

# Service Bulletin

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## FIBERGLASS REPAIR KIT

A fiberglass repair kit for the repair of fiberglass body parts is available from the Parts and Accessories Division under Part No. AC-2931.

The following information and instructions supplement the instructions contained in the Repair Kit.

The information in this article is more explicit as to details in the matter of caution, preparation, mixtures, actual repairs, and the finishing of the repaired area of the fiberglass.

This information should be read in its entirety before repairs to fiberglass material are attempted.

The kit material, when used according to the procedures to be outlined, will repair cracks, splintered edges or sizeable holes in fiberglass. Kit AC-2931 includes the following material:

- 1 pt. Resin (Polyester)
- 1 pt. Thickener (Santocel)
- 1 oz. Catalyst
- 1/2 yd. Fiberglass Cloth
- 1 Eyedropper
- 6 Paper Cups
- 6 Stirring Sticks

### 1. SAFETY PRECAUTIONS

In cases where resin tends to cause irritation or rash, it will be advisable to apply a protective cream to the hands and to use rubber gloves when handling the resin and hardener.

Any resin accumulated on tools, clothing or the hands may be removed with lacquer thinner before the resin starts to jell or harden. It

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is important to use caution when handling thinner because it is highly inflammable. As resin mixtures may produce toxic fumes, it should be used only in well ventilated areas. When it is necessary to grind or polish the resin-repaired areas, a respirator must be worn to avoid inhaling the resin dust.

Catalyzed resin should not be left standing too long as the chemical action results in rapid heat build-up and, therefore, is a fire hazard. Keep water container available that is large enough to provide ready disposal for such left-over or unused mixed material.

Do not leave such mixed material for extended lengths of time in shop areas or undisposed of when shop is closed.

**2. Repair Instructions.**

(a) Clean surface around damaged area with a good commercial grease and wax remover.

(b) Remove all paint and primer with sanding block or feather-edger using 80 grit paper and expose the plastic material. Grind or file all cracked or splintered material away from the hole on both the inside and outside of the area to be repaired.

Working from the outside surface of the damaged area or hole, file or grind the edge of the hole until the surface edge of the hole is slightly tapered toward the outer surface to permit better patch adhesion.

On the inner surface of the repair area, remove any dirt, deadener, etc. from the damaged area. Scuff the area around the hole with coarse 80 sandpaper to provide a good bonding surface. Keep sanding and scuffing as flat to surface of fiberglass panel as possible using a sanding block, whenever possible, in order to keep from creating indentations. Following the sanding operation, clean the surface well with mineral spirits, naphtha or a similar dry solvent.

(c) To apply base inner surface patch, which is the first patch application, cut pieces of fiberglass cloth large enough to overlap all sides of the hole or repair area at least two inches. Apply two or more laminations of fiberglass cloth as required to provide proper strength. Prepare a mixture in a paper cup of resin plus the hardener (Catalyst), in a ratio of approximately two drops of hardener to 1/2 cup of resin.

NOTE: Do not use excessive amounts of hardener, as material may tend to set too fast and poor final setting may result.

Lightly wet the inside surface around the damaged area with this mixture and apply the thicknesses of fiberglass cloth over the area so that the overlap around the hole is at least two inches. Apply light coating of the mixture over the layers of fiberglass cloth, smooth cloth well into place and permit the material to harden.

NOTE: Cure of the patch may be stepped up by use of drying lamps, heat not to exceed 180° F.

(d) Filler application as applied to the outside surface.

After the base of inner surface patch has hardened, remove all loose material around

the hole or fracture on the outside surface of the repair area. Using coarse sandpaper, sand the area until all paint is removed for a distance of approximately 2-3 inches from the edges of the hole or fracture; then clean with a dry solvent.

Make a mixture of resin and thickener (Santocel), add the thickener until the mixture thickens to paste and will not run, then catalyze the mixture. Two to three drops (from eyedropper) to 1/2 cup of compound should be added to catalyze resin compound.

NOTE: Stir thoroughly and do not add an excess amount of hardener, or poor patch might result.

Apply the resin patch compound with a spatula or putty knife and build up the patch beyond the contour of the patched area; make certain all air pockets are removed.

Before the patch begins to harden, waxed paper may be taped over the patch, then a rubber squeegee or block may be used to smooth out the patch, while keeping the patching material well above the surrounding contour of the panel.

