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INSTALLATION INSTRUCTIONS

NOISE REDUCTION KIT

SPECIFICATION NO. 5632

for

GENERATOR SET MODEL 60G20T

SPECIFICATION NO. 5384

MOTOR GENERATOR DIVISION  
HOBART BROTHERS COMPANY  
TROY, OHIO 45373  
U.S.A.

## TABLE OF CONTENTS

SUBJECT	PAGE NO.
Introduction	1
Description of Kit	1
Preparation for Installation	1
Locating Equipment	1
Inspection	1
Roll Generator Set Out	3
Kit Installation	3
Disassembly	3
Left front door	3
Right front panel	3
Lights	3
Front radiator canopy	6
Right front canopy frame	6
Muffler	6
Preparation for Assembly	6
Assembly of New Parts	8
General	8
Muffler	9
Muffler mounting bracket	9
Right front canopy frame	9
Front radiator canopy	9
Lights	11
Left front door	11
Right front top panel	11
Right front bottom panel	12
Roll Generator Set In To Normal Position	12

## LIST OF ILLUSTRATIONS

Figure No.	Title	Page No.
1	Canopy Assembly	2
2	Roll-Out Stop-Bar	4
3	Generator Set Retaining Components	4
4	Left Front Door	5
5	Right Front Panel	5
6	Canopy Frame and Radiator Attaching Screws	7
7	Exhaust Manifold Mounting Surface	8
8	Pilot Hole Sizes	8
9	Muffler Mounting Bracket	10
10	Muffler Installed	10
11	Front Canopy Installed	11

## 1. Introduction

These instructions cover recommended procedures for the installation of a Noise Reduction Kit, Specification Number 5632 (S-5632), designed for modification of a tractor-mounted generator set, Model No. 60G20T.

## 2. Description of Kit

The kit consists of a new exhaust system and new canopy components (see items 1, 7, and 9, Figure 1) designed to reduce noise level to below 92 DBA, at a distance of 15 feet from the machine when it is operating under full load. A new panel (not illustrated) is added below the right front panel (7, Figure 1). A new right front canopy frame is required to provide exhaust system clearance. The new exhaust system is a one-piece, welded unit consisting of exhaust manifold, muffler, and resonator, designed to reduce engine noise. New panels are covered on the inside with Fiberglass acoustic material to reduce reflected and conducted noise, and to also absorb noise.

Kit components are identified as follows:

PART NUMBER	ITEM NAME	QUANTITY
480519	CANOPY, FRONT (Radiator housing and grille)	1
480535	DOOR, LEFT FRONT	1
480536	PANEL, RIGHT, FRONT	1
480537	PANEL, RIGHT, BOTTOM (new, added)	1
480517	FRAME, CANOPY, RIGHT FRONT	1
480515	MUFFLER ASSEMBLY, EXHAUST	1
403983	GASKET, EXHAUST MANIFOLD	1
480539	BRACKET, MUFFLER MOUNTING	1
480538	TUBE ASSEMBLY, FUEL DRAIN	1
COMM	SCREW, SELF-TAPPING	31

