/16"
R-1044	Wrench, Box, 1/2" - 7/16"

NOTE: On No. 4 Crossbar and Step-by-Step with AMA jobs it will be necessary to order the R-81438 hoisting chain and the R-2975 pliers since they are not normally available on these jobs.

4. HOISTING AND MOUNTING KS-13834 PERFORATOR UNITS

4.1 Secure the R-1844, 1/4 ton chain hoist to the auxiliary framing. See Section 50A. The framing bars should be so located that the chain hoist will hang approximately 6" from the front side of the frame.

4.2 The perforators are packed in a wooden crate which in turn is placed in another box and is protected from shifting during shipment by wood shavings or excelsior. Remove the top and one side of the outside crate and push the inner box on an R-2599 dolly truck. Then remove the top and sides of the inner box and move the unit in position in front of the frame.

4.3 Attach the R-81438 hoisting chain to the unit as shown in Figure 1.

4.4 Raise the perforator as high off the floor as is necessary to remove the screws securing the shipping skid to the bottom of the unit, when so attached. Remove the shipping skid and move the dolly truck away from the front of the frame.

4.5 Continue raising the unit until the bottom is slightly above the level of the mounting brackets on the frame uprights.

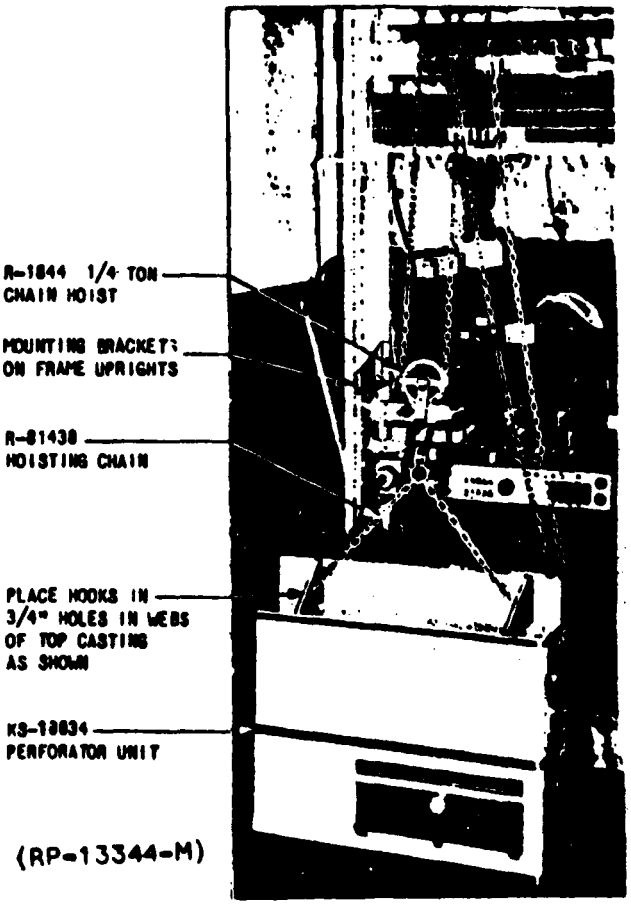

FIG. 1 UNIT IN POSITION FOR HOISTING - DOLLY TRUCK AND SHIPPING SKID NOT SHOWN (PAR. 4.3)

4.6 While one man is operating the chain hoist, a second man should grasp the unit and guide it back in position on the mounting brackets on the frame uprights.

CAUTION: Exercise care when placing the perforator in final position to prevent the hoisting chain from rubbing against and possibly damaging the apparatus mounted above the unit.

ASSOCIATED HANDBOOK INFORMATION CHART (Par. 2.13)

Subject	Handbook	Section
General Requirements and Information	30	1B
General Safety Precautions	30	1A
Mounting Shelves, Units and Other Frame Mounted Equipment, Common Information	30	50B
Precautions, General	0	13A
Precautions, Service Interruptions	0	13B
Precautions, Damage to Building and Equipment	0	13C
Precautions, Personal Injury	0	13D

4.7 Place the mounting screws, furnished with the unit, in position through the bottom mounting brackets and back supports and securely tighten.

4.71 Slotted hexagon head screws are used for securing the unit to the bottom support brackets. Use the R-1324 screwdriver or, where interference is encountered, the R-1044 box wrench for turning the screws.

