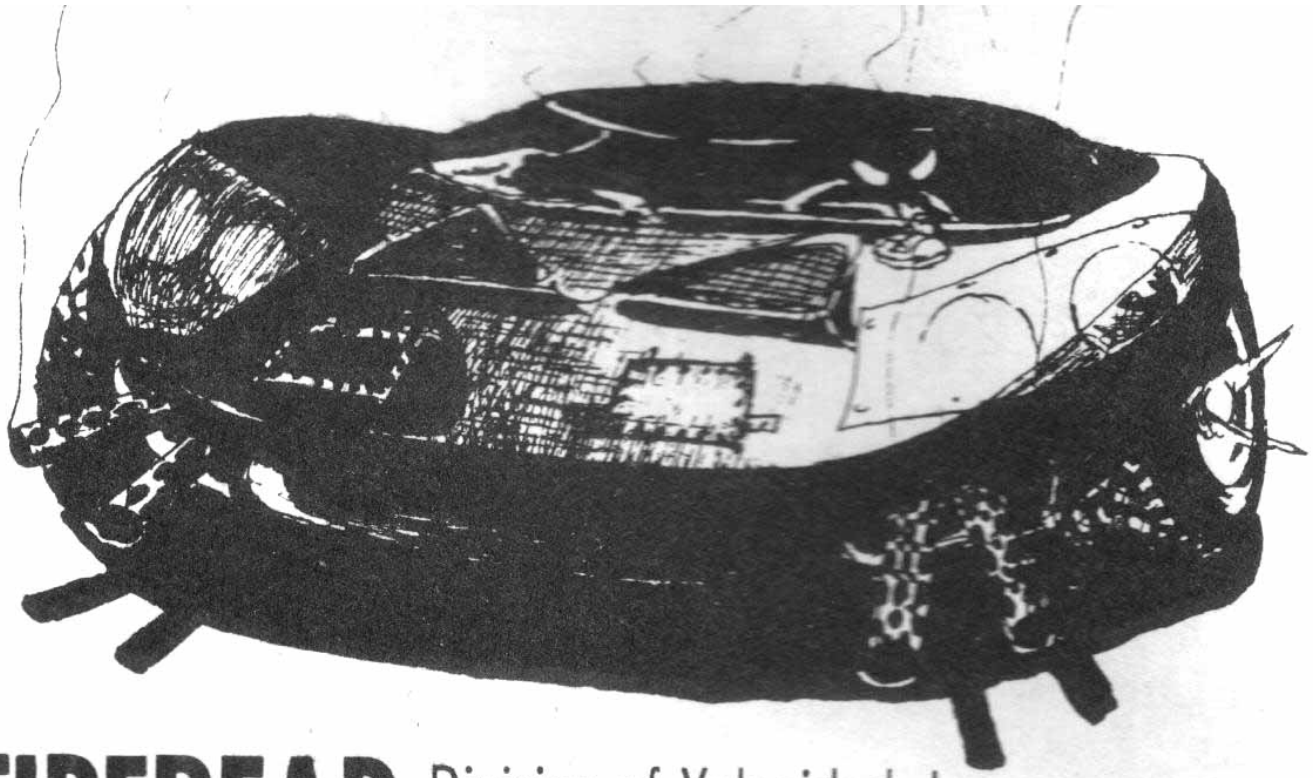


FIBERFAB Division of Velocidad, Inc.
2365 LAFAYETTE, SANTA CLARA, CALIF

TABLE OF CONTENTS

ASSEMBLY PROCEDURE SEQUENCE, GT KIT

1. Cut out windows, door openings, holes
2. Install wiper motor/dimmer switch/blower/gas cap/horn & relay
3. Install window moulding retainer clips, windshield & rear window
4. Install headliner/inner rear window trim, door post trim
5. Install rear glass and trim moulding
6. Assemble dash, install assembled dash in body, pad dash
7. Install speedometer cable
8. Install windshield, moulding, aluminum dash trim
9. Install blower vents and hoses
10. Install headlights, parking lights, tail lights
11. Route and terminate wiring
12. Check electrical system, install wiper blades.
13. Install carpets and trim edges.
14. Install tailgate, headlight covers
15. Assemble doors, install, (less glass)
16. Install door w/stripping, door glass, extrusion, unigrip, door panels/kick panels.
17. Tape wires/ seal all holes/ spray underneath, black
18. Install rear view mirror/ name plates, detail.
19. Recheck above and review.

Above procedure is used at Fiberfab on pre-assembled bodies. It is suggested that you assemble your body, to the above extent, before mounting.

* * * * INTRODUCTION * * * *

Pioneer and leader in the ever expanding array of fiberglass bodies for various chassis, FIBERFAB car kits and bodies are manufactured from the highest quality glass fiber, polyester resins and gel-coats that are commercially available.

The assembly of your kit will take the tools and equipment found around most homes.

The following pages contain instructions for assembly of the GT style body, manufactured by FIBERFAB/C.D.A., Ltd. and are applicable to the Avenger GT series, GT-15 series and Valkyrie GT-X series.

The parts described herein refer to the components used on the Fiberfab pre-assembled bodies. They are in the manual mainly for reference purposes. All parts can be purchased new from Fiberfab, however, most can be substituted with similar products from various manufacturers or more economically priced, used components.

This body manual should be used as a guide line for the various components and steps necessary to complete your car.

Building your car is a project that can be rewarding - - both financially and emotionally. It is difficult to describe the thrill the first time you fire the engine up or the excitement of the first road test.

There is immense satisfaction in knowing this is truly your car. You have built your own car and each admiring and envious look is a compliment to you. Your thoughts, planning and efforts have produced a car that stands out from the crowd.

It is also satisfying to know that your work can produce something worth far more than just the raw materials that went into it. Very few of us can afford to go out and buy a Ferrari or a Forg GT. Now, it is possible for a minimum investment to build a car whose styling is up-to-date and superior to many expensive imports.

THE MOST IMPORTANT QUALITY FOR A BUILDER TO POSSESS, IS IMAGINATION. Along with this, time and patience will be the builders greatest assets.

CONSTRUCTION MATERIALS, TOOLS, POWER TOOLS

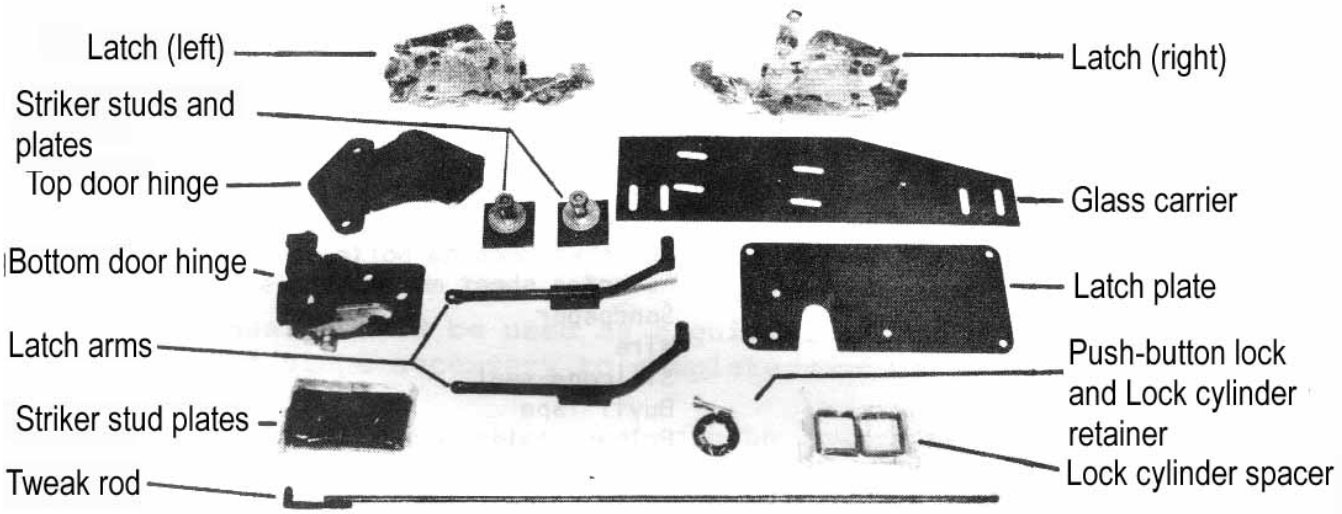
Hand tools, essential:	5/16", 3/8", 7/16", 1/2", 9/16", 5/8" sockets 3/8" drive ratchet Screw drivers, several standard blade, (2) Phillips Straight-edge, tape measure
Hand tools, helpful:	3/8" drive 3" and 6" extensions open end wrenches and/or box end wrenches, various sizes Pop rivet gun, various size pop rivets Wire terminal crimping tool Hacksaw, knife assorted rasps, files, drills and taps set of wood-working hole saws
Power tools, essential:	Electric drill - - 1/4" capacity
Power tools, helpful:	Electric drill - - 1/2" capacity Sabre saw Rotary sander/grinder Hydraulic floor jack and jack stands

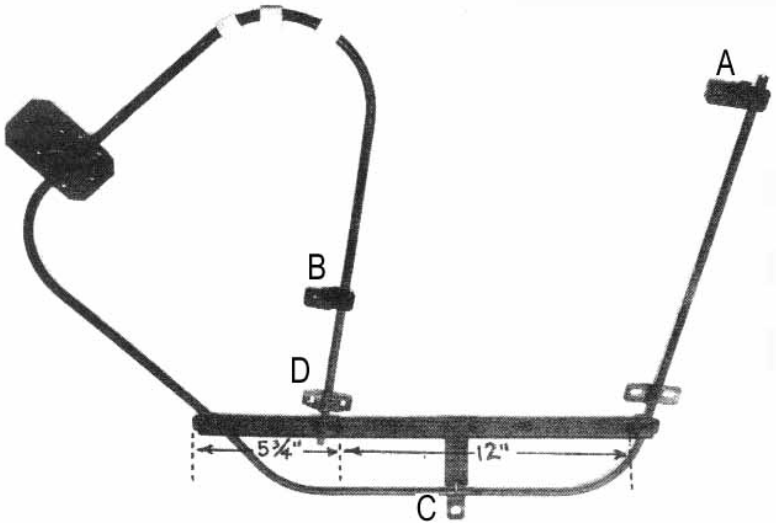
Construction materials, essential:	Assorted machine bolts, nuts, washers Assorted sheet metal screws Sandpaper Wire Silicone seal Buytl tape primer, paint, etc.
Construction materials, helpful:	Epoxy adhesive kit Epoxy putty/filler Crimp-on wire terminals Assorted gage wire

Note: Construction materials and use therof, are referred to throughout the assembly manual.

Since the door assembly is the most intricate part of your GT kit, the instructions will be presented in a step-by-step program. It is recommended this step-by-step method be followed in the given sequence. If a short-cut of any kind is taken - you may end up with installation problems.

A parts list is on the preceding page - - the photos below will help identify some of the parts.



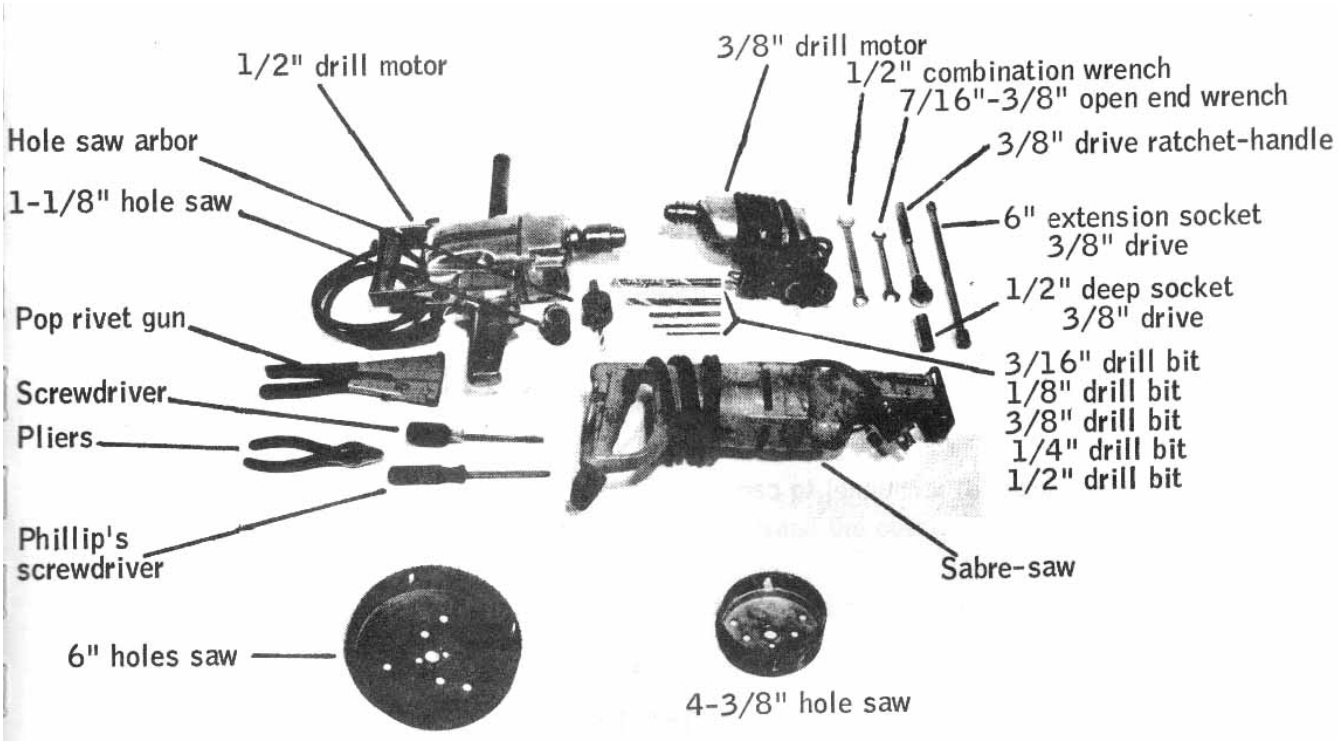


Window regulator

Assemble all the tools necessary before starting the installation of the

doors.