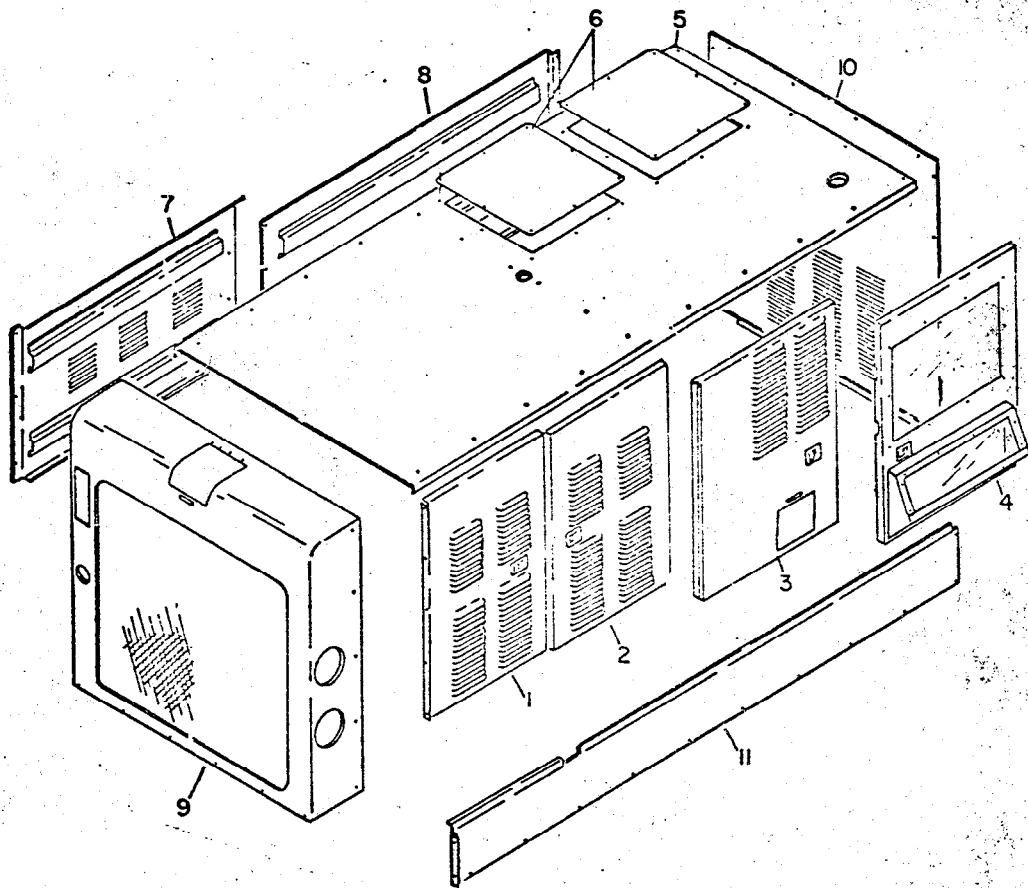
## 3. Preparation for Installation

### A. Locating Equipment

Locate and position the unit to be modified in an area where adequate lighting and power for driving hand tools are available.

### B. Inspection

Inspect all kit parts after they have been unpacked to be certain they were not damaged in shipment. Check for dents, bends, and distortions. Check muffler assembly and exhaust manifold gasket especially.



- |                                       |                              |
|---------------------------------------|------------------------------|
| 1. Left front engine compartment door | 7. Engine access panel       |
| 2. Left rear engine compartment door  | 8. Generator access panel    |
| 3. Generator compartment door         | 9. Radiator shell and grille |
| 4. Control box door                   | 10. Rear panel               |
| 5. Canopy top                         | 11. Left side panel          |
| 6. Canopy top access panels           |                              |

Canopy Assembly  
Figure 1

### C. Roll Generator Set Out

- (1) Make CERTAIN the stop bar (Figure 2) is down as far as it will go in SAFETY position.
- (2) Remove two each attaching nuts, screws, and lockwashers (1, Fig. 3) from retaining brackets (2) at the front of the machine.
- (3) Roll the generator set outward carefully, until the stop-bar (Figure 2) contacts the stop-block in the left track. This will allow access to the right side and underside of the engine.

## 4. Kit Installation

### A. Disassembly

Remove parts which are to be replaced or modified as follows:

- (1) Left front door

Open left front door (Figure 4) and remove it by taking out five attaching Phillips-head screws.

NOTE: All self-tapping screws used to attach canopy parts are "Tap-Tite", self-locking, and are difficult to loosen. Use a ratchet wrench handle (at least 3/8 inch drive) with a Phillips screwdriver bit, no. 3, or use an impact type screwdriver to loosen screws.

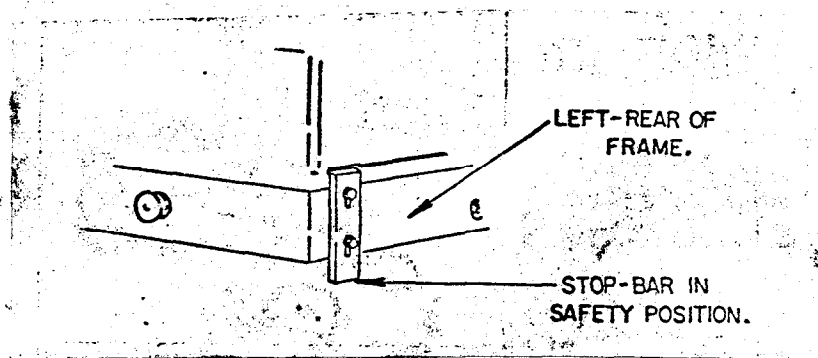
- (2) Right front panel

Remove right front panel (Figure 5) by removing seven adjusting screws.