4.72 Round head screws and hexagon nuts are used for holding the units back against the frame uprights. These screws are inserted from the rear of the frame through the tapped holes in the mounting bars and extend through the slotted holes in the mounting brackets located at the top rear of the units. The units are then locked in position by means of the hexagon nuts furnished with the screws. Tighten the parts securely with the R-1044 box wrench.

4.8 The KS-5748 Motor in the KS-13834 Perforator is protected from vibration during shipment by a series of wooden blocks. These blocks must be removed before operating the motor. See Figure 2.

4.9 When it is necessary to remove a perforator unit, the procedures outlined in the preceding paragraphs should be followed in a reversed order.

5. ADDITIONAL PROCEDURES

5.1 After the perforator unit has been mounted on the frame, open the cover of the unused card bin and remove the cards that are wedged in place to protect the elevator during shipment. Insert a package of 400 cards into the bin (remove the top and bottom unnumbered protecting cardboards from the stack), line up the cards and insert the "T" bar into the positioning slot in the rear edge of the card stack. Close the door of the bin and push it to its down stop position which will cause the elevator to rise to its operating position.

NOTE: Storing and handling of cards is covered in Handbook 15, Section 1.26.

5.2 Place the manual control handle, which is normally located in the compartment at the rear of the motor, on the hand drive shaft and press the armature of the latch magnet against the core face and rotate the knob in a clockwise direction. After a slight rotation of the handle, the armature of the latch magnet may be released. Continue the rotation until the latch takes effect. Force rotation to the pull overthrow position and then quickly release the knob. The perforator should then be ready for normal power operation.