NOTE: If heat or drying lamps are applied to hasten drying, do not heat above 180° F.

Following the hardening and cooling, rough grind the excess material, using as large a sanding disc as possible, to prevent dishing. As fiberglass grinds rapidly, it is better to take slow cuts than to grind too fast. Use a sanding block and production or finishing sanding paper to restore final contour of repaired area. Major imperfections may be filled or corrected with additional patching compounds. Minor imperfections may be corrected with filler before painting.

(e) To refinish repair, prime the surface and paint using same procedures as with metal panels.

### COAT HOOK INSTALLATION - 1958 (W,F,Y) SEDAN MODELS

*Please record this article on the Service Bulletin Reference page of your 1958 Passenger Car Shop Manual Supplement.*

Vehicles manufactured prior to the following model and body numbers were not equipped

with provisions for the installation of rear compartment coat hooks.

- |               |                           |
|---------------|---------------------------|
| 58G-W1 - 2790 | 58B-W4 - 4015             |
| 58G-Y1 - 145  | 58H-W1 - 20               |
| 58G-W4 - 2558 | 58H-Y6 - 2405             |
| 58G-F1 - 1960 | 58H-F1 - 12               |
| 58G-F4 - 876  | 58L-Y8 - All are equipped |

When it becomes desirable to install rear compartment coat hooks on sedan models manufactured prior to the above body numbers, it may be accomplished by the installation of the following list of parts in the manner explained below:

- 2 - 1328032 - Coat hook support bracket
- 4 - # 8 x 1/2" - Screw - self tapping
- 2 - 1320240 - Hook
- 2 - 1319208 - Screw

The above list of parts are available through your Parts and Accessories Division.

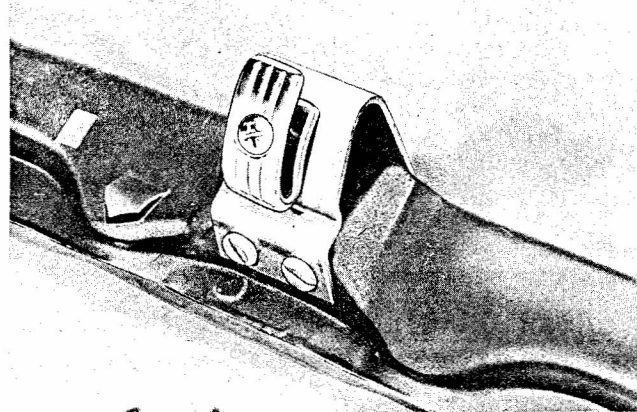
The headlining must be unhooked in the area between the second and third rear bows along the windlace to expose the header and locate the position for installation of the Bracket, Part No. 1328032. (See Fig.1) The bracket must be installed directly over the boss located on the header as shown in Fig. 2.



A-804  
 Fig 1  
 ENG. C. No. 37362

1. Use an awl or ice pick to fish out the edge of the headlining from between the windlace and the headlining retainer. Hold the edge of the headlining with one hand, then insert the rounded and smooth end of a putty knife blade upward to unhook the headlining from the retainer and uncover as required to locate the boss on the header.

2. Use a wide flat blade and pry the headlining retainer away from the header about 1/8" toward the center line of the body in the area of the



A-805  
 Fig 2  
 18652-4

boss. Pry the windlace retainer prongs away enough to release the windlace and move it towards the centerline of the body to expose the underside of the header.

3. Drill two holes 11/64" diameter (.171") in the lower part of the bracket to accept two No. 8 x 1/2" attaching screws.

4. Place the Bracket, Part No. 1328032 above the headlining and header and feed the lower part of the bracket downward between the header and retainer directly over the boss until the lower edge of the bracket and screw holes may be seen from below.

5. Position the bracket on the header and drill two No. 32 (.116" diameter) holes, then install the attaching screws and tighten securely.

6. Replace the windlace edge under the retainer and close the prongs to hold the windlace, securely.

7. Use a hammer and return the headlining retainer against the header. Examine the barbs in the headlining retainer, and if any of them are distorted they must be pulled back into position to receive and retain the headlining edge.