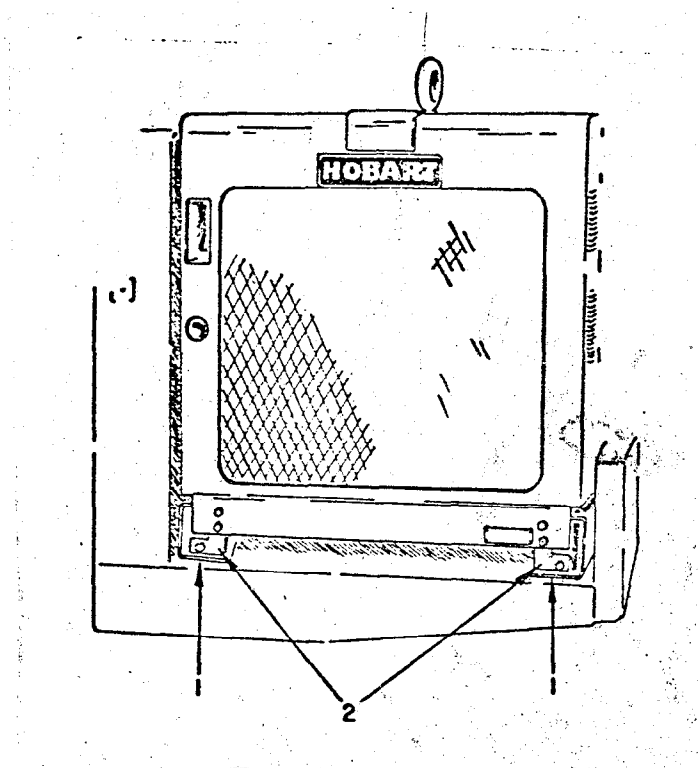
- (3) Lights

Remove stop-and-tail light, back-up light, and clearance light mounted on left side of front canopy.

NOTE: The stop-and-tail light and back-up light may be removed by removing the attaching screws and disconnecting wires at the quick-disconnect connectors. Be sure to identify wires so they may be reconnected properly. The clearance light is removed by removing the attaching screws, pulling the light outward and cutting the lead wire. The connector cannot be drawn through the mounting hole.