Tools needed:



Not shown: 1-5/8" hole saw
1/2" flat file
Stanley File-saw drill bit

Materials to be purchased: #40 grit and #120 grit sandpaper
3-1/2" x 13-1/2" exterior grade sandpaper
Masking tape

For your convenience before you start any installation we suggest you sort the

hardware into the following groups needed to install the respective items:

1) To mount the door hinges to the door: 5/16"-18 x 2" bolts (8)
Wide area washers (8)
Self-locking nuts (8)

2) To mount the door hinges to the body: 5/16"-18 x 2-1/2" bolts (12)
Wide area washers (8)
Hinge plates (4)
Self-locking nuts (12)

3) Modification of window regulator gear unit: 1/4"-20 x 1/2" bolts (12)
Self-lock nuts (12)

4) Window regulator secured to door: 1/4"-20 x 3/4" bolts (10)
Self-locking nuts (10)
Clip (2)

5) Window carrier plate attached to regulator: 1/4"-20 x 1/2" bolts (8)
Self-locking nuts (8)

6) Window channel to carrier plate: Metric bolts (4)
Metric nuts (8) 2 per bolt
Washers (8) 2 per bolt

7) Window mounted in channel to carrier: 1/4"-20 x 1-1/4" bolts (4)
Washers (4)
Self-locking nuts (4)

8) Mount latch mechanism to latch plate: 1/4"-20 x 1/2" bolts (4)
1/4"-20 x 2-1/4" slot-head bolts (2)
Self-lock nuts (6)

9) Bolt on the top of the latch arm: 5/16"-18 x 3/4" bolt (2)
Hex nuts (2)

10) Mount latch plate to door : 1/4"-20x7/8" THP bolts (6)
1/4"-20 x 1/2" THP bolts (2)
1/4" flat washers (8)
Self-locking nuts (8)

11) Secure tewak rod at rear of door: 1/4" wide area washers (2)
1/4" self-locking nuts (2)

12) Door weatherstripping screws: #6 x 1/2" THP screws (8)

13) Mount door-pull handle: #8 x 1-1/4" THP screws (8)

14) Door opening weatherstripping: Pop rivets (20)

15) Window-stop bolts: Upper stop #10 self-tapping THP (2)
Lower stop 1/4"-20 x 1-1/4" bolts (2)
washers (2)
Self-locking nuts (2)

16) Pull-strap secured by: #8 THP trim screws (2)
"S" hooks (4)

STEP 1. CUT OUT THE DOOR OPENINGS IN THE BODY

Measure and mark with a grease-pencil the margins indicated in Figure 1.

The top and bottom of the door opening should have a 1" margin. The 1" margins on both sides of the door opening should be widened to a 2" margin where it is shown in the diagram.

Using a sabre-saw cut along the pencil-marked margin.

Now the front door jamb should be cut out to give access to the hinge mounting surface (see Photo A). Measure 3" down from the fender peak -- this is as high as the cut out should be. The total length of the cut-out is 17". The width of the cut-out, at its widest, is 3-3/4". Measure 1/4" inside the outer surface of the body skin for its outside edge. Cut in the oblong shape as shown in the photo. Use the outside surface of the " step"molded into the jamb as a guide for marking and cutting the inside edge ofthe hinge-access cut-out.

STEP 2. FINISHING THE OPENINGS IN THE BODY.

Place a 3-1/2" x 13-1/2" piece of 3/8" exterior grade plywood against the hinge mounting surface of the inner panel. The outside surface of the plywood should be approximately flush with the inside edge of the door jamb cut-out. Secure with two 1/4" bolts and nuts -- drill the bolt holes with a 1/4" drill bit from the inside of the body. Position the bolt holes in the middle of the plywood insert and approximately 3" apart. This positioning of the bolt holes avoids interference with door hinges. DO NOT permanently secure the plywood to the inner panel as the plywood will be removed temporarily in a subsequent operation. (see Figure 2.)

Sand all the rough edges smooth -- using #40 grit sandpaper. Sand the inside edge of the door jamb cut-out flush with the plywood insert. Sand the outside edge of the door jamb opening flush with the inside of the body skin.

STEP 3. MEASURE AND CUT HOLES IN THE DOOR.

The various measurements that will be needed are best explained with the following series of photographs and illustrations.

Photo B -- First draw the two reference lines from which all other measurements will be taken. Measure up 1-3/8" from the bottom step of the depression in the door inner panel(see Figure 3). Draw a line.

Photo C -- Mark the center of the forward vertical trough.

These two lines are your vertical and horizontal references for subsequent measurements.

Photo D -- Holes A,B and C are the regular mounting bolt holes. Using a 1/4" drill bit drill hole A at the intersection of the vertical and horizontal reference lines. Hole B(1/4")is placed within the other vertical trough 12" from hole A. Hole C(1/4") is located by measuring 13-3/8" up from hole B and 13-3/8" over from the vertical reference line-- at the intersection of these two measurements drill hole C.

Photo E -- Window crank hole is located by measuring 24-1/2" from hole B (see Figure 4). From hole A measure 15-1/2". And measure up from the horizontal reference line 11-7/8". At the intersection of these three lines drill the window crank hole using the 1-5/8" hole saw. To locate the window crank mounting bolt holes (see Figure 5.) mark a point 1" over from hole A and draw a line through this point and the center of the window crank hole. On this line measure 1-1/2" on either side of the center of the crank hole and mark. Drill these holes with a 1/4" drill bit.

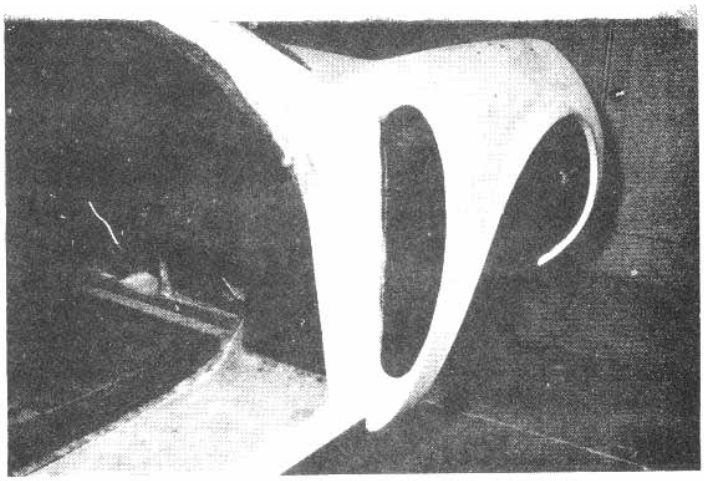


Photo A

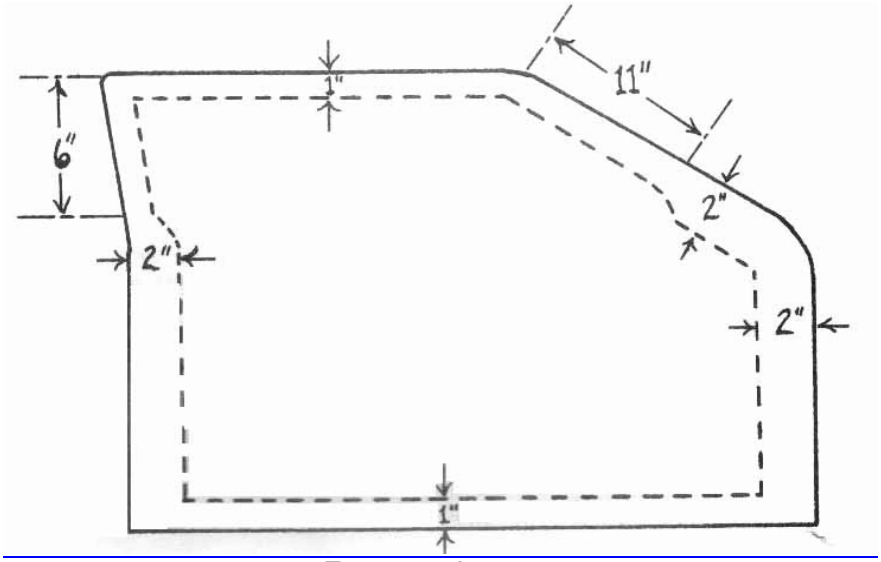


Figure 1

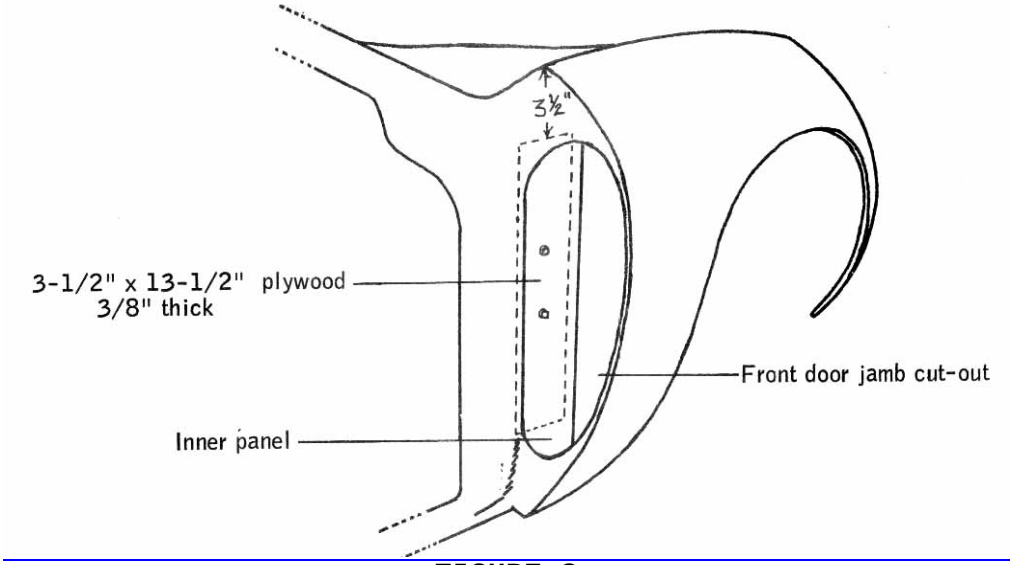


FIGURE 2

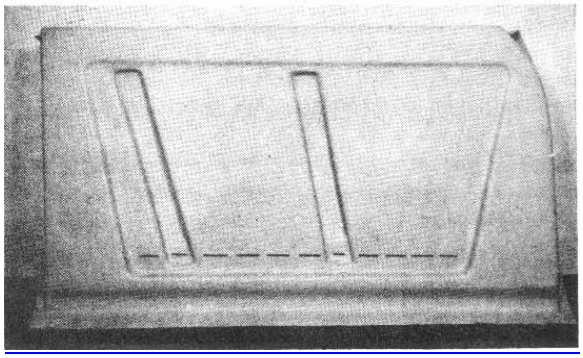


Photo B

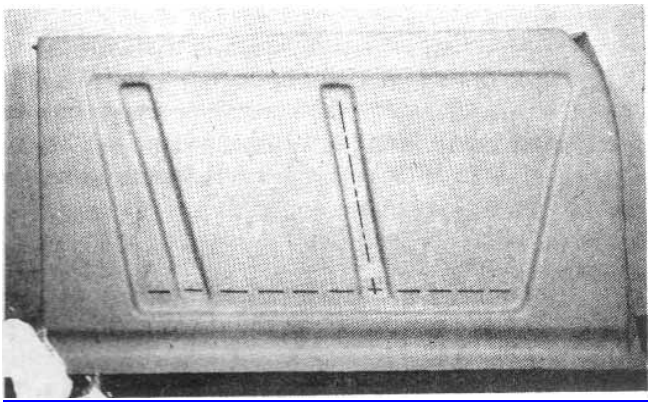


Photo C

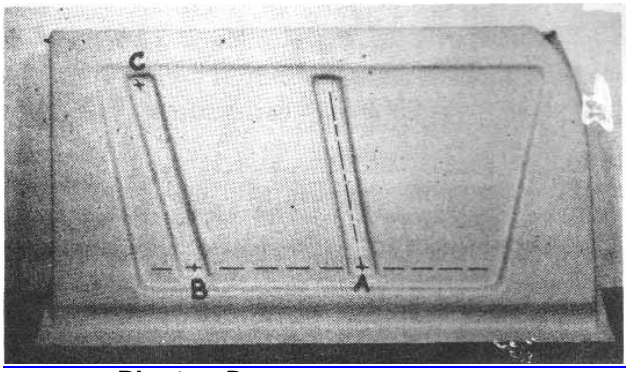


Photo D

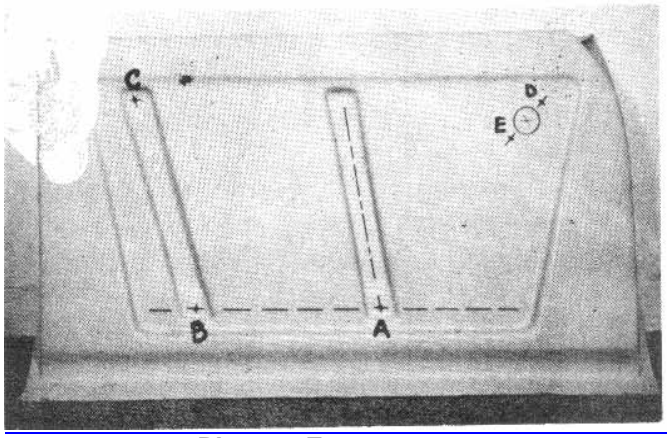


Photo E

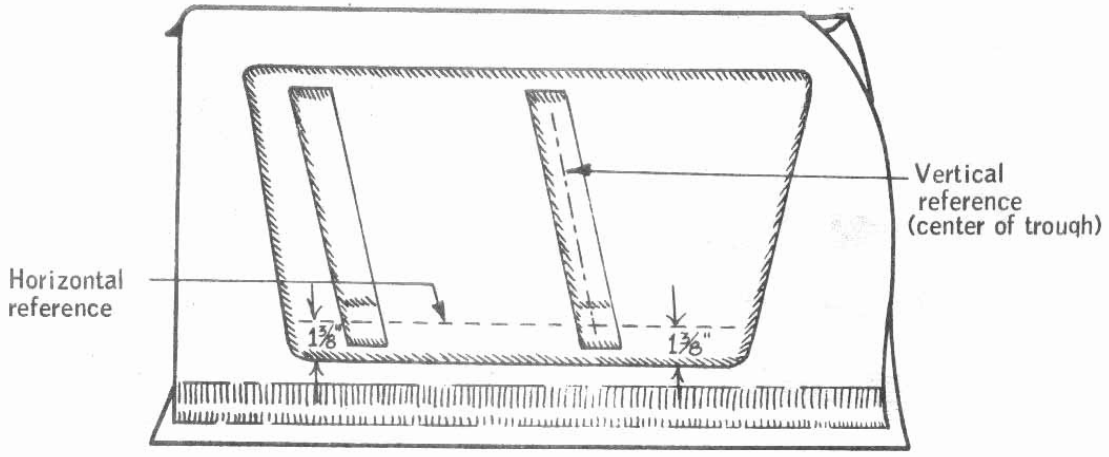


Figure 3.

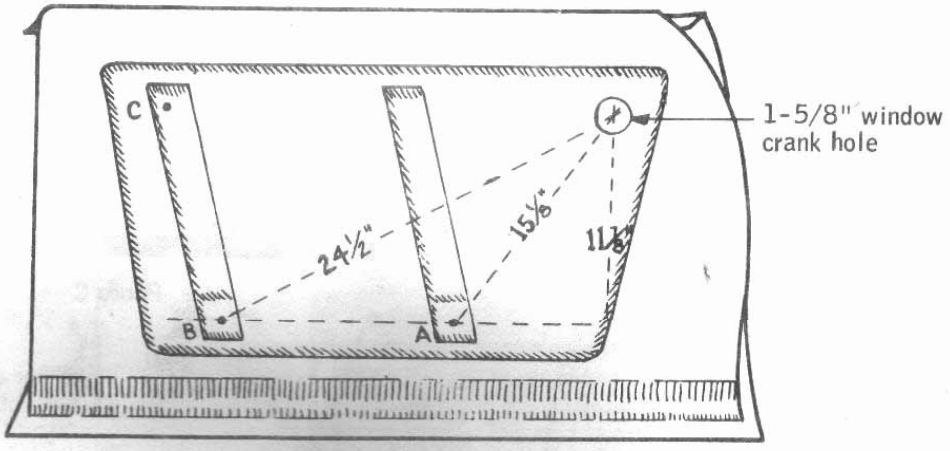


Figure 4.