8. Reinstall the headlining. Hold the edge of the material with one hand, then use the putty knife blade to stuff the material upward between the retainer and windlace until it hooks. When the headlining has been returned to its original appearance, stuff the remaining edges of the material upward and out of sight. Any objectionable space between the headliner, retainer and windlace may be closed by blocking the area toward the header.

9. Press the headlining upward against the

bracket, then use a wire or small diameter awl to locate the hole in the bracket through the headlining.

10. Install the Hook, Part No. 1320240, with Screw, Part No. 1319208, and tighten as required to secure the hook. Repeat the procedure for installation of the coat hook on the opposite side.

### CORRECTIONS OF WATER LEAKS AT REAR QUARTER - 1958 J MODELS

*Please record this article on the Service Bulletin Reference page of your 1958 Passenger Car Shop Manual Supplement.*

The first step for correction of any body leak is to perform a complete water leak test to locate the source of leakage. Much time and effort may be saved by proper and accurate diagnosis.

For leaks which appear to originate in the rear quarter, first, remove the seat cushion, seat back, arm rest, and regulator handle to permit the removal of the rear quarter trim panel. Flow water against the quarter glass, observe the point of leakage from within the body and mark the location.

Figure 3 illustrates the rear quarter inner panel of the J Models and points at which leakage may occur.

Before attempting to seal, dry the panel thoroughly with compressed air. The corrections for the various points of leakage are:

A. Seal the top and bottom windlace lanced retainers with Dum Dum from inside the quarter panel. Place tape over the center lanced hole from outside and seal with Dum Dum. The holes

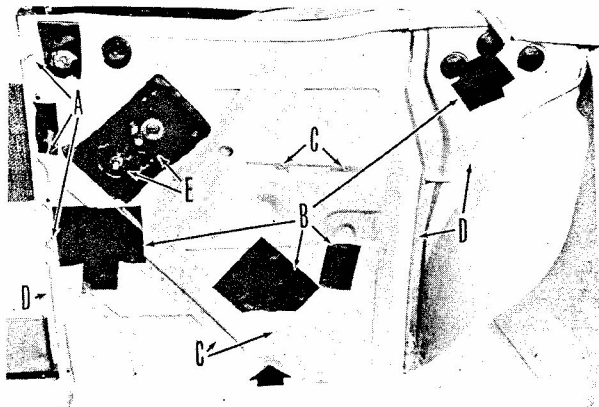


Fig. 3

- A. Windlace Retainers
- B. Tape edges
- C. Edges of Channel and Arm Rest Nuts
- D. Pinch weld seams
- E. Regulator mounting plate and shaft

*A. Sop*

ENGR No. 37437

in the panel between the windlace retainers should also be sealed with Dum Dum, but from the outside.

B. Make sure that the tape seals-off the opening completely. Replace the tape, if required. If not, seal the edge of the tape with a suitable sealer.

C. Use a suitable sealer on the edges of the reinforcement channels and arm rest nuts.

To prevent water from building up within the reinforcement channels, drill a 1/4" hole, at the approximate location shown in Fig. 3, through the lower reinforcement and the inner body panel to provide a drain. Be sure to seal the hole in the reinforcement channel after drilling.

D. At the pinch weld seams or panel joints force a suitable sealer as far as possible into the seam.

E. Seal around the regulator mounting plate and shaft and, window run channel retaining screws with Dum Dum.

Give the sealer sufficient time to dry of set completely. Then, retest to make certain the sealing is effective.

### HORN TESTING AND ADJUSTMENT -- SPARTON HORN -- 1958 PASSENGER CARS

*Please record this article on the Service Bulletin Reference page of your 1958 Passenger Car Shop Manual Supplement.*

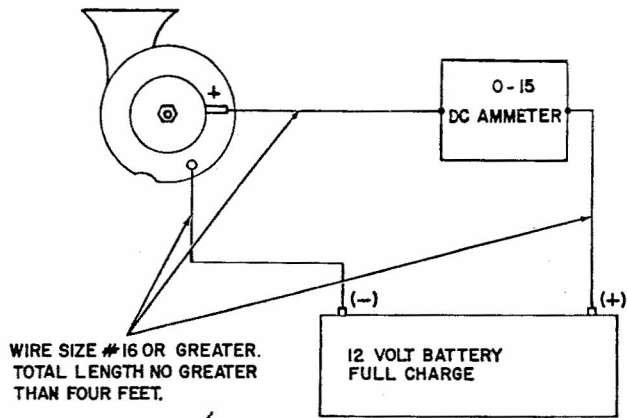
In the event of faulty operation of a Sparton horn, the manufacturer recommends that the horn be removed and given a visual and electrical inspection.