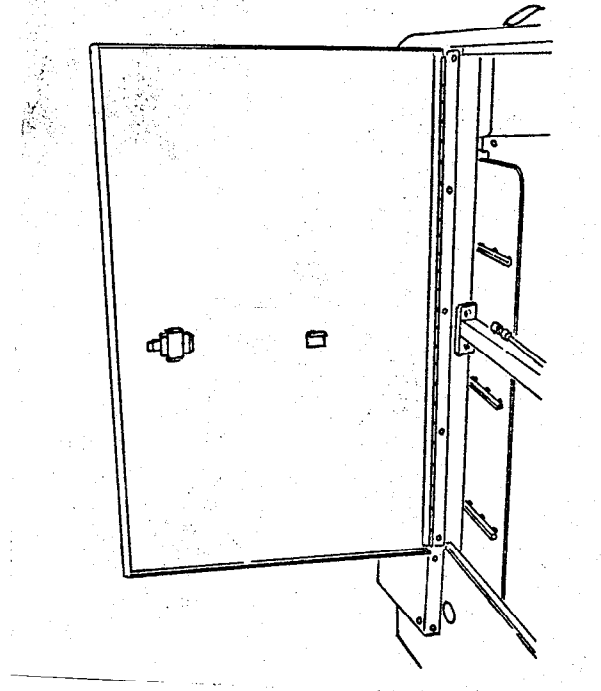


Roll-out Stop-bar  
Figure 2

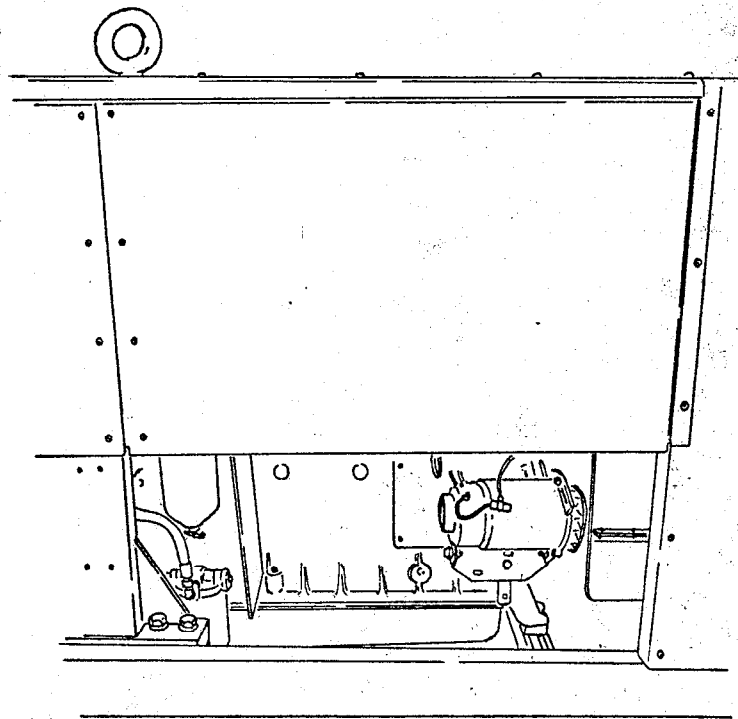


1. Attaching hardware; nuts, screws, and lockwashers
2. Retaining brackets

Generator-Set Retaining Components  
Figure 3



Left Front Door  
Figure 4



Right Front Panel  
Figure 5



(4) Front radiator canopy

Remove remaining screws which attach the front radiator canopy (9, Figure 1). There are six screws across the bottom front and five in the top. After removing the door and side panel, only two screws should remain in the right side. Make certain the canopy is free; then lift off carefully.

(5) Right front canopy frame

Remove four screws along the right front edge of the canopy top which attach the top to the canopy frame (Figure 5). Use a 7/16 inch wrench to remove the 1/2-20 cap screw which attaches the top canopy frame member to the lifting yoke (Figure 6). Use a 9/16 inch wrench to remove the cap screw attaching the lower front member to the main frame (Figure 6). Lift out the right front canopy frame.

(6) Muffler

Use a 5/8 inch socket wrench with extension, and handle to remove the four nuts which attach the muffler. Carefully slide the muffler off the studs. Some maneuvering may be necessary to clear the lifting yoke.

NOTE: Do not lose large flat muffler-attaching washers.

Return old muffler to the factory for rework. Ship to:

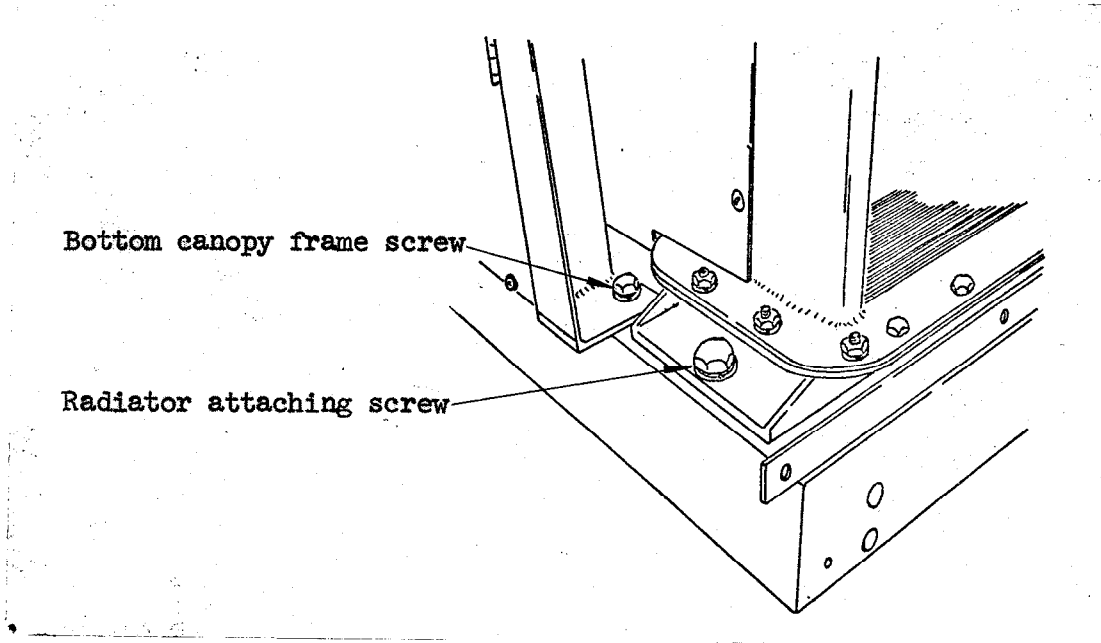
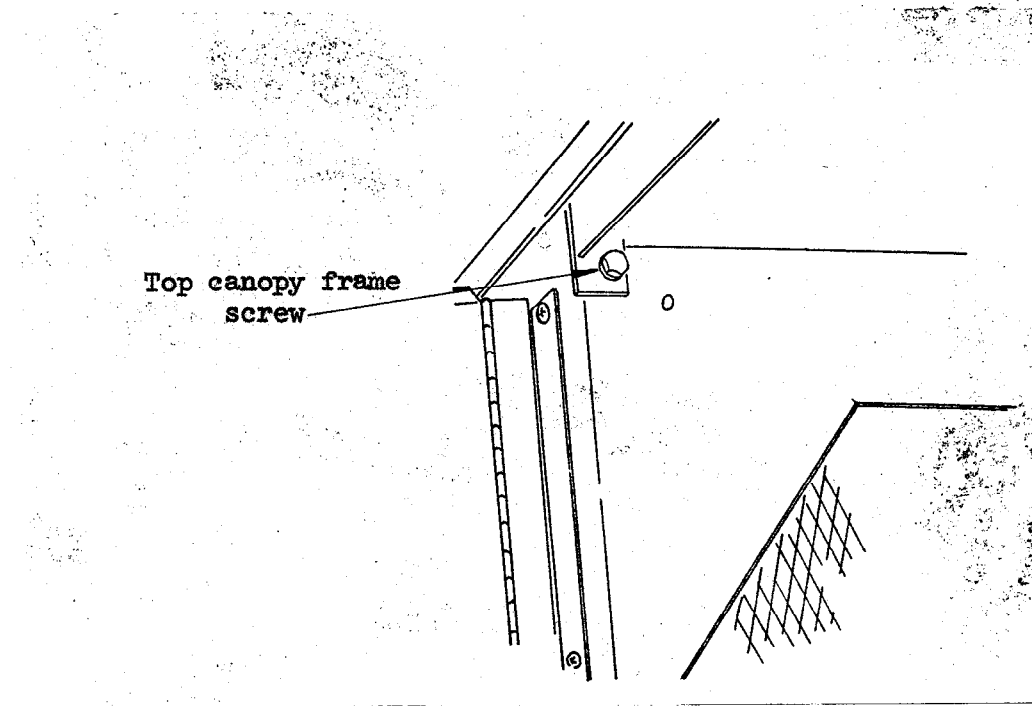
Service Manager, Jim Hufford  
Motor Generator Division  
Hobart Brothers Company  
Troy, Ohio 45373  
U.S.A.

B. Preparation for Assembly

- (1) Use a putty knife or other similar tool to remove the exhaust manifold gasket. Thoroughly clean all bits of gasket material and foreign matter from the manifold mounting surface on the cylinder head (see Figure 7). DO NOT SCRATCH SURFACE.
- (2) Use a 3/4 inch, end wrench to remove the cap-screw which attaches the right side of the radiator (Figure 6).

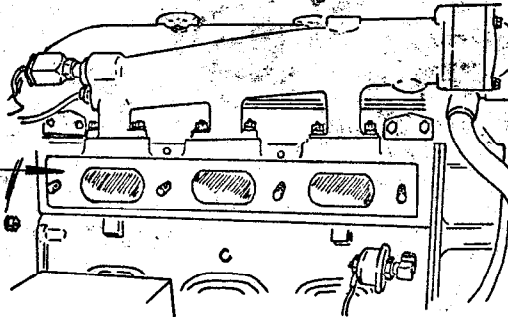
NOTE: It may be necessary to use a pry bar to lift the radiator slightly to allow the bolt to clear the radiator flange.