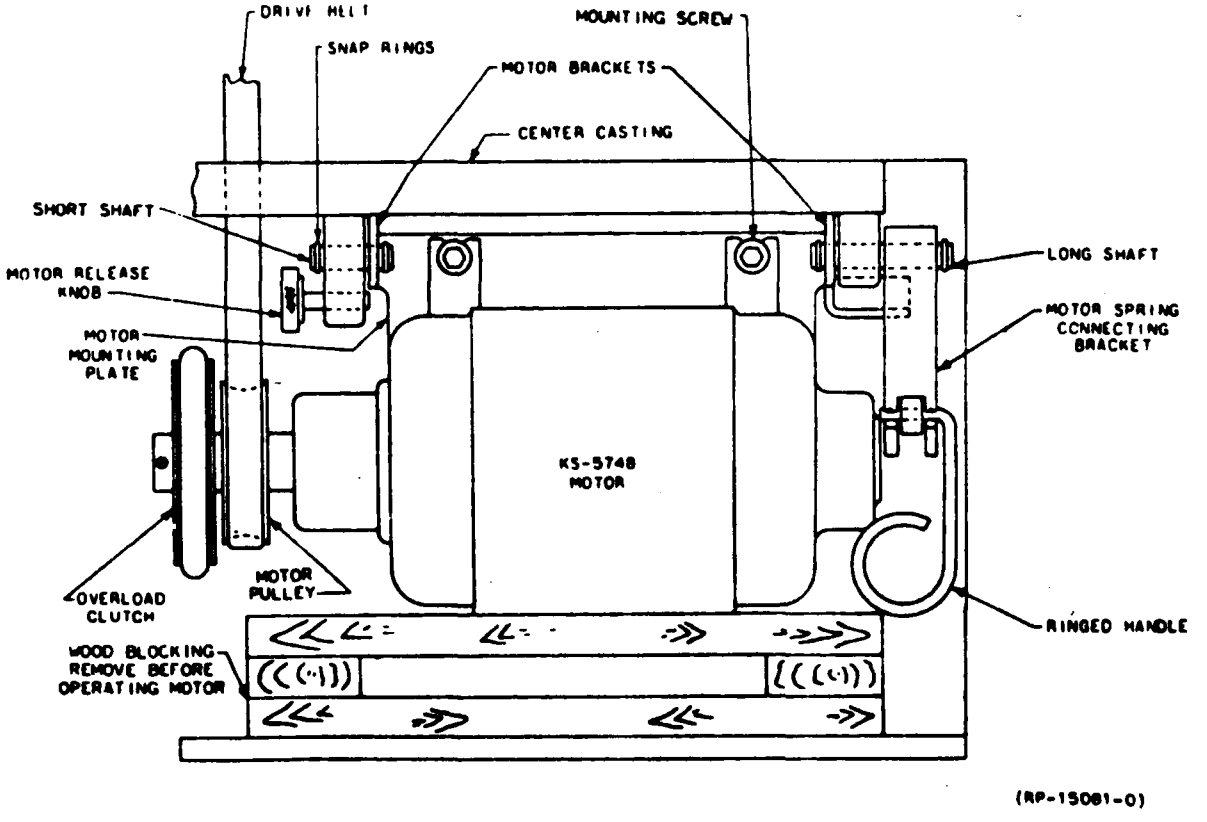

FIG. 2 MOTOR IN KS-13834 PERFORATOR (PAR. 4.8)

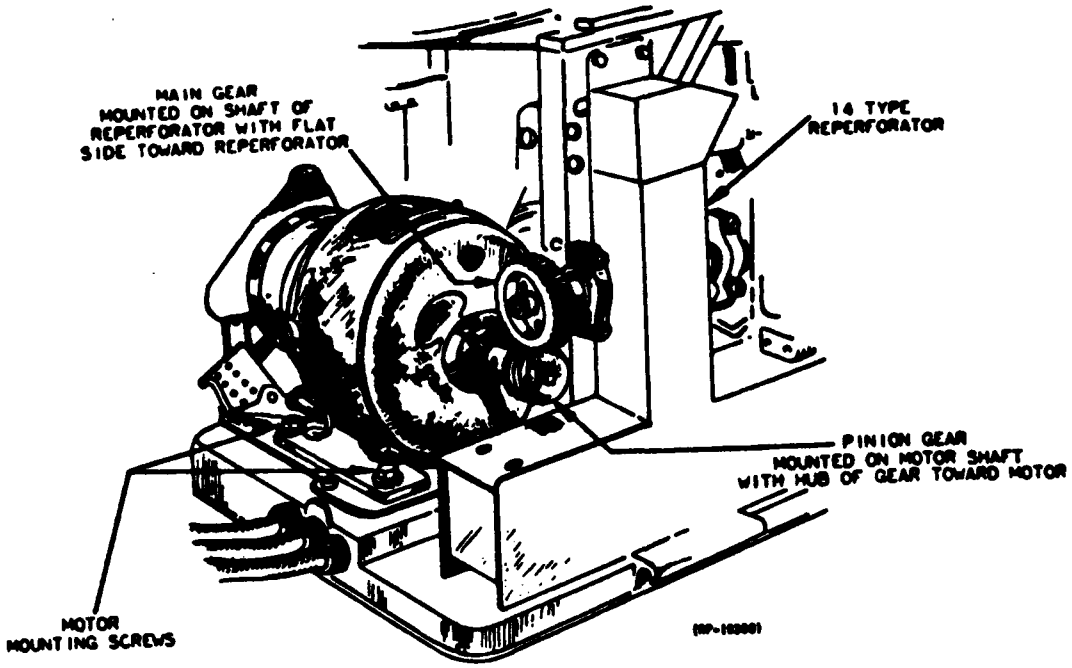

FIG. 3 MOTOR PINION AND MAIN SHAFT GEAR - 14 TYPE REPERFORATOR (PAR. 6.12)