#### VISUAL INSPECTION

- a. Remove the cover
- b. Observe the condition of the horn coil. If the coil has been excessively hot due to shorting, burnt varnish will be seen throughout the horn motor. If such is the case, replace the unit.
- c. with compressed air blow all particles of dirt and dust out of the motor. In particular, check for iron particles in the air gap between the armature and the field. Tone and volume are affected by dirt and dust.

#### ELECTRICAL INSPECTION AND ADJUSTMENT

- a. Use the battery, ammeter, wiring and



9-241 Fig. 4

horn as indicated in Fig. 4. CAUTION - The positive lead must be connected to the horn terminal.

b. After the connections are made as indicated in Fig. 4, firmly press the positive lead against the horn lead and observe the ammeter reading. Hold only long enough to observe the current indicated on the ammeter.

DO NOT ATTEMPT TO ADJUST THE HORN WHILE IT IS "BLOWING".

If the ammeter reading is 0 to 7 amperes -- Turn the current adjusting nut counterclockwise until horn draws approximately 9 - 10 amps. Between 7.5 to 10.5 amperes, the horn should

operate, its best operation is at 9 - 10 amperes. If horn fails to adjust, replace.

If the ammeter reading is 11.5 amperes or more -- turn the current adjusting nut clockwise until the horn current is approximately 9 - 10 amps. If the horn fails to adjust, replace.

If the current oscillates between 9 and 12 amperes, turn the nut clockwise a small amount.

Be sure to replace the cover tightly; a loose cover will cause poor horn tone.

### VALVE SPRINGS - 1956-57 CONTROL AND PRESSURE REGULATOR VALVE ASSEMBLIES - FLIGHTOMATIC

Please record this article on the Service Bulletin Reference page at the end of the Transmission-Flightomatic section of your 1956 Studebaker Passenger Car Shop Manual and at the end of the Transmission-Warner Gear section of your 2E Series Trucks Shop Manual

Outlined below is a summary covering the dimensions of the 1956-57 Warner Gear automatic transmission control and pressure regulator valve springs. This summary is a means of identification of the various springs used in the unit.

### AUTOMATIC TRANSMISSION VALVE SPRING IDENTIFICATION CHART

1956-57 MODEL	NAME OF SPRING	APPROX. FREE LGTH.	APPROX. NO. OF COILS	DIAMETER*
G-B-H-L & Trucks	Oil press. Reg. Valve	4.000	16	.996 - 1.010
HK-7 & 57L	Oil press. Reg. Valve	4.062	16	.996 - 1.010
All	Conv. press. Reg. Valve	3.900	22-1/2	.705 - .725
All	Inhibitor Valve	2.260	26 - 31	.248 - .262(I.D.)
G & Truck	2-3 Shift Valve, Outer	1.860	11	.620 - .640
G & Truck	2-3 Shift Valve, Inner	2.260	26 - 31	.248 - .262(I.D.)
B-H-L	2-3 Shift Valve, Outer	1.450	12	.620 - .640
B-H-L	2-3 Shift Valve, Inner	1.770	20 - 21	.248 - .262(I.D.)
G & Truck	1-2 Shift Valve	.670	14	.180 - .190
B-H-L	1-2 Shift Valve	1.000	6	.690 - .710
All	Transition Valve	1.280	29-1/4	.175 - .185
All	Orifice Control Valve	1.475	22-1/2	.310 - .326
All	Rear Servo Check Valve	1.640	25-1/2	.305
All	Throttle Valve	1.040-1.050	15 - 16	.247 - .257
All	Compensator Valve, Inner	1.167	8 - 9	.265 - .285(I.D.)
All	Compensator Valve, Outer	.984	6 - 7	.550 - .570
All	Rear Pump Check Valve	1.000	7	.448 - .502
All	Front Pump Check Valve	.617	5 to 6	.403 - .417
All	Throttle Modulator Valve	1.450	13-1/2	.348 - .360(I.D.)

\* Outside Diameter Except When Indicated.



**RADIATOR TOP TANK COLLAPSING -- ALL MODELS**

Please record this article on the Service Bulletin Reference Page of your 1958 Passenger Car Shop Manual Supplement.