Install a 1/2 inch flat washer on the screw and reinstall screw loosely.



Canopy Frame and Radiator Attaching Screws  
Figure 6

Manifold  
mounting  
surface



Exhaust Manifold Mounting Surface  
Figure 7

- (3) Remove the radiator cap, access cover and reflectors from the old front canopy and mount on the new canopy.
- (4) It will be necessary to drill new mounting holes in the horizontal part of the new right canopy mounting frame for top canopy mounting screws. It may also be necessary to drill holes in the lifting yoke for mounting the new bottom right panel. An electric or air drill and proper size drill bits will be required. Hole size requirements are listed in Figure 8.

MATERIAL	MATERIAL THICKNESS			HOLE SIZE	
	DECIMAL	FRACTIONAL	U.S. GAUGE	DRILL SIZE	DECIMAL
SHEET METAL	.063-.140	1/16-9/64	16-10	7/32	.219
ANGLE, or PLATE	.125-.266	1/8-17/64	11-2	5.7 M	.224

Pilot Hole Sizes for 1/4-20 "Tap-tite" Screws  
Figure 8

#### C. Assembly of New Parts

##### (1) General

Where it is necessary to drill new holes, or relocate holes for self-tapping screws, refer to Figure 8 for hole size.

(2) Muffler

- (a) Be sure manifold mounting surface is clean (Figure 7).
- (b) Install manifold gasket on muffler mounting studs. The gasket cannot be installed incorrectly. DO NOT USE ANY FORM OF GASKET SEALER OR CEMENT.
- (c) Carefully position muffler assembly on mounting studs. Attach securely with original flat washers and nuts. Torque nuts to 57 to 61 foot-pounds.

(3) Muffler mounting bracket

- (a) Slip the slotted portion of the bracket under the flat washer on right radiator mounting screw (see Figure 9).
- (b) Align bracket assembly with the attaching bracket welded to the resonator (see Figure 10).
- (c) Install two attaching cap screws and tighten. Tighten radiator mounting cap screw.
- (d) Attach drain tube to fitting in resonator. Position tube so that it will not interfere with other parts.

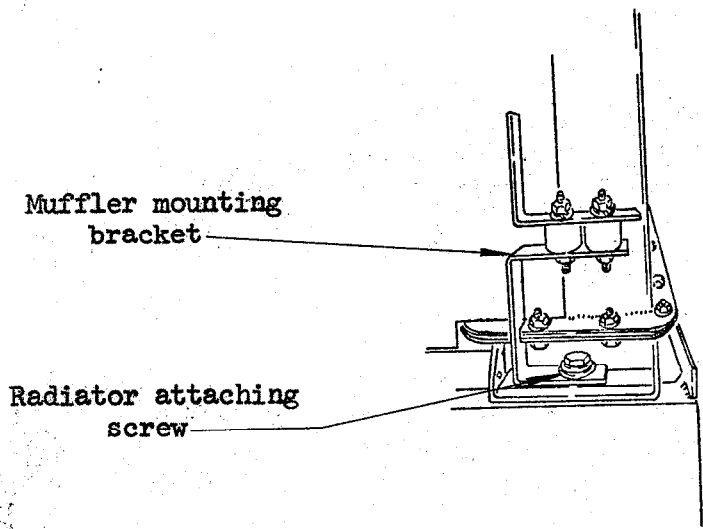
NOTE: Function of drain tube is to allow unburned fuel to drain to ground instead of being blown out the exhaust opening in the event "wet-stacking" should occur.