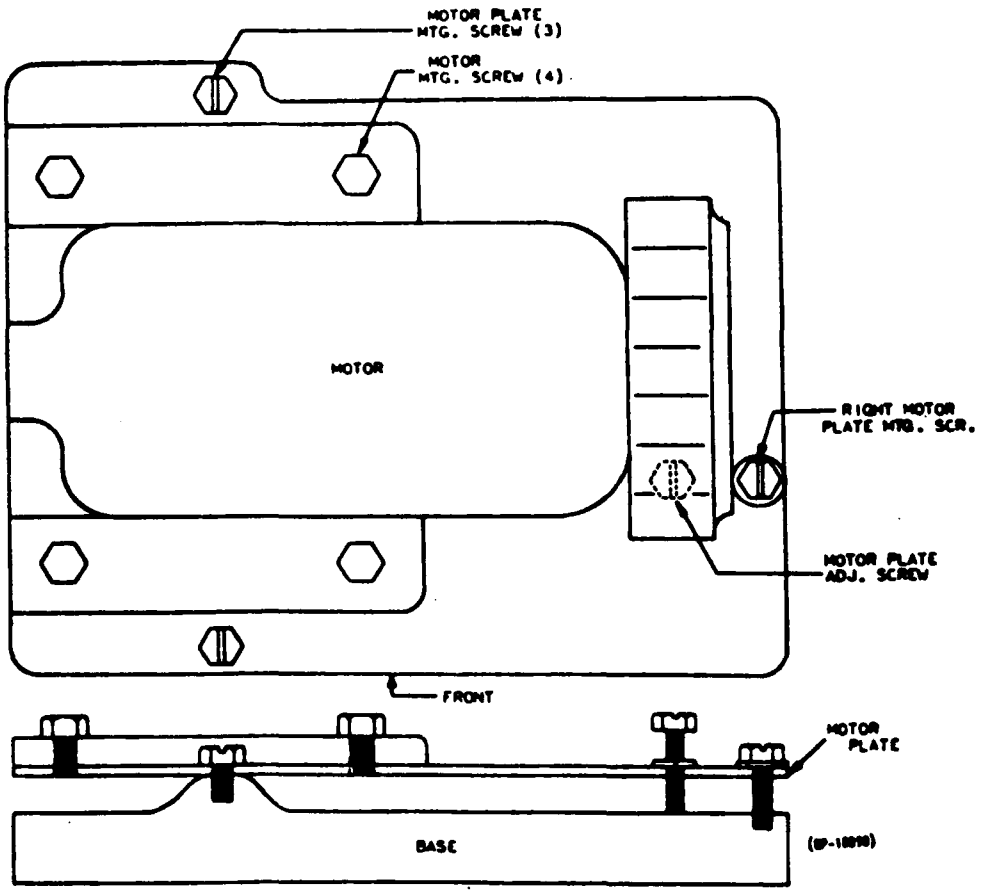

FIG. 4 LOCATION OF MOUNTING AND ADJUSTING SCREWS (PAR. 6.32)

6. 14 TYPE REPERFORATOR

6.1 Mounting of Gears

6.11 The 14 type reperforator furnished with the automatic progression trunk test frame in No. 5 Crossbar offices is received on the job with motor and gears shipped separately.

6.12 To avoid the possibility of damaging the main shaft or the pinion gear, make sure that the pinion gear is mounted on the motor shaft with the hub of the gear toward the motor. The main shaft gear should be mounted on the shaft of the reperforator with the flat side toward the reperforator and the hub of the gear outward. See Figure 3.

6.2 Location of Motor

6.21 The motor should be so located that the axis of the pinion shaft lies approximately in the midplane of the main shaft gear as gauged by eye.

6.22 To adjust, loosen the motor mounting screws and reposition the motor on its mounting plate, keeping the edges of the motor base and the mounting plate parallel.

6.3 Aligning and Adjusting Gears

6.31 The motor pinion and main shaft gear should not bind and there should be a barely perceptible backlash between them at the closest point in their revolution.

6.311 Gauge the bind by feel and the backlash by eye. Hold the pinion and move the main shaft gear.

6.32 To adjust, (facing front of machine) loosen the right motor plate mounting screw and the locknut of the motor plate adjusting screw. (See Figure 4) Slightly loosen the other two motor plate mounting screws. Start the motor and carefully readjust the vertical position of the motor plate adjusting screw until the gear noise is at a minimum. Tighten the motor plate mounting screws and the adjusting screw locknut. Shut off motor and recheck the backlash.

CAUTION: As this adjustment is made with motor running, care should be taken to avoid injuries to the fingers. Care should also be taken to avoid damaging the main shaft gear or overloading the motor as a result of too close mesh between the gear and pinion.

→ Arrowed lines indicate new or changed information.

[Vertical line at side of paragraphs indicates requirements.

Engineer of Installation

Reason for Reissue:
(1) To remove information which no longer applies.
(2) To add Paragraph 4.8 and change Figure 2 to include removal of wooden shipping details from underneath the Motor.
(3) To add reference to Handbook 15. (Paragraph 5.1, Note)

Replaces Section 50C of 2-21-57.