We have received radiator cores from the field in which the top tank was collapsed. Investigation and tests indicate this was caused by running cold water over the top tank while the radiator was hot in an effort to cool the radiator before removing the cap.

If the radiator is cooled too fast air cannot enter fast enough to equalize pressures, with the result that the top tank collapses. There is a greater chance, of course, of this happening if the coolant is low and boiling has occurred.



**FRAME SUBSTITUTIONS - STUDEBAKER 1955-1956 MODELS**

Please record this article on the Service Bulletin Reference page at the end of the Frame section of your 1955 and 1956 Studebaker Passenger Car Shop Manuals.

The following 1957 passenger car frames may be substituted for 1955 and 1956 Models as follows:

1957	1955	1956	Model
1541807 For	535469	1539103	W & F (LHC)
1541808	535471	1539104	W & F (RHC)
1541813	536294	1539106	C (LHC)
1541814	536296	1539107	K (LHC)
1541811	535470	1539931	Y (LHC)
1541812	535472	1539932	Y (RHC)

When service parts stock of the above-listed 1955 and 1956 frames is exhausted, the 1957 frames as indicated above will be substituted

It is important to note that whenever a 1957 frame is used on a 1955 or 1956 Model, it will be necessary to enlarge the two front holes in the rear shock absorber frame crossmember. These two holes in the 1957 crossmember are approximately 29/64" and in the 1955 or 1956 crossmember must be approximately 21/32" in order to receive the taper head of the rear shock absorber upper mounting bolts.

**FRONT SEAT CUSHION SPRING MODIFICATION AND RELOCATION OF COVER PADDING - 1958 TWO DOOR MODELS**

Please record this article on the Service Bulletin Reference page of your 1958 Passenger Car Shop Manual Supplement.

In some instances the clips which hold the spring assembly in position in the front seat cushion on 1958 two-door models may have loosened to permit one or both of the following conditions:

- A) Fore and aft movement of the top of the cushion
- B) Irregular appearance along the side rear top edge of the cushion trim cover.

When this condition is found remove the hog rings from the cushion cover and uncover the spring assembly as shown in Fig. 5 or as required.

To correct the fore and aft movement, install a second clip as indicated in Fig. 5. This clip may be fabricated from a piece of sheet metal (3/64" x 5/8" x 1-5/8") or the two wire frame members may be taped together securely. Make sure that the flat side of the top rim wire is directly on top of the round frame member.

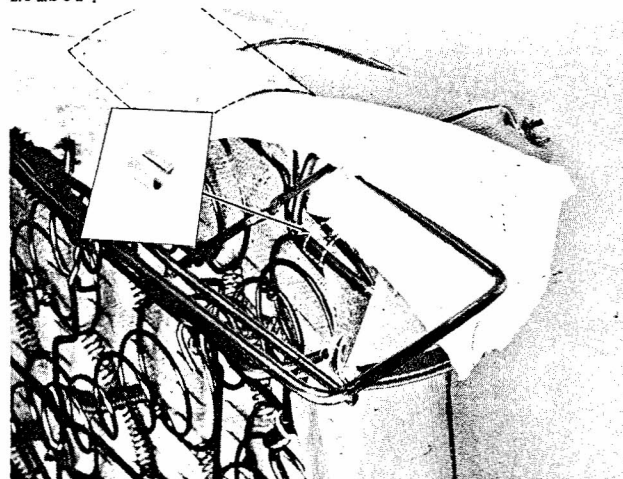


Fig. 5 15288-8

To correct the irregular appearance along the side rear top edge of the cushion trim cover, fold the padding and/or sponge rubber from the cushion cover in the area indicated by the dotted lines in Fig. 5 and extend it rearward. Then secure it to the assembly with hog rings. Use two hog rings on the top and one on the rear edge of the frame.

Reinstall the cushion cover and arrange the padding as required to obtain a smooth appearance. Secure the cover to the frame in the same manner as originally attached.

Check the lower spring assembly frame wires and, if they are distorted, bend them as required to engage the seat frame assembly and retain the cushion assembly properly.