(4) Right front canopy frame

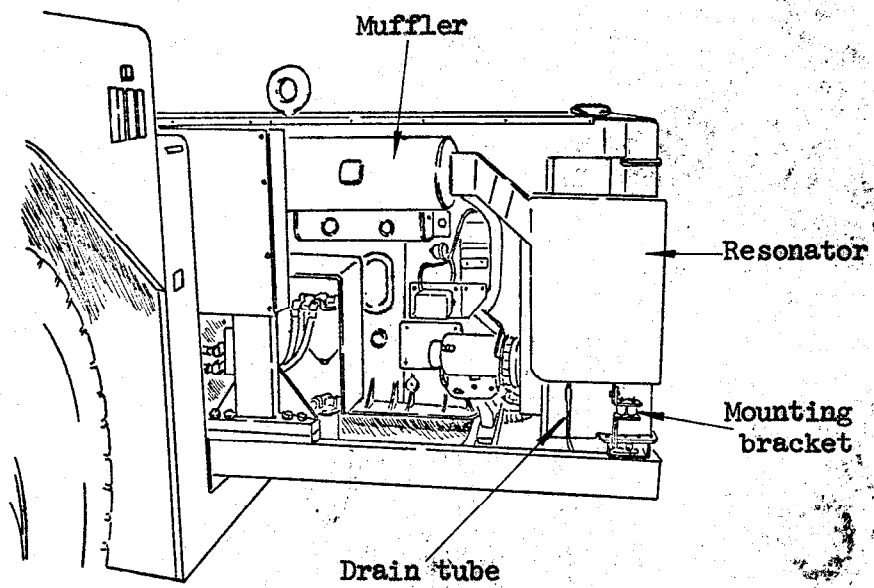
- (a) Position the new canopy frame in place and secure with one 1/4 inch cap screw in the top rear angle and one 3/8 inch cap screw in the front bottom angle (see Figure 6). Tighten screws securely.
- (b) Use the top canopy as a template to locate four canopy attaching holes in the frame.
- (c) Drill holes and install mounting screws (see Figure 8 for hole size).

(5) Front radiator canopy

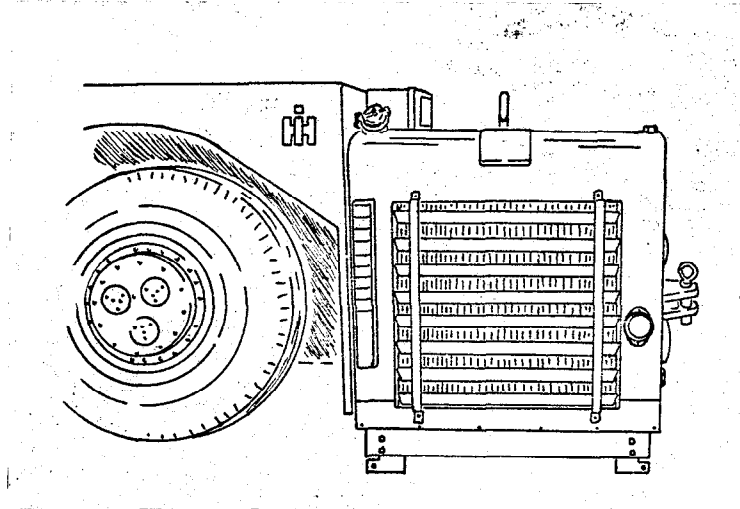
- (a) Carefully position new front canopy (see Figure 11).
- (b) Align mounting holes and install five mounting screws across the top and six across the bottom. Tighten securely.



Muffler Bracket Installed  
Figure 9



Muffler Installed  
Figure 10



New Front Canopy Installed  
Figure 11

- (6) Lights
  - (a) Identify wire leads to stop-and-tail light and to back-up light. Connect leads at quick-disconnect connectors and install lights.
  - (b) Splice the wire which was cut to remove the clearance light. Solder and insulate with electrical tape. Install light.
- (7) Left front door
  - (a) Position door and align mounting holes (see Figure 4).
  - (b) Attach door with five self-tapping screws.
- (8) Right front top panel
  - (a) Position new top panel and attach with seven mounting screws.
  - (b) Relocate any mounting holes which do not line-up with new panel (see Figure 5).

(9) Right front bottom panel

This is a new, added panel designed to cover the lower, formerly open portion of the engine compartment (see Figure 5).

- (a) Carefully position the panel to fit and mate neatly with the top panel. Use the panel as a template to locate mounting holes in the lifting yoke.
- (b) Secure panel with 1/4 inch self-tapping screws.

D. Roll Generator-Set In To Normal Position

To return the generator-set to normal operating position, proceed as follows:

- (1) Roll the machine inward carefully until the retaining brackets (2, Figure 3) contact the end gussets in the tracks.
- (2) Install attaching screws, nuts, and lockwashers and tighten securely.