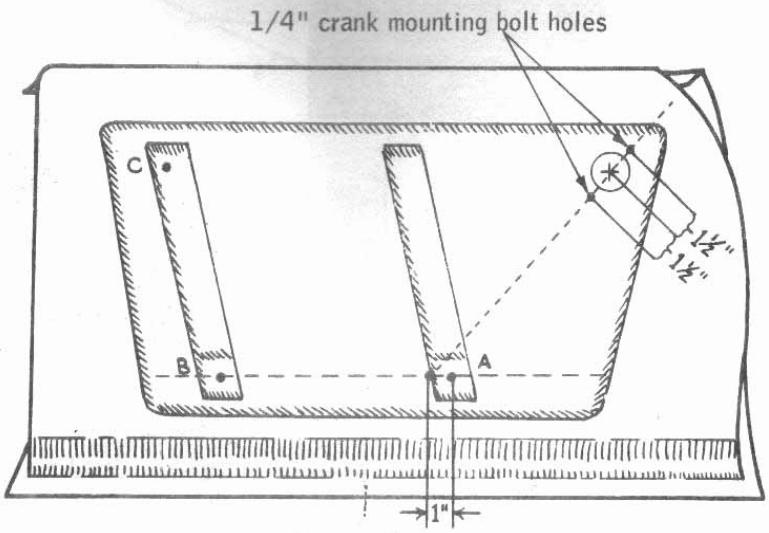


Figure 5.

Photo F -- The two window adjustment access hole center points are located by measuring up from the horizontal reference line 5-1/8" (see Figure 6). Draw a line. On this line measure from the vertical reference line 4-1/2". At that intersection is the center of the first access hole. From that center point measure3-5/8" over to the second access hole center and mark. With the 4-3/8" hole saw cutout these two holes. Using a sabre-saw cut off the two "peaks" caused by the overlapping of the circles (shown by the dotted line in Photo F and Figure 6).

The 6" hinge access hole center is located by measuring 5-7/8" up from the

horizontal reference line and measure 6-3/4" out from the vertical reference line--the intersection of these two lines is the center point. Cut out hole with 6" hole saw.

Photo G -- This shows all the other holes that should be drilled on the in side panelof the door before the door is finished (see figure 7). To loca te the door latch cut-out (for striker stud clearance) measure down from the top edge of the door 8-5/8" -- draw a line as shown. The door latch cut-out is rectangular 1-3/8" x 3/4"(center cut-out on the guide line by measuring 11/16" on each side). Cut out the hole with the File-saw drill bit.

17" from the rear surface of the door inner panel mark the location of the door-pull-handle screw holes. Use the pull-handle itself as a template by placing the handle on the guide line and drill holes. remove the handle. In the middle of the two holes nearest the door strap slot and on the guide line drill a 1/8" hole (this is for a self-tapping screw which secures the door strap to be hidden by the door-pull-handle).

The upholstered door panel is secured by nine #8 trim screws. To mark the placementof these screws measure 5/8" from the "step" of the depression at each corner and inthe middle of each side EXCEPT the top row of screws. The two central screws are placed 11" from each corner screw. (see Figure 7) Drill these holes with a 1/8" drill bit.

Photo H -- Prepare the template on Page 11 as indicated. Fit the template to the door jamb and trace the cut-out. Cut out with a sabre-saw of keyhole saw. Now using the latch cover plate as it's own template mark its mounting bolt holes and drill with a 1/4" drill bit.

The "tweak" rod (the "Tweak" rod attaches to a hinge-securing bolt at the upper-front of the door and passes through "tweak rod hole" at the lower-rear -- this diagonally-positioned rod is used to prevent and/or adjust out any door sag.) hole is 3" down from the bottom of the latch plate mounting bolts and 3-3/4" from the inside edge of the door. Drill with a 2/4" drill bit.

Only the passenger side door has an inside push button lock. Location of this hole is 1" from the rear door jamb edge centered on the top surface of the door inner panel on the inside of the window slot. Drill a 5/16" hole.

The extorior lock hole center is located 2-3/4" from the rear edge of the door skin and 1-1/4" down from the top edge of the scoop depression. (see Figure 8) Use the 1-1/8" hole saw to drill hole. Using a 1/2" flat file -- file the hole as shown in Figure 8A. File this approximate shape until exterior lock mechanism fits in the hole. Keep checking the fit by trying to insert the lock.

The side-window weatherstripping on the exterior of the door is mounted with #6 x 1/2" THP screws and these holes need to be drilled now. Take the piece of exterior weatherstripping (the strip with the rubber) and cut it to fit the window slot opening. Hold the strip in its proper position in the door slot and with a 1/8" drill bit 6 equally spaced holes along the inside position in the door slot and witha 1/8" drill bit drill 6 equally spaced holes along the inside

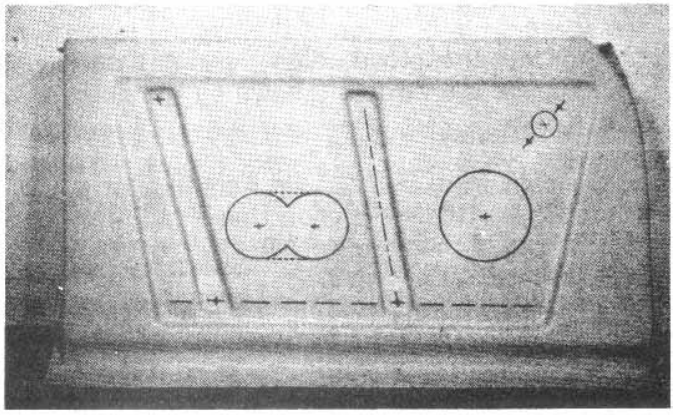


Photo F

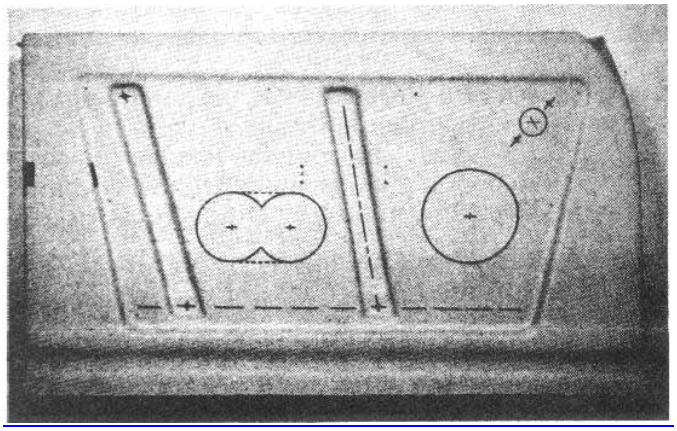


Photo G

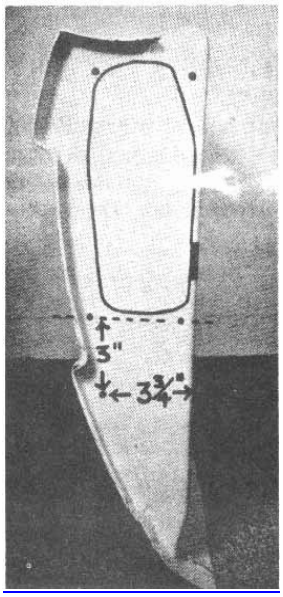


Photo H

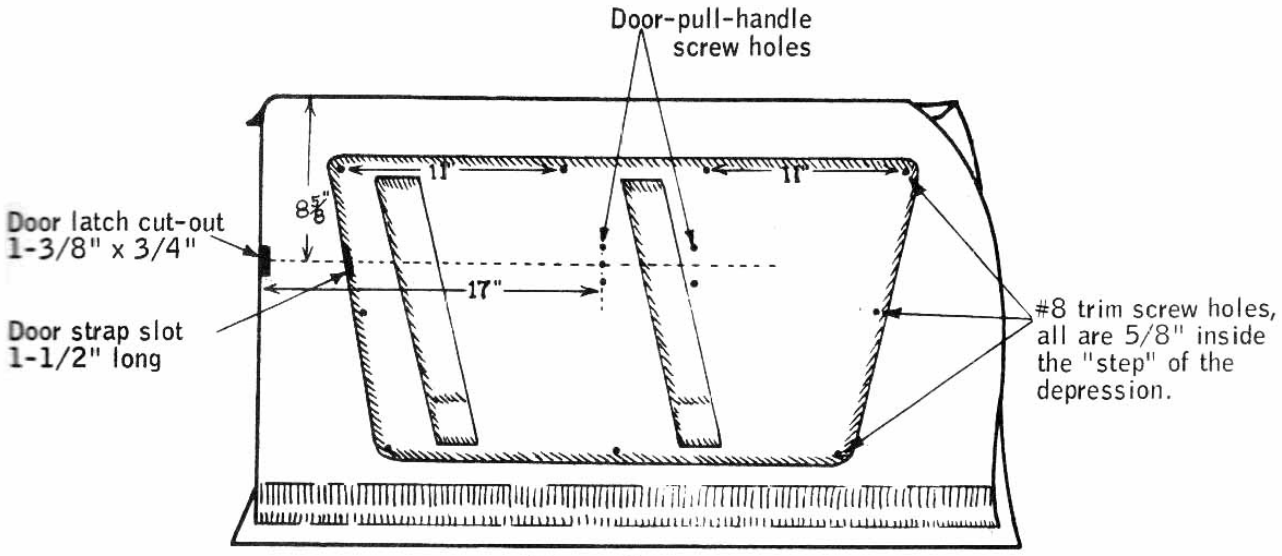


Figure 7.

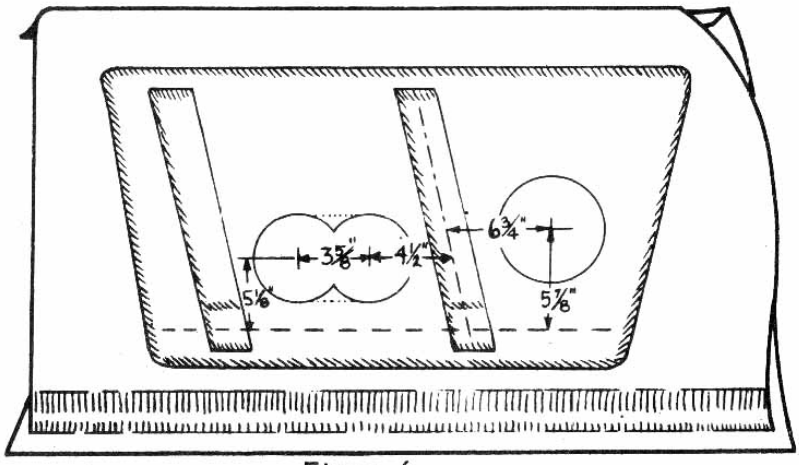


Figure 6.

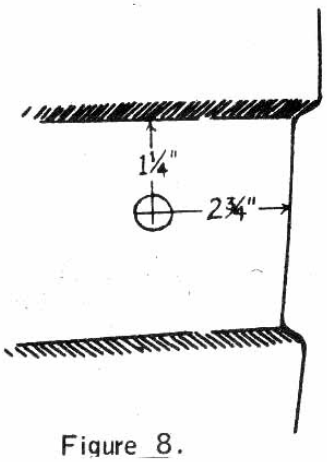


Figure 8.

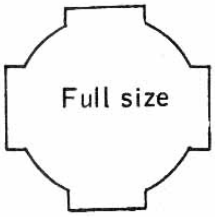
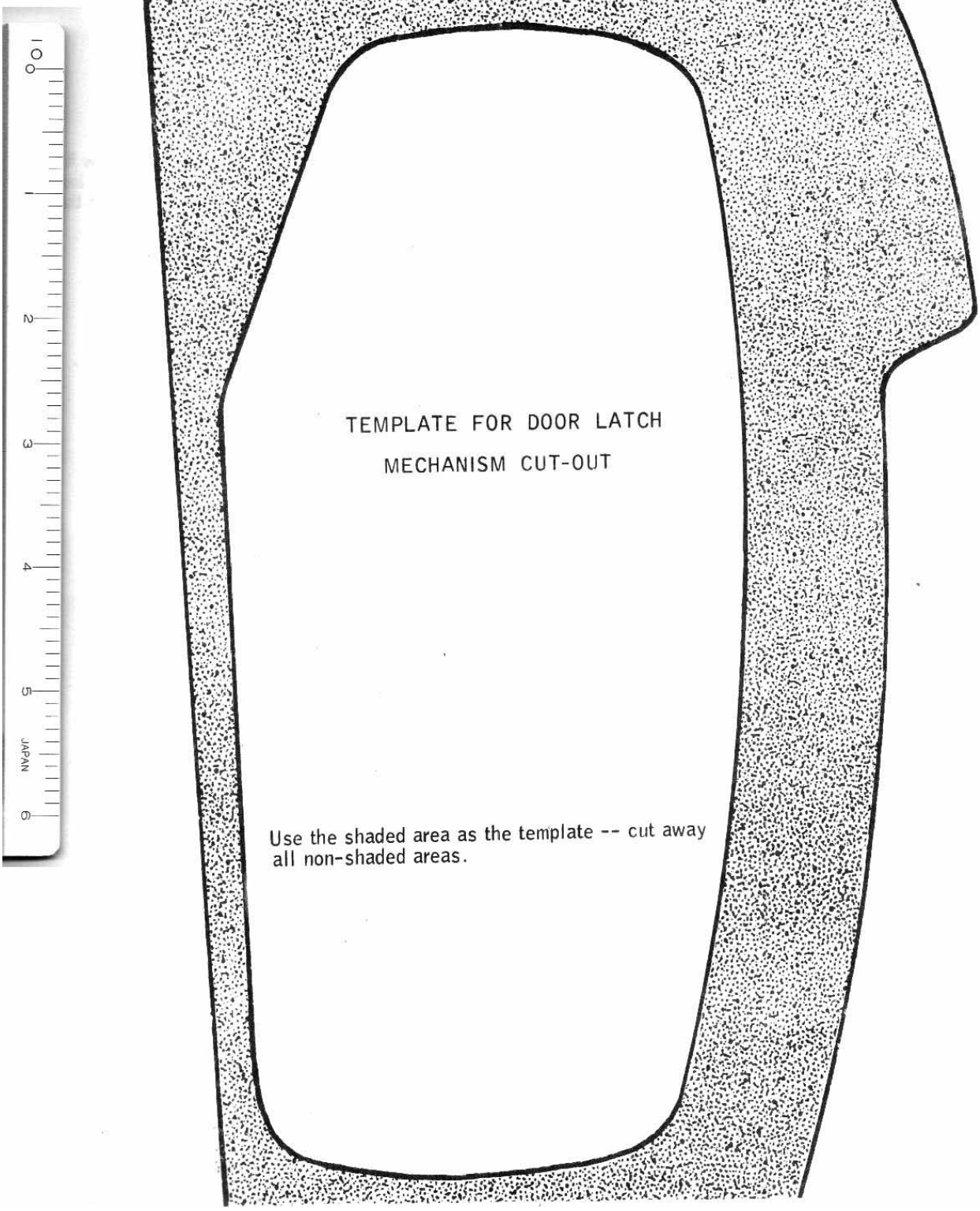


Figure 8A


TEMPLATE FOR DOOR LATCH
MECHANISM CUT-OUT
Use the shaded area as the template -- cut away all non-shaded areas.