### HOOD LOCK DOVETAIL SPRING -- PACKARD 58LS - K9 MODELS

*Please record this article on the Service Bulletin Reference page of your 1958 Passenger Car Shop Manual Supplement.*

Starting with production model Serial 58LS-1392 the Dovetail Spring, Part No. 308748 which has eleven coils and a free length of 5 1/2" is used instead of Part No. 1314833 which has thirteen coils and a free length of 6 1/2". Use of the shorter spring will lessen the possibility of hood distortion because less effort is required to secure the hood in the locked or closed position. The new spring will also have less tendency to bottom.

### FLYWHEEL SCREW -- PACKARD ULTRAMATIC TRANSMISSION

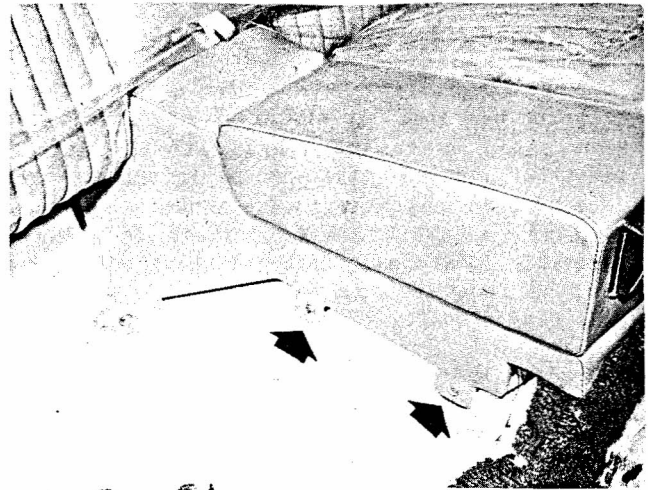
When present stock of part No. 421762 Screw is exhausted Screw, Part No. 443171 will be substituted.

Part No. 443171 is a slotted self-locking type, whereas Part No. 421762 is a conventional screw. Because of this, whenever part No. 443171 is used, the lock plate should be omitted. Substitution should be made in complete sets of six only.

### CENTER ARM REST SCREW INTERFERENCE WITH PROPELLER SHAFT - 58L K9 MODELS

*Please record this article on the Service Bulletin Reference page of your 1958 Passenger Car Shop Manual Supplement.*

In early production 58L K9 models, the screws which attach the center arm rest to the floor pan at the right side (see Fig. 6) may extend through far enough to cause interference with the propeller shaft.



A-808

Fig. 6

To prevent this interference, remove the two screws and drill out the two holes to take 3/16" bolts. Install the bolts from below, with the heads of the bolts on the underneath side of the floor pan. Install lock washers and nuts on the bolts and when properly tightened, cut off the end of the bolt flush with the nut. It is only necessary to remove the right side cushion to perform this operation.

On present production models extensions have been welded to both right side center arm rest securing tabs which lowers the screws approximately 1-23/32" on the floor pan from the position illustrated in Fig. 6. On models with the extensions no changes are required, as this new position provides sufficient clearance between the screws and the propeller shaft.

### REAR UNIVERSAL JOINT REPAIR KIT NO. 436279, UNIVERSAL PRODUCTS SHAFT - MODELS 2401, 2501, 2601 5400, 5401

There have been some difficulties reported when installing Repair Kit 436279 in the Universal Products 2 1/2" drive shaft used in 2401, 2501, 2601, 5400 and 5401 Models, equipped with Ultramatic.

The 2501 and 2601 models with 2 1/2" Universal products driveshafts, (used with Ultramatic transmissions) were equipped in production with a rear universal cross having an overall length of 3 1/2", the 2401 models with 2 1/2" driveshafts were originally equipped with a rear universal joint cross having an overall length of 2 7/8".

Repair Kit, Part No. 436279 has the cross and trunnion bearings of the longer length and when installed in a 2 1/2" Universal products

driveshaft, all parts of the kit must be used, no substitution of individual items can be made.

When assembling the cross at the fixed trunnion bearings, at the drive shaft end, the shortest trunnion bearings with an overall length of .700 to .710" must be installed. The longer trunnion bearings with an overall length of .825 to .835 are always installed at the removable locations, which are the two trunnion bearing locations in the flange on the rear axle pinion shaft.

Following the installation of the two fixed trunnion bearings at the drive shaft end, and with one bearing locked in position, place the locked bearing over a sleeve that will support the drive shaft but the inside diameter of the sleeve or support will clear the outside diameter of the trunnion bearing. Apply pressure against the opposite or unlocked trunnion bearing, holding a squeeze just heavy enough to permit starting and tapping the second lock into place.