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edge of the window slot, through the weatherstripping and fiberglass (see Figure 9). After the holes are drilled remove the weatherstripping. It will be installed in a subsequent procedure.

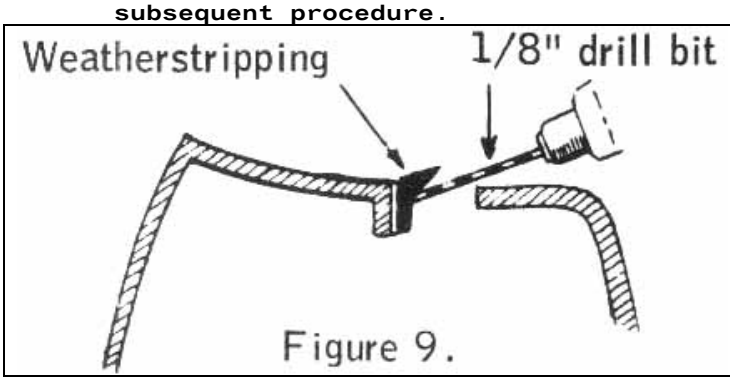


Figure 9.

Cross-section of the door showin how to drill the holes for mounting the exterior-side weatherstripping.

Now the doors and body should have all the holes and cut-outs needed except the door hinge mounting bolt holes. These holes will be in place after the door is sanded and fitted into the door opening.

STEP 4. FIT THE DOORS INTO THE OPENINGS

Using #120 gritsandpaper sand the rough edges of the door and window slot smooth. Also sand the edges of the opening in the body.

Set the door in place in the opening and adjust it to the best fitting position. Tape the door to hold it secure in the opening.

STEP 5. MOUNT THE DOOR HINGES

Use the wheel well and door jamb cut-out as access holes to locate the door hinges. The hinge with the coil spring on it is the bottom hinge. Hinges are placed as far appart as possible. From the inside of the body skin the measurement down from the peak of the fender to the top of the top hinge should be approximatly 5". From the top of the top hinge to the top of the bottom hinge the measurement should be at least 8".

With hinges located vertically -- slide them back on the plywood insert until they contact the front face of the door. Using the hinges as their own template mark all the bolt holes exposed on the door jamb and on the plywood insert. Drill 3/8" holes in the door (drill the middle mounting hole for the lower hinges that was not exposed when the hinge mounting holes were first marked two holes already drilled and the hinge itself as a guide). Drill the hinge mounting holes marked on the plywood insert.

Now replace the plywood insert (with the holes drilled) and bolt with 1/4" bolts as done in step 2. Place a light (preferably a high-intensity reading light) in the door jamb cut-out. With this light shining through the holes drilled in the plywood insert you will be able to drill the 3/8" hinge mounting holes in the correct position through the inner panel from the inside of the body.

After these holes have been drilled bolt the hinges to the door (be sure to use the hinge with the coil spring as the bottom hinge, see Photo 1).

Set the door in the door opening and adjust to the best fit as you did before. Bolt the door hinges to the plywood/inner panel using a large washer and lock washer as illustrated in the cross-section drawing in Figure 10.

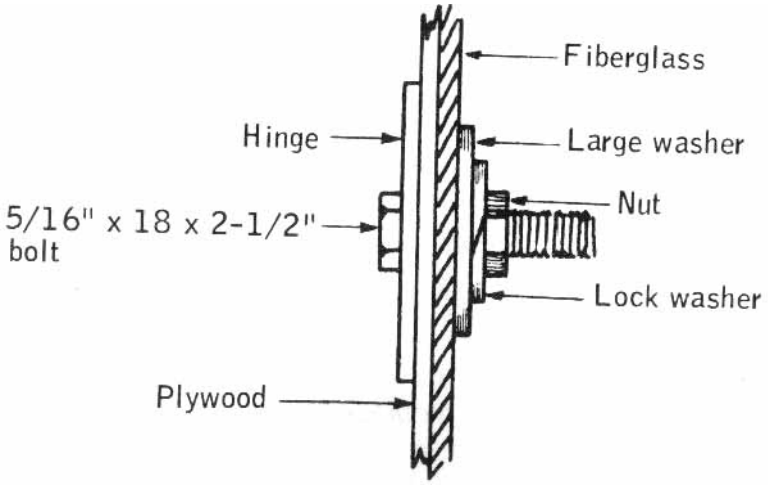


FIGURE 10.

STEP 6. INSTALL THE TWEAK ROD

The "tweak rod" should be placed inside the door with the "L" shaped bracket end toward the front of the door. This "L" shaped bracket is secured by the top bolt ofthe top door hinge. Place the other end of the tweak rod through the hole below the latch cover plate cut-out. Now rotate the rod until it is as close to the outer skin as possible. Secure the tweak rod to the top hinge bolt with a washer, lock washer and self-locking nut. Place a large area washer and nut on the end of the tweak rod projecting out the back end of the door. Tighting of the nut will give the door added support and provide some measure of adjusting the position of the door within the door opening.

STEP 7. MODIFY AND INSTALL THE WINDOW REGULATOR

The window regulator requires some modification before it can be installed inside the door. As indicated in the photo of the window regulator on the first page, three original mounting tabs must be removed (A,B, and C). A and B tabs may be removed by heating -- either using a propane torch or simply heating the tab over a gas stove. Tab C should be cut-off just below the regulator tube using a hack saw. One window carrier mount (D) should have the original threaded holes drilled out to 1/4". The gear unit mounting holes must also be drilled out to 1/4". Also indicated in the photo on the first page are the measurements for the location of the regulator mount holes. Measure 5-3/4" from the forward end of the regulator cross-channel. Mark and drill with a 1/4" drill bit at the center of the channel. 12" from the hole -- mark and drill another 1/4"hole centered on the channel. Theseholes will align with holes A and B in photo D.

If the gear unit has a short crank shaft -- the egulator can be slipped in side the door through the window opening by spreading the window opening slightly. If the window-crankshaft is too long to slip through the window opening, then the lip must be notched enoughto alow the window crank shaft to drop through. The notch must then be filled with body plastic and sanded smooth.

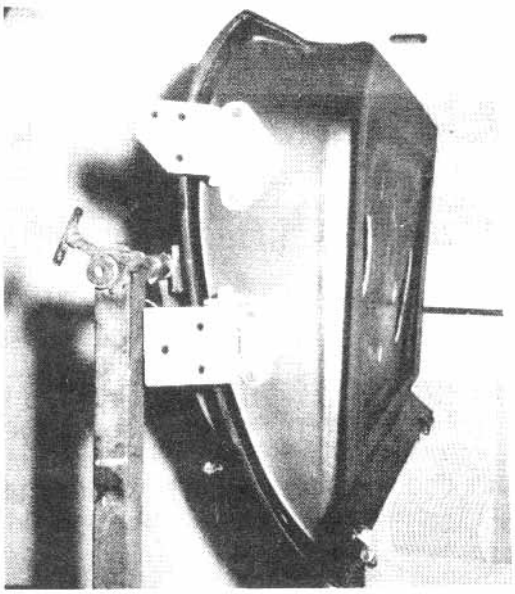


Photo I

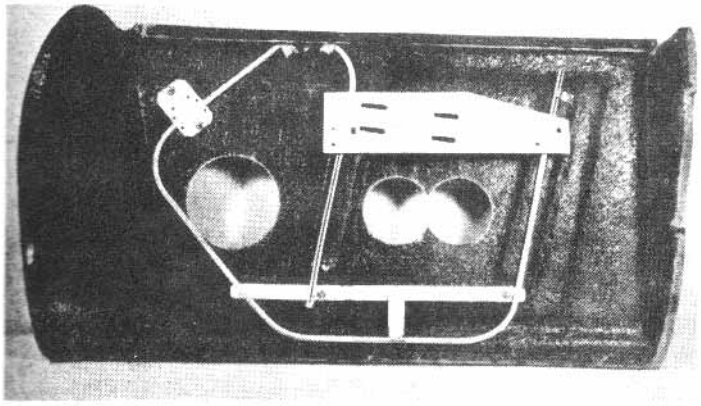


Photo M

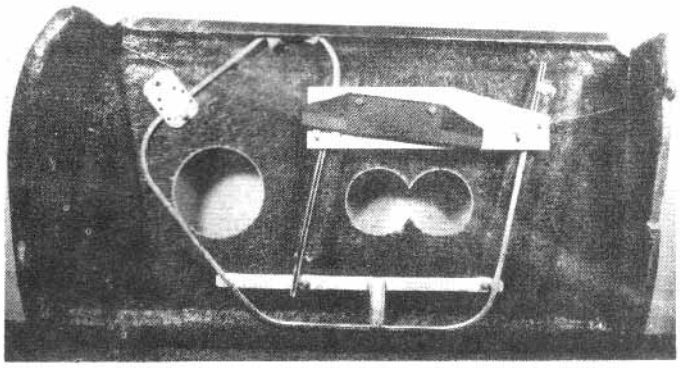


Photo M1

Mount the regulator to the door inner panel as shown in Photo M (a view oft he door with the door skin removed). Match the two holes (A and B) with t he two holes on theregulator cross-channel. To secure use the 1/4"-20 x 3 /4" bolts and nuts. Place the hold-down clip over the regulator tube and a lign the hole in the clip with hole C asshown in Photo D. Secure with 1/4"-20 x 3/4" hardware.

Secure the window-crank gear unit with 1/4"-20 x 1/2" bolts placed through holes D and E in the door panel.

STEP 8. INSTALL THE WINDOW WEATHERSTRIPPING

The extirior weatherstripping has the rubber attached and the interior weatherstripping has the felt brush attached. Cut the strips to fit the window openings (the exterior weatherstripping should be cut and holes already drilled as described on page 8 in the last paragraph). The rubber weatherstripping is secured with six #6 THP screws. The interior weathers tripping is secured with the contact cement provided in the kit. Be sure the surface is thoroughly cleaned and roughened before cementing. Apply the contact cement on the strip and on the door according to the instructions on the cement. It is advisable to use wooden wedges shoved in to the window openings to clamp the strip in place and set over-night.

STEP 9. INSTALLATION OF THE WINDOW GLASS

Install the window carrier plate with the bevel to the rear of the door as per Photo M using 1/4"-20 x 1/2" hardware. Leave the carrier loose -- do not tighten bolts. Attach the window channel to the window carrier plate with the bottom bolts only. These bottom bolt(s) are metric and are assembled to the carrier plate and window channel in following manner:

1) thread a nut onto the bolt up to the bolt head, 2) place the bolt through the bottom slot(s) in the carrier plate, 3) thread a second nut onto the bolt, 4) thread the bolt into the thredded hole(s) in the bottom edge of the window channel. The two nuts are usedto adjust the position of the bottom edge of the glass which in turn positions the glass into or out of the door opening.

Now place the window insulations rubber over the bottom of the window so the holes in the glass and rubber line up. Insert window through opening and into channel. Install the top mounting bolts through the channel, window and carrier. Raise the window to its uppermost position, and slowly close the door. Tape the door closed. The window can now be adjusted utilizing the slots in the carrier plate, to fit the opening. Once the window isin the correct position, tighten all the bolts. Do not over-tighten the two mounting bolts that go through the window as excessive pressurecan cause the window to break. (see Photo M)

After the window is adjustd and secure raise the window to the desired height to fit the door opening properly and install an upper window-travel stop. This is done be drilling a 1/8" hole on the side of the cable housing of the regulator (regulator tube). Using the door latch mechanism cut-out as access, the hole should be drilledthrough the side of thecable housing just above the end of the cable. Install a #10self-tapping screw through the housing, thus providing a stop for the cable itself. The lower stop is installed by lowering the window to its lowest position (the top rear corner of the window should be even with the the top of the window opening -- this will leave some of the forward part of the window above the door and drilling a 1/4" hole in the bottom of the rear inner panel through just below the window carrier plate comes down against it.

It is recommended at this point that you remove the side-window glass -- this will leave the room needed for subsequent installations. The glass will be installed permanently after Step 12.

STEP 10. INSTALLATION OF THE EXTERIOR PUSH-BUTTON LOCK

Insert the push-button lock with the key in the lock so that the cut on the key is down. Push the spacer against the skin. Secure the push-button and spacer with thepush-on-spring-steel retainer(lock cylinder retainer).

See Figure 11.

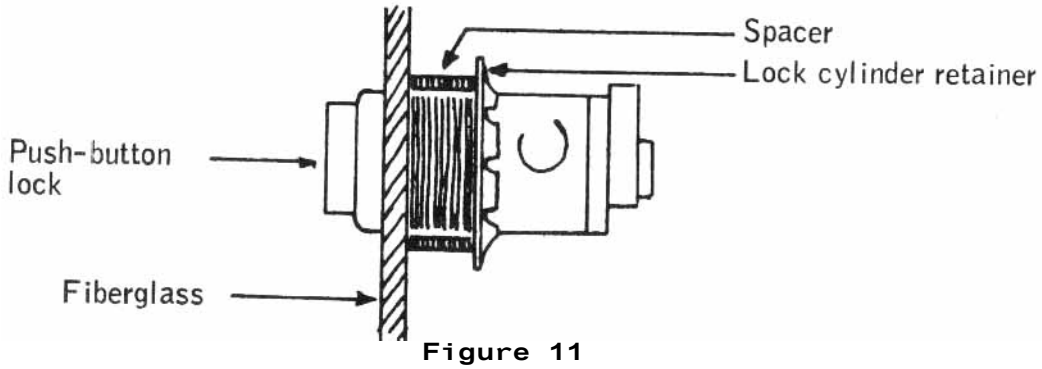


Figure 11

STEP 11. ASSEMBLING AND INSTALLING THE DOOR LATCH MECHANISM.

As shown in Photos N and O it is nessary to assemble the latch mechanism before it is placed inside the door. Remove the little tubular-shaped extension of the locking mechanism with a hack saw (see Photo N).

Place the latch mechanism on the latch plate as shown in Photo O. With two

1/4'-20x1/2" bolts and nuts secure the mechanism to the plate as indicated. The 1/4"-20 x 2-1/4" bolt is inserted in the middle hole -- place a latch arm on this bolt as shown in Photo O and secure with a self-locking nut. D onot tighten up on the latch arm -- allow it to move freely. Insert 5/16"-18 x 3/4" on the top of the latch arm. Adjustment of this bolt will be made after the actuating rod is installed.

Install the latch mechanism in the door so that the jaws of the latch align with the cut-out on the inner door panel. Secure with three 1/4"-20 x 7/8 "
THP bolts and nuts --the top bolt closest to the outside skin is a 1/4"-20 x 1/2" bol. This shorter bolt allows the latch arm to move freely without interference.

The passenger-side door has a push-button lock on the inside. Insert the push-button with the wire in the hole on the top of the door. Attach the wire as indicated in Photo O.

STEP 12. INSTALLATION OF DOOR STRIKER STUD
Insert a screwdriver in the large hole directly behind the jaws of the lock

mechanism. Force the jaws closed which in turn will create a hole for the striker stud. Close the door and tape in proper position in the door opening. Stick a pencil through the opening created by the screw-driver an dmark on the body door jamb the location of the striker stud. As you stick

the pencil through the opening to mark the door jamb -- be sure the pencil is straight and not tipped or at an angle. Open the door and drill a 3/8" hole for the striker stud.

Install the striker stud and washers (see Photo P) and secure with the threaded nut plate. Close the door and check the fit of the sriker stud as they contact the jaws of the lock. The enlarged end of the striker stud should just fit behind the jaws of the lock. The adding-on or removal of the washers allow the adjustment of the striker stud.

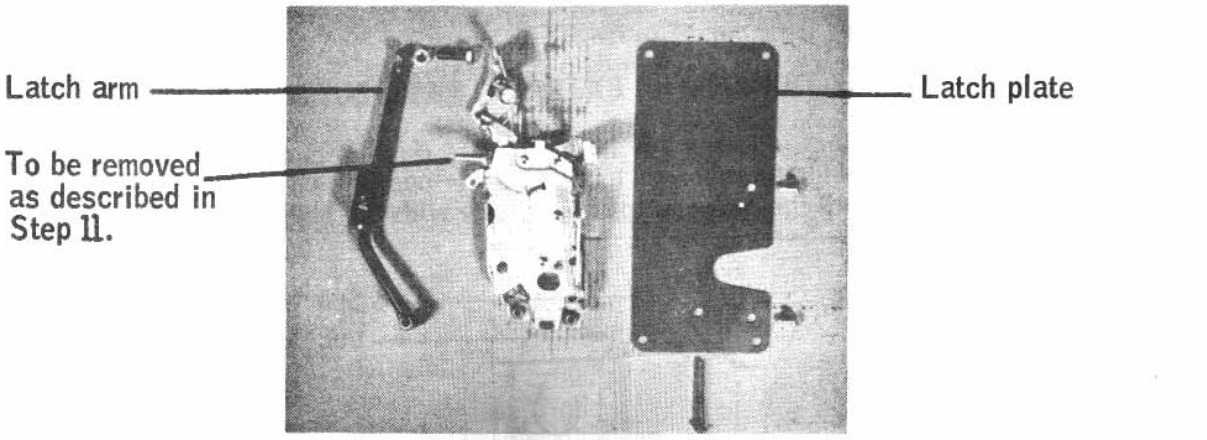


Photo N

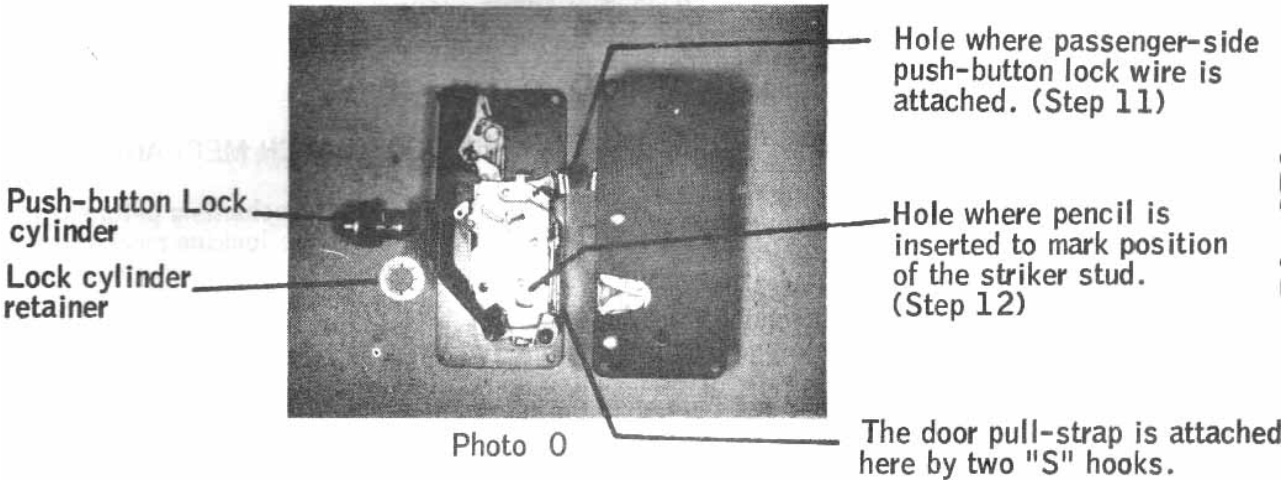


Photo O

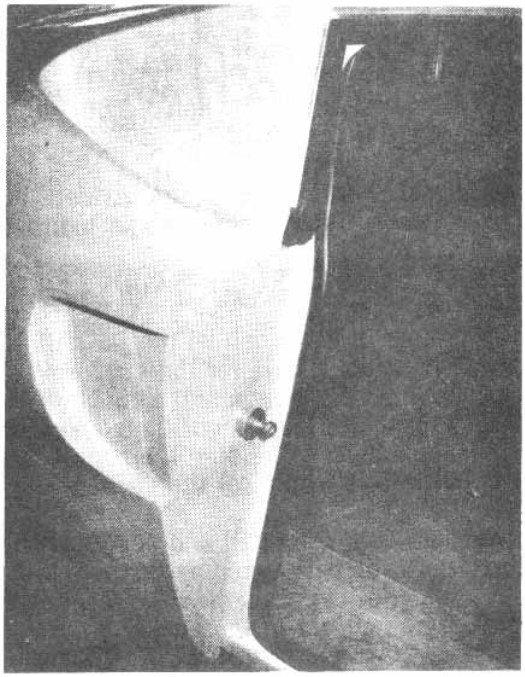


Photo P

Now the side-window should be installed as per instructions in step 9.

STEP 13. INSTALLATION OF SIDE-WINDOW WEATHERSTRIPPING

Measure and cut the aluminum extrusion as specified in Figure 12. Mitre the corner to insure a weather-tight fit. Measure and cut the rubber strip (cut the rubber 4" longer than the aluminum). Mitre the rubber stri palso. Mount the rubber into the aluminum strip (temporarily). Close the door and slide the weatherstripping as close to the window as possibl e(see Figure 12A). Mark with a pencil along the edge of the aluminum. Remove the rubber from the aluminum and pop rivet the aluminum in place. Then use contact cement to secure the rubber to the aluminum.

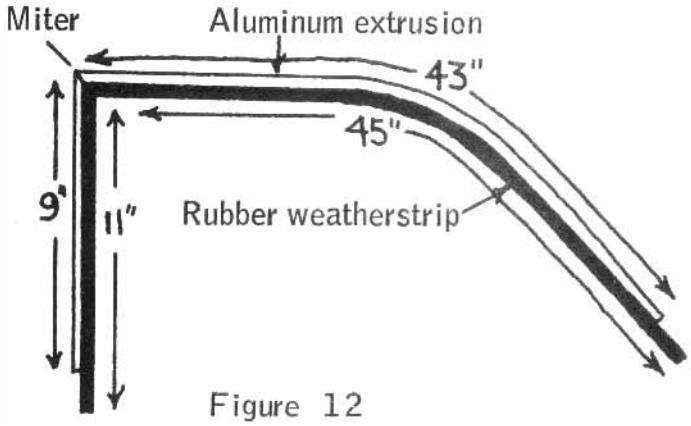


Figure 12

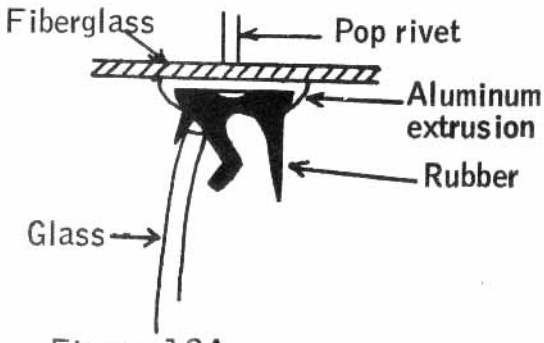
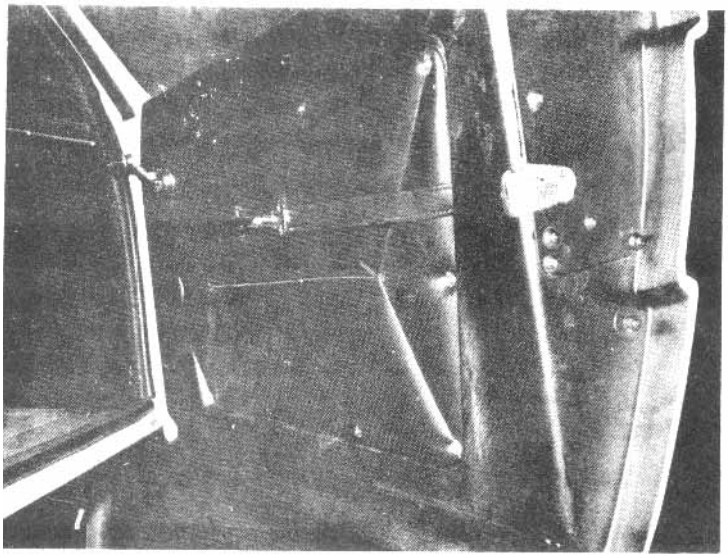
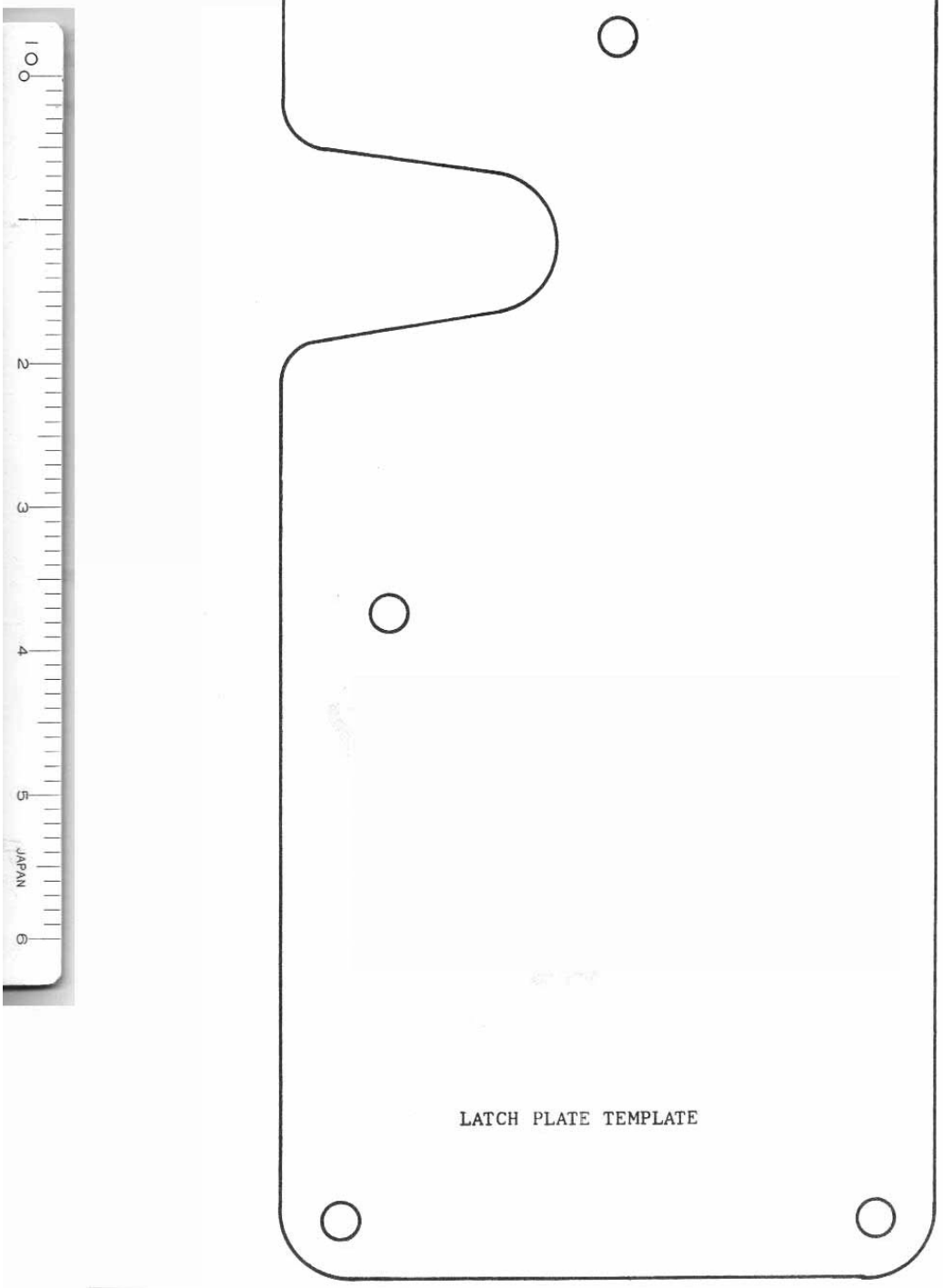
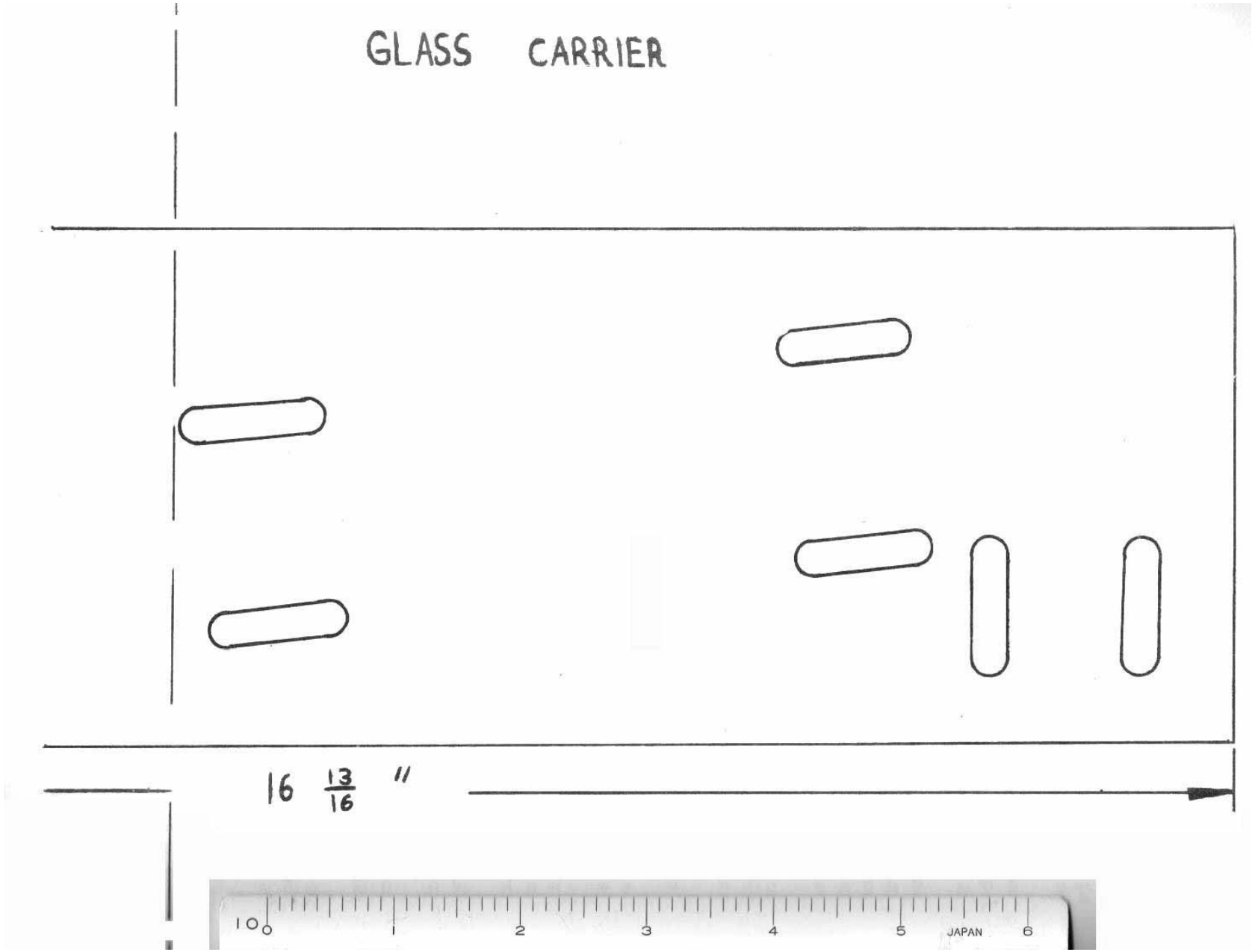


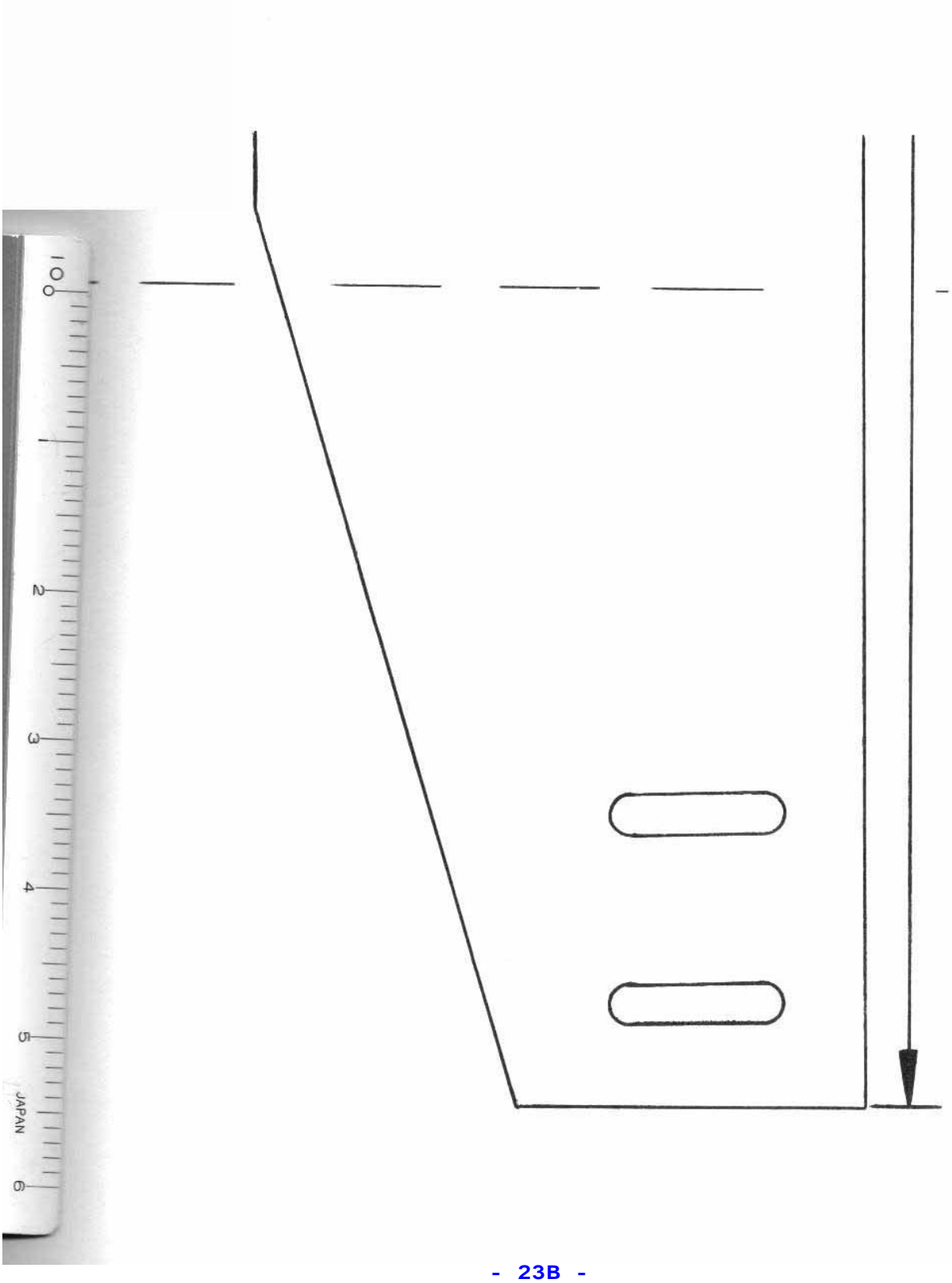
Figure 12A

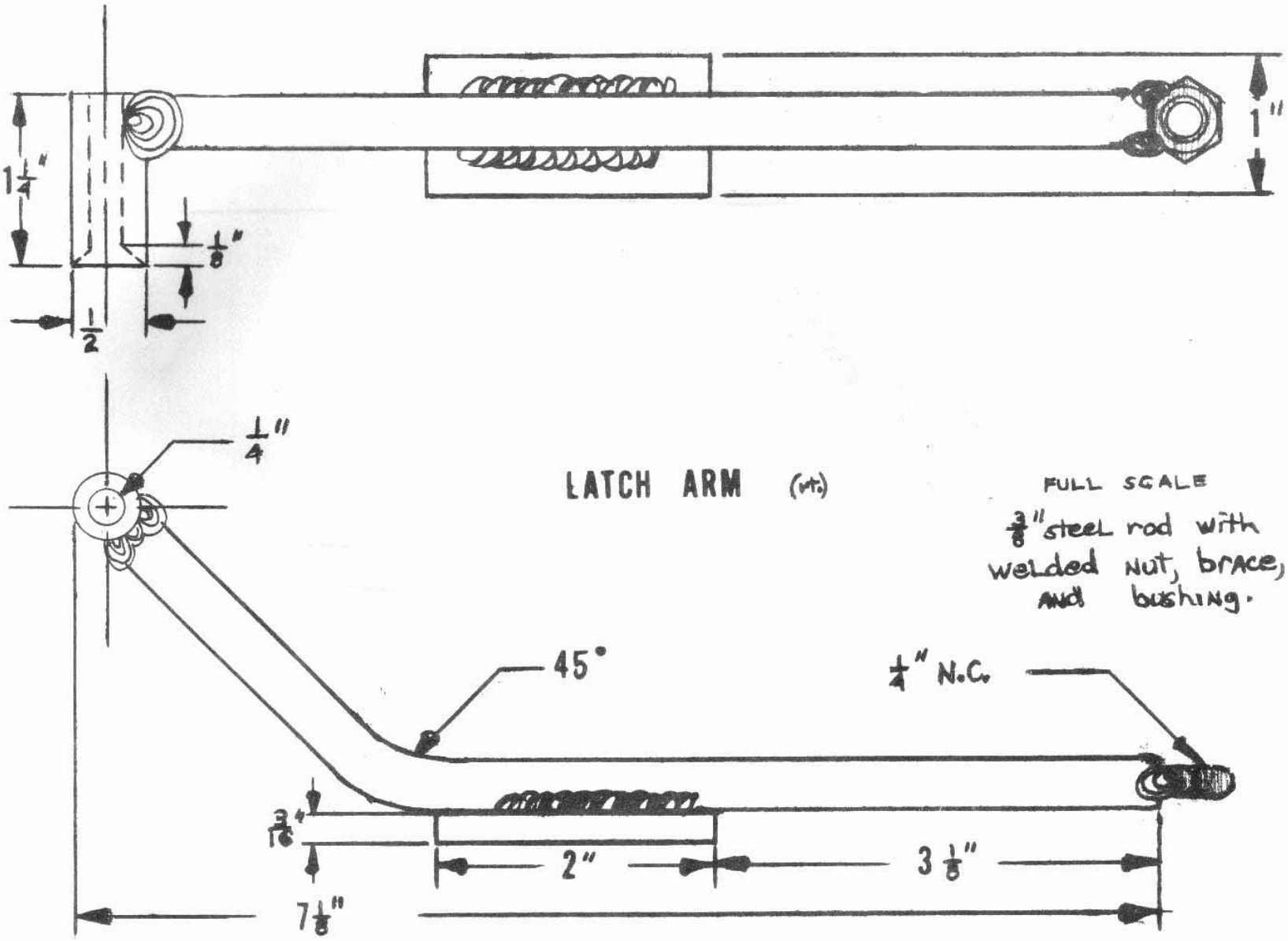
The photo below shows a completed door. The windlace for the door openin gand the upholstered door panel are included in the Upholstery Kit.




LATCH PLATE TEMPLATE


GLASS CARRIER
16 13/16 "
JAPAN


JAPAN


1 1/4"
1/8"
1/2
1"
1/4"
LATCH ARM (Mt.)
FULL SCALE
3/8" steel rod with welded Nut, brace, and bushing.
45°
1/4" N.C.
3/16
2"
3 1/8"
7 1/8"

DASHBOARD ASSEMBLY AND MOUNTING

Check dashboard for fit in place, laying thr forward portion of the dash over the lip in the body behind the windshield opening.

Be sure that the two dash corners do not extend beyond the door openings. Also check hump cutout to assure a good fit over hump, to either side and to floorpan.

After you are satisfied with fit, proceed with instruments, switches, and defogger installation as per following instructions.

When you have fully assembled the dash, you are ready to permanently mount it to the body.

First, lay up a good agent (or fiberglass resin/hardener/ matting) on lip of body and place dash on it, weighting it down firmly. Pop rivets may be used if desired.

Using a "Bond-O" type body filler, the forward edge of dash may be blended into body and front edge behind windshield opening.

IF PADDING IS DESIRED:

LAy sheet foam (1/4"-1/2") over the dash allowing it to drape over inner edge sufficiently to cover the area you desire to pad. Trim to fit and bond to dash.

Lay vinyl over the dash in the same manner. However, allow the vinyl to extend into the windshiled supporting lip. Bond the portion of the vinyl under the inside edge of dash and along protruding inner edge of dash. Further secure the lower edge with a metal trim strip.

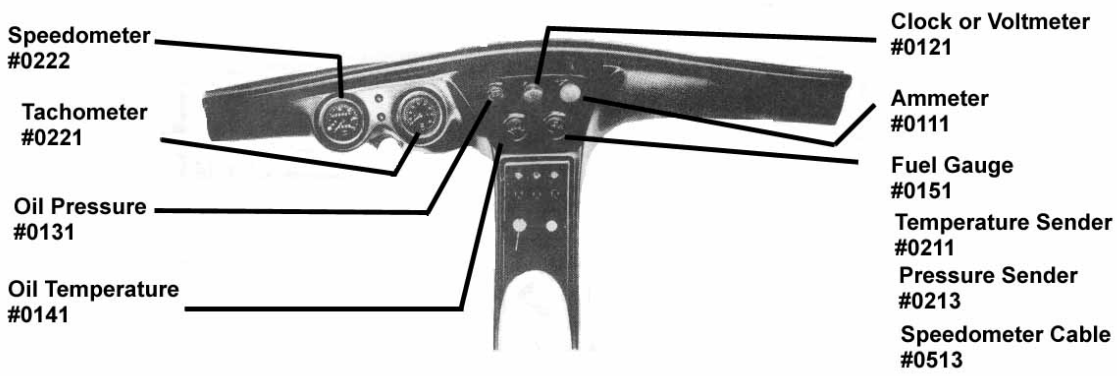
Draw vinyl tight over foam toward windshield supporting lip, over edge and secure in place with a good bonding agent. (3M W/strip cement, eg.). Trim excess.

Defroster vents may now be set in holes, through vinyl and secured with Tinnerman nuts.

FIBERFAB'S INSTRUMENT INSTALLATION INSTRUCTIONS

The instruments are most easily installed in the dashboard before dashboard is permanently mounted to the body.

Below is example of location of a complete set of instruments.



Now assemble the tools necessary to install the Instrument Kit:

NOTE: The installation of the instruments can be expedited if 7 mm, 8 mm, 17 mm, and 9/16" socket wrenches are available in place of the 6" adjustable wrench.

Materials to be purchased: one aerosol spray can of lacquer primer

one aerosol spray can of flat black or wrought iron black lacquer

one sheet each of #40 grit, #120 grit, and two sheets of #240 grit sandpaper

Plastic body putty ("bondo")

INSTRUMENT KIT INSTALLATION INSTRUCTIONS

Preraration of Dashboard

The dashboard should be prepared bafore any instrument is mounted.

First -- using the 3-1/8" hole saw, drill out the two larger guage recesses on the left side of the panel. Drill from the front side. Using the 2-1/16" hole saw drill out the five smaller guage recesses in the center of the panel. (NOTE: at this time it is advisable to drill or cutout any oth eropenings necessary for switches, radio, etc. e.g., see Fiberfab's Switch Kit)

Now file all edges smooth -- outer edges of dash panel and edges of drilled holes. Then sand edges with #40 grit sandpaper. Fill all holes or cracks

with plastic body putty. Sand the entire surface thoroughly with #120 grit sandpaper. (NOTE: dash should be sanded till all existing gloss is gone -- paint will not stick to a shiny gel-coat finish) Then spray primer on dash. After primer is dry, wet sand dash with #240 grit sandpaper. When surface is smooth and dry -- spray entire dashboard with flat black.

Mounting Instruments

To install gauges, unscrew and remove the mounting bracket (U-bracket) from the back of the gauge. Insert the gauge in the panel from the front and secure with U-bracket from behind dash with the knurled nuts supplied on th egauge. (We suggest you turn the nut over to utilize the most thread withi n the nut.)

General Information for Wiring Instruments

These instructions are directed toward the installation of these instrument sin a car having a 12 volt electrical system -- that is, the car utilizes a

12 volt battery whose "-" terminal is connected to the vehicles chassis making the chassis the "ground" (NOTE:The symbol for ground is "-" or "") for the electrical system. The "+" terminal then, becomes the source of 12 volt power for all lights, instruments, motors, etc. --and usually is referred to as the "hot side" of the battery. Thus, to "ground" an instrument means simply to connect it in some manner to the metal part of the chassis.

Electrical Connections

A. Case Grounds

1. All instruments require a ground connection to their cases. This connection can, on all instruments except the speedometer, be made with a wire connected to their "-" or "" terminal or to the stud used to secure the U-bracket with a knurled nut.

2. The spedometer has no ground terminal and must be grounded by connecting a wire under the large retaining nut securing the U-bracket or by drilling the U-bracket with a sheet metal screw. (DO NOT depend upon the speedometer cable to ground the case)

INSTRUMENT KIT INSTALLATION INSTRUCTIONS

B. Lighting

1. All instruments have a light connection.

2. If the lighting socket has two terminals -- connect one terminal to ground and the other to a source of instrument lighting power (e.g., rheostat on your headlight switch). If the socket has one terminal the ground connection need not be wired inasmuch as it is made through the socket receptacle to the instrument case ground. The single terminal is wired to the source of lighting power.

C. Other Connections

The fuel level gauge, the oil temperature gauge and oil pressure gaug eare installed and operated similarly from remote senders. The oil pressure and temperature senders are included in the kit but the fule level sender is a standard '68-'69 Volkswagen unit.

1. Fuel level gauge, oil temperature gauge and oil pressure gauge

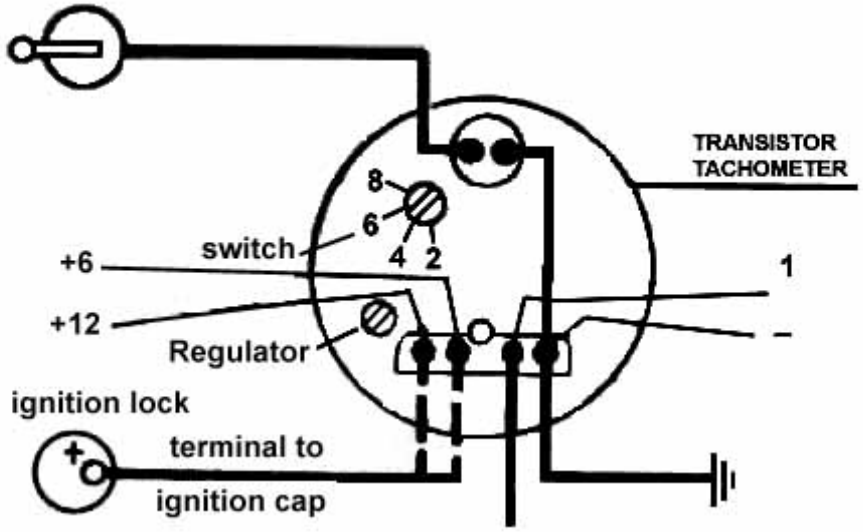
a) G terminal is wired to the sending unit.
b) "+" terminal to ignition switch "ACC" or "IGN" terminals such that these instruments operate only when ignition switch is in "ON" position.

2. Clock or Voltmeter
a) "+" terminal is connected directly to the battery (not switched) so instrument is "ON" all the time.
b) "-" terminal connected to ground.

3. Ammeter
a) "+L" terminal is connected to the charging ("BAT") terminal of the voltage regulator.
b) "+B" terminal is connected to "hot side" of the battery.

4. Tachometer

a)The following diagram illustrates the connections for the tachometer.



b) The switch with the numbers 2,4,6 and 8 represents the cylinders-- set this dial at 4 for VW engines and 6 for Corvair engines.
c) On the terminal strip, connect the "+12" terminal to the ignition switch "ACC" or "IGN".
d) The "1" terminal is connected to the distributor side of the ignition coil.
e) "-" terminal connected to ground.

INSTRUMENT INSTALLATION INSTRUCTIONS

Mechanical Connections

A. Speedometer
1. The near end of the speedometer cable is attached to the threaded stud in the center of the instrument and secured with the internally threaded plastic nut on the cable.

2. The far end of the cable is installed in the same manner as a stock Volkswagen cable, i.e., it is inserted through the left front wheel spindle and bearing dustcoverand retained by inserting a cotter key through the hole in the end of the cable.

Sender Installation

A. Oil pressure sender
1. The oil pressure sender is installed as a replacement for the existing warning light switch in a VW engine. This switch is located directly behind the crankshaft pulley and adjacent to the base of the distributor.

SWITCH KIT INSTALLATION INSTRUCTIONS

The Switch Kit is most easily installed at the same time you are installing the instruments in the dash panel. All possible wiring and

instrumentation should be completed on the dash panel before the dash is permanently mounted to the body.

Parts List

Ignition Switch
Light Switch
Toggle Switch (accessory) (2)
Wiper Switch
Dimmer Switch
Indicator Lights (2)
Flasher

Now assemble all necessary tools needed to install the Switch Kit:

Materials to be purchased:

One aerosol spray can of lacquer primer
One aerosol spray can of flat black or wrought iron black lacquer
One sheet each of #40 grit, #120 grit and #240 grit sandpaper
Plastic body putty ("Bondo")
Masking tape

Preparation of the Dashboard

Place the template provided in the proper location on the dash panel -- make sure the template is centered. Using masking tape secure the template. It is advisable to make "starter" holes with a 1/8" drill bit before you drill the switch holes to their full size so that the larger drills won't slip and mar thesurface of the dash. Remove the template. Using 7/16" drill bit drill the top three holes. With the 15/32" drill bit -- drill the middle three holes. Then with the 7/8" hole saw carefully drill the larger of the two bottom holes. Drill the smaller bottom hole with the 3/8" drill.

B. Oil temperature sender

1. The temperature sender is fitted in place of the screwdriver-slotted plug closing the main oil gallery at the rear of the engine. This plug is located directly behind the crankshaft pulley and approximately at the "4 o'clock" position on the pulley.

2. If plug is difficult to remove from the oil gallery -- run the engine untill it has reached normal operating temperature and turn off.. Then unscrew the plug. Be prepared to catch the oil which will drain from the opening.

3. Some temperature senders require an adapter, which is included in the kit when necessary.

After the holes are drilled prepare the dash as outlined below:

1. Sand all the rough edges with #40 grit sandpaper.

2. Fill all holes and cracks with plastic body putty.
3. Sand entire surface thoroughly with #120 grit sandpaper.
   (NOTE: Dash should be sanded untill ass existing gloss is gone -- paint will not stick to a shiny gel-coat finish.
4. Spray primer -- let primer dry.
5. Wet sand entire dash with #240 sandpaper. Let dash dry.
6. Spray dash with flat black.

Instalation of the Switches

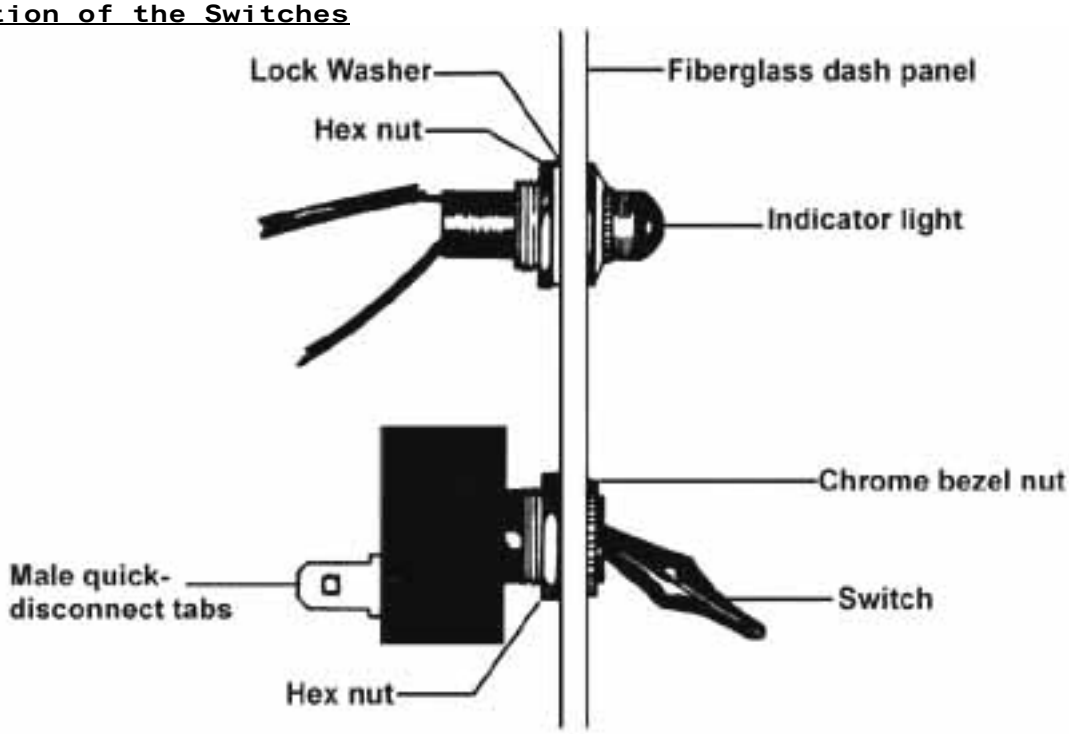


Figure 1

Remove the chrome bezel nut from the front of the switch unit. Leave the hex nut on the threads. Insert switch in the 15/32" hole from behind the dash panel. Using the chrome bezel nut secure switch from the front -- screw the chrome bezel nut till it is flush with the outer end of the threaded barrel of the switch (see Figure 1). Then from the back of the dash panel, tighten the hex nut untill switch is secure.

The blower and accessory switches are simple ON-OFF switches -- connect 12volts to one of their terminals and it becomes connected to the other terminal, through the switch, when the switch lever is "UP". When installing these two switches be sure the male quick-disconnect tabs are on the lower portion of the switch unit (see Figure 1).

The windshield wiper switch has four male quick-disconnect terminals numbered 1,2,4 and 5 -- 3 and 6 have no terminals. Insert the wiper switch so that terminals #1 and #4 are on the bottom (see following diagram).

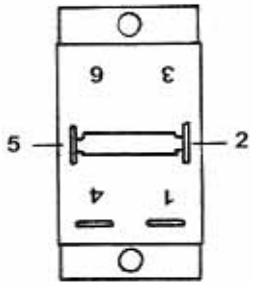


Illustration of the terminals on the back of the windshield wiper switch. Correctly installed, the 1 and 4 terminals are on the bottom.

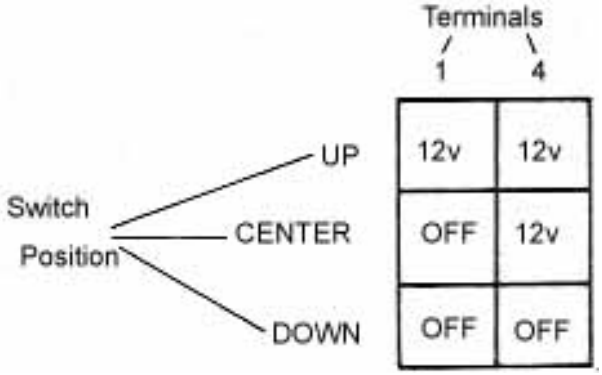


Table of Switch Connections with 12v applied to terminals 2 and 5

The wiper switch is supplied with the terminals #2 and #5 wired together. This switch is intended to operate a 2-speed windshield wiper motor such as the Bos chwiper motor unit supplied in Fiberfab's Wiper Kit. The switch operates such that with 12 volts applied to terminals 5 and 2, terminals 1 and 4 receive 12 volts as shown in diagram of switch connections.

Indicator Lights

You will receive three lights -- two of one color for the turn indicators and one of another color which is for the hi-beam indicator.

To install the indicator lights remove the hex nut and lock washer from the bac kof the light. Insert the lights from the front of the dash into the 7/16" hol e.Then replace lock washer and hex nut from behind the dash (see figure 1).

Headlight switch

Remove headlight switch knob by unscrewing the set screw. Then remove bezel retaining nut. Insert in 3/8" hole from the back of the dash and secure from the front with bezel retaining nut. Replace knob with set screw. NOTE: Make sure termination side of switch is facing upward for ease of wiring.

Interpretation of the headlight switch connections is as follows:

BAT -- 12 volt power input directly from the battery to the switch-- the switch incorporates a 30 Ampere circuit breaker for overload protection-- no other fusing for the lights required.

AUX -- may be used as a source of fused 12 volt power (not to exceed a demand of 5 Amperes)

PARK -- 12 volt power for parking lights--
"OFF" when the switch knob is pushed in--
"ON" with the knob half-way out--
"OFF" with the knob all theway out.

TAIL -- 12 volt power for tail lights--
"OFF" when the switch knob is pushed in--
"ON" otherwise.

HEAD -- 12 volt power for headlights
"OFF" with the knob pushed in--
"ON" otherwise.

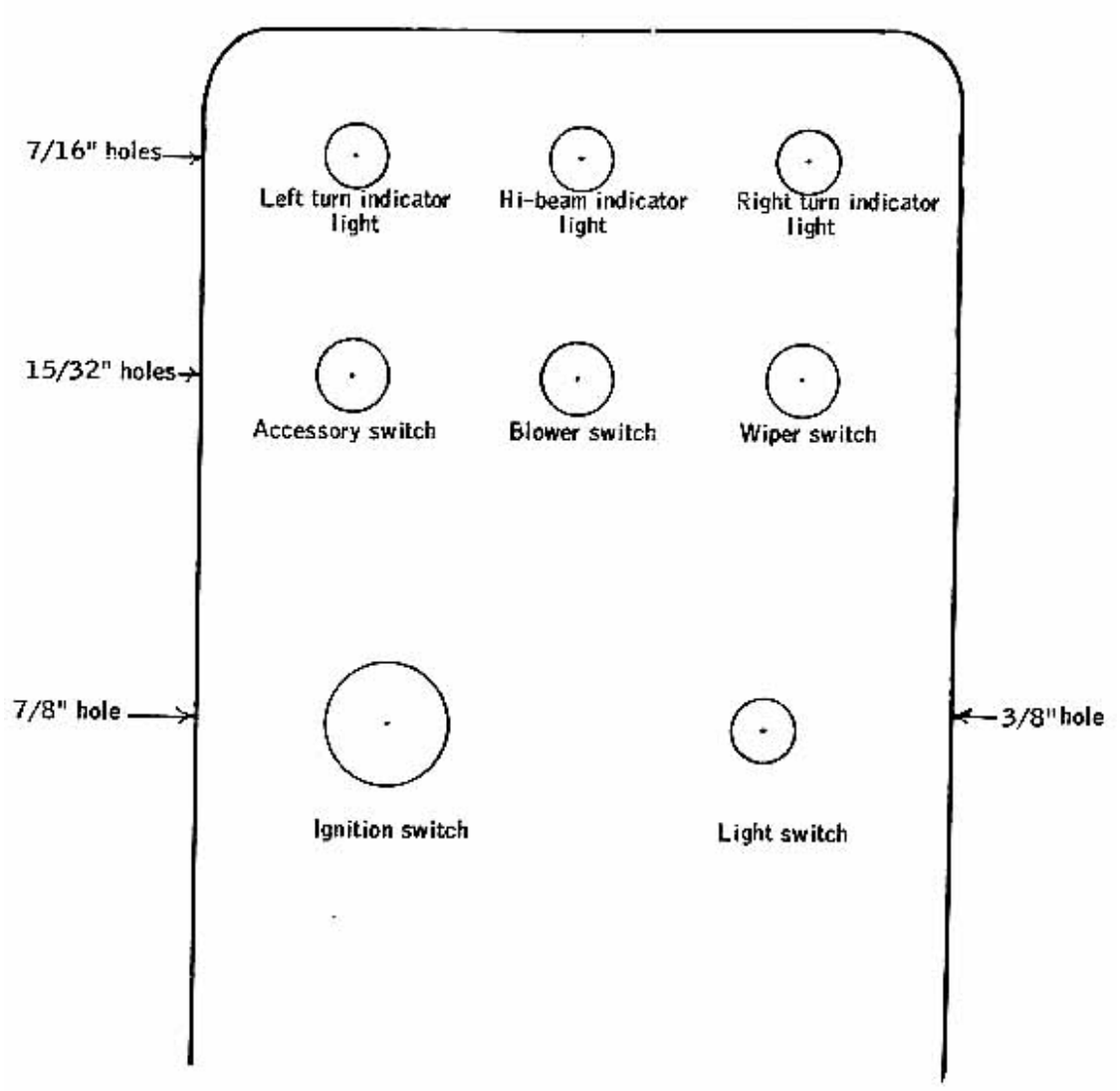
Ignition Switch

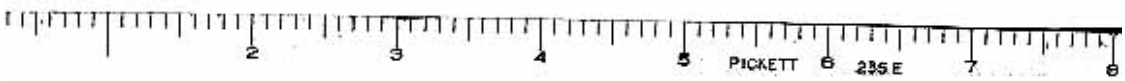
Remove the keys. Remove the knurled bezel nut. Screw the hex nut all the way down against. Insert the ignition switch from the back of the dash through the 7/8" hole. Replace the knurled bezel nut and screw untill flush with the ignition key hole.

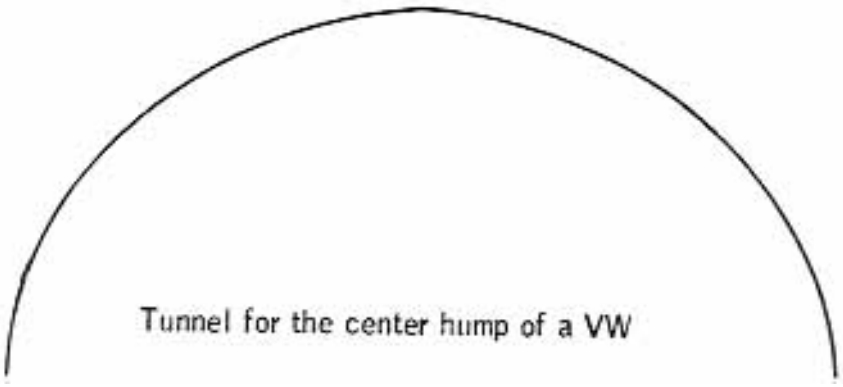
Holding the ignition switch from behind the dash panel so the switch will not rotate --tighten the hex nut against the back of the dash to hold ignition switch secure.

Interpretation of the ignition switch is as follows:

BAT	--	12 volt power input directly from the battery.
IGN	--	12 volt power to the ignition coil.
ST	--	12 volt power to the ignition coil.
ACC	--	12 volt power for any accessories (radio, defroster, etc.)--"ON" when the key is to the left or right of the center- "OFF" position -- "OFF" when the key is rotated fully-clockwise into the "start" position.

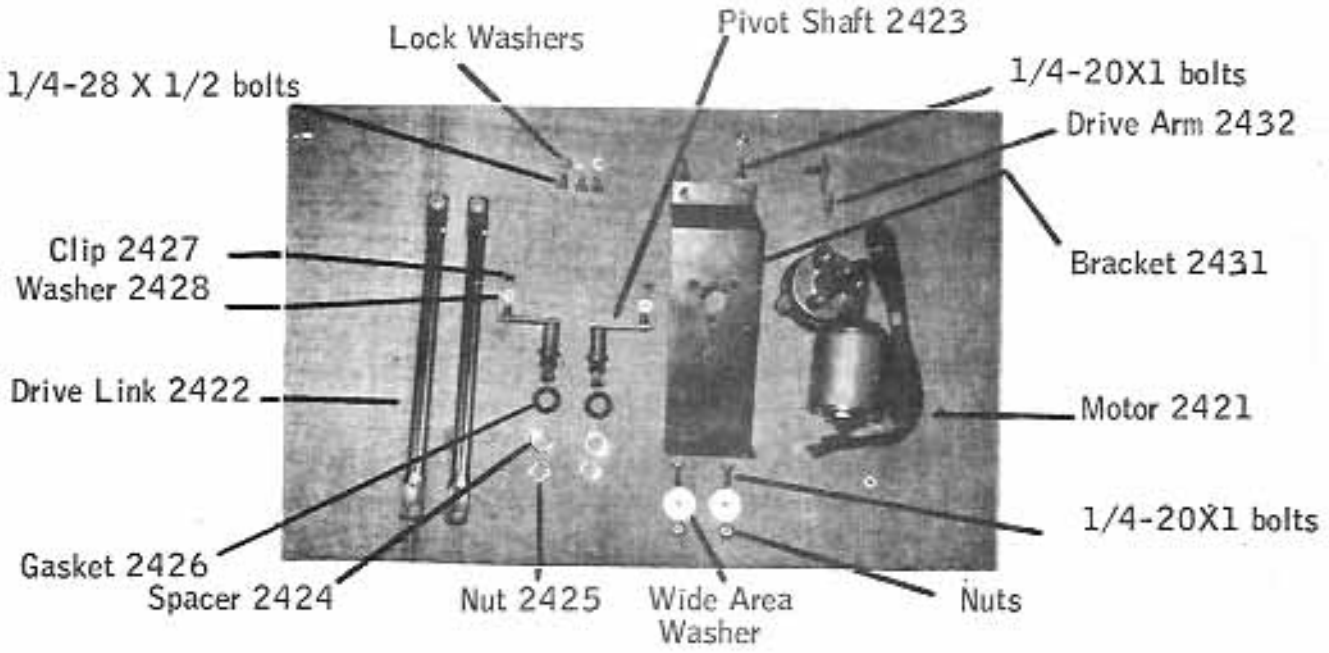

7/16" holes
Left turn indicator light
Hi-beam indicator light
Right turn indicator light
15/32" holes
Accessory switch
Blower switch
Wiper switch
7/8" hole
3/8" hole
Ignition switch
Light switch


2
3
4
5
PICKETT
6
235 E
7
8


Tunnel for the center hump of a VW

WIPER KIT INSTRUCTIONS

The complete wiper kit is shown below.



PART ONE: INSTALLING AND WIRING MOTOR AND PIVOTS

Drill and cut the holes as shown in the illustration on page 2; assemble the motor to the bracket,using the 1/4=28 x 1/2" bolts provided, as shown in Figur e1. Attach the main drive arm

FIGURE 1

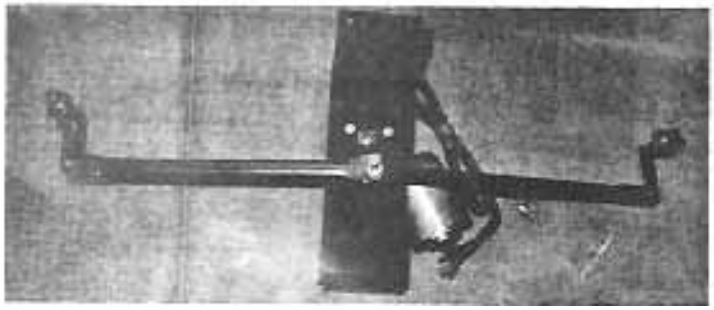
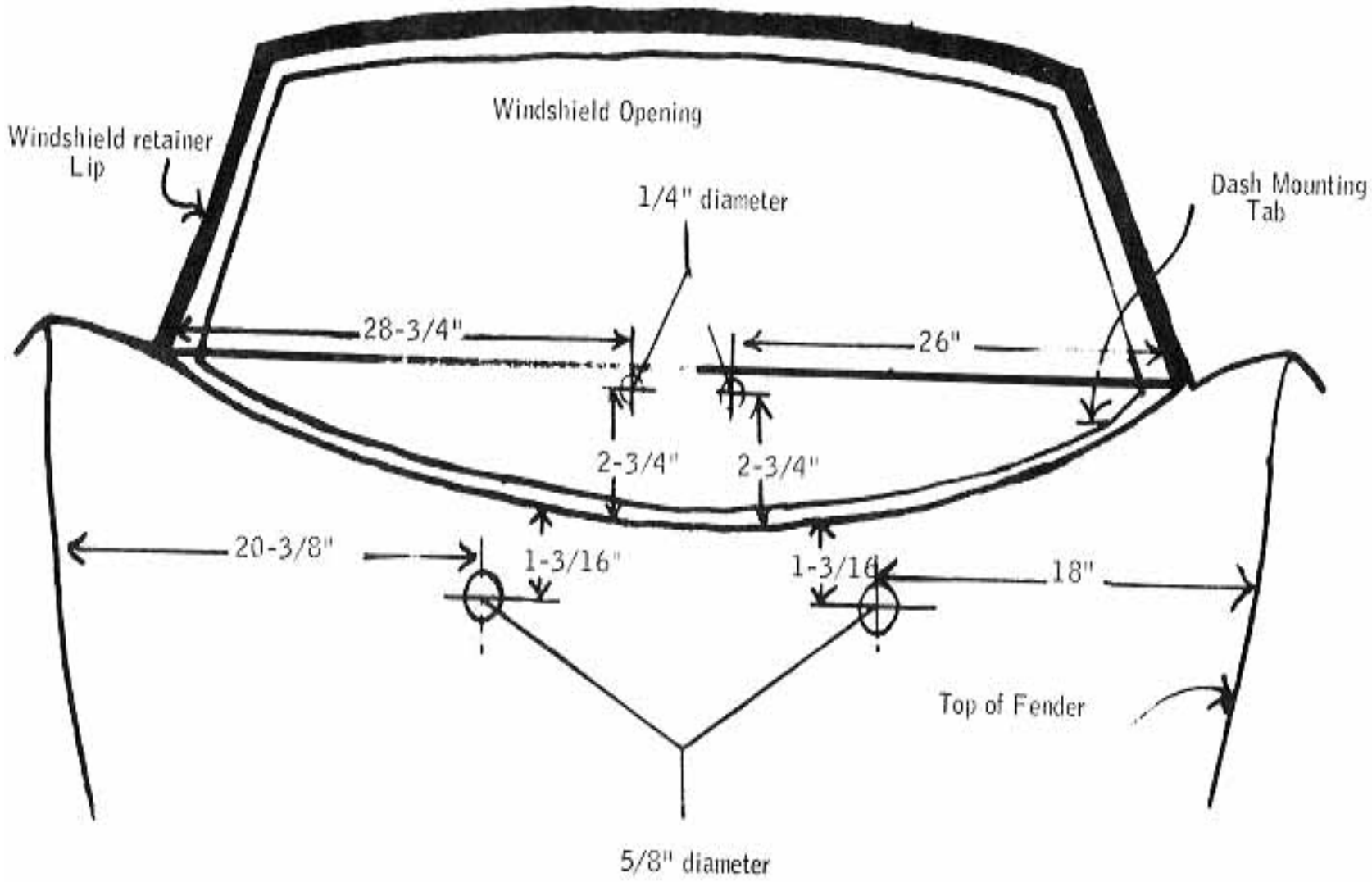


FIGURE 2

as shownin Figure 1 and install the assembly in the dash mounting tab, using only the two 1/4" mounting holes already driled. Be sure to use two wide area washers on the top side, where bolt head will tighten against the dash.

The wiper arm pivots are installed as follows: Place the leather gasket over the top of the pivot and let it slide down against the retaining lip; insert the pivot through the 5/8" hole previously drilled in the body; place a spacer over the pivot and install nut-- DO NOT PLACE


Windshield Opening
Windshield retainer Lip
1/4" diameter
Dash Mounting Tab
28-3/4"
26"
2-3/4"
2-3/4"
20-3/8"
1-3/16"
1-3/16"
18"
Top of Fender
5/8" diameter

UNNECESSARY STRESS ON THE NUTS, as this will result in future cracking of the fiberglass. Repeat this procedure for the other wiper arm pivot.

Before bolting the lower part of the bracket through the forward bulkhead, measure from the center of the motor drive shaft to the center of each pivot shaft; the motor shaft must be exactly centered between the pivot shafts. Afte rcentering the motor drive shaft, drill two 1/4" holes in the forward bulkhead

corresponding to the lower mounting bracket holes; use the holes in the bracke tas guides for the drill. Install the mounting bolts, again being sure to use

wide area washers against the fiberglass.

Install the drive links as shows in Figure 2 and secure with the washers and clips provided, completing mechanical installation to this point before installing the windshiled in your car.

Wire the motor as follows: Run direct power from an unswitched power source to the black lead on the motor. This is the automatic homing power. The red le adfrom the motor is Slow Speed Power, and the green lead is Fast Speed Power.

The fast speed power will be a direct lead from the wiper switch; likewise the slow speed power will be a direct lead from the switch, however, fast speed i s achieved by putting power to both red and green leads at the same time; henc e, a switch activating two terminals at once in one position and one terminal in
another position is needed (three-position switch), unless only one speed is desired.

PART TWO: INSTALLING ARMS AND BLADES

After the windshield is instaled in the car, fit the blades over the pivots. Turn the motor on and off once; the motor will automatically home the blades, but not necessarily in the correct area of the windshield. To adjust the home ,turn the white knob on the bottom of the motor with a 3/8" box end wrench.

CAUTION- Do not turn the white knob any more that a total of 3/4 of a turn. I fthe blades home in a straight up or nearly straight up position, remove the motor drive arm and rotate it 180 degrees. This will cause the blades to ome in the down postion or very nearly so. Final adjustment may then be made with the white knob.

DEFOGGER KIT INSTALLATION INSTRUCTIONS

The Defogger Kit should be installed after the dashboard is installed--but before the windshield and dashboard padding, if any, are permanently placed.

Before you start mounting the Defogger Kit check the enclosed parts. If, by chance, a part is missing notify Fiberfab