Always be sure and positive that the locks are bottomed and are securely in place.

Kit Part, No. 436305, the rear universal joint repair kit for the 3 1/2" Universal

Products Joint Shaft, used with Ultramatic in some of the models listed, usually when equipped with a 300 engine, the same instructions for the kit installation in the 2 1/2" shaft will apply. The lengths and dimensions of the cross and trunnions are larger but the shortest trunnions go in the fixed drive shaft end, and the longer ones in the axle flange ends. The same squeeze is required when installing the second or last lock in the fixed trunnion bearing.



TRUCK CLIMATIZER HEAT DISTRIBUTION

We have received occasional complaints on trucks equipped with a Climatizer, that too much heat is directed onto the driver's foot and not enough heat to the passenger side of the cab. A baffle, which can be readily made in your shop, can be installed on the Climatizer door to divide the air flow so that more heated air is deflected to the passenger side of the cab. The dimensions and the installed position of the baffle are shown in Fig. 7.

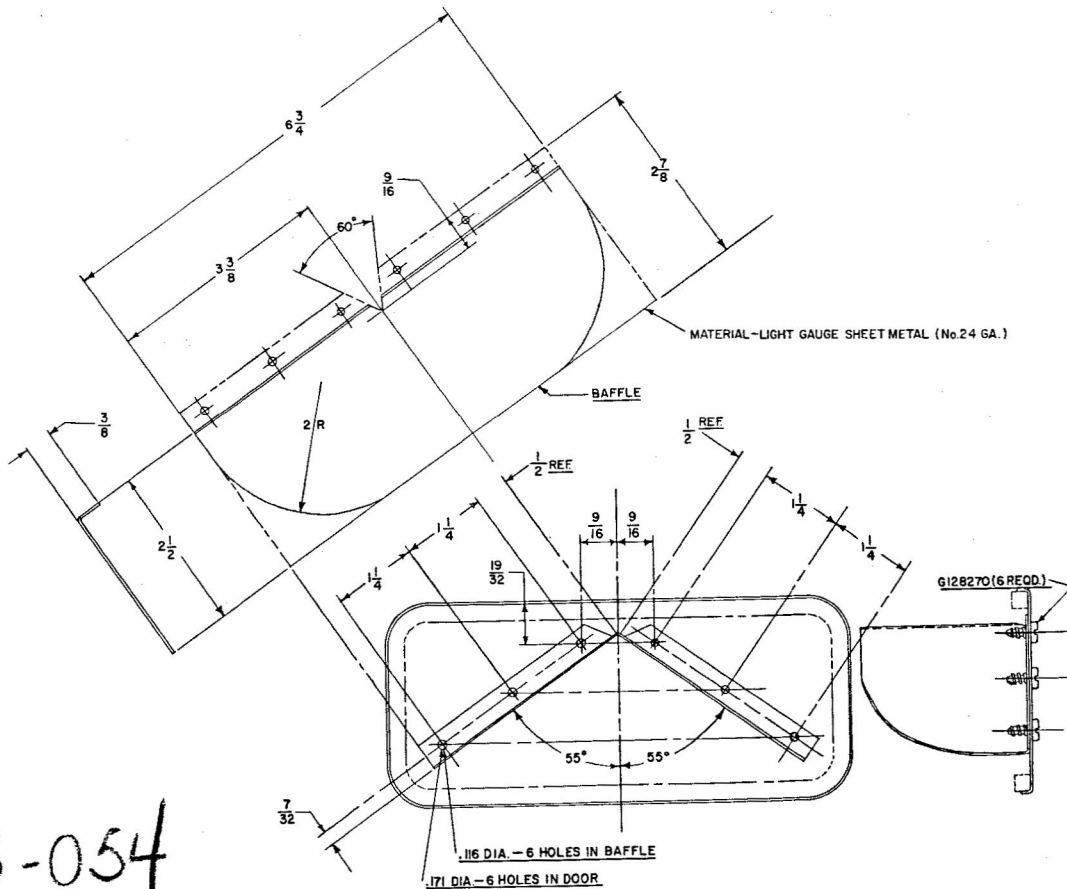


Fig. 7

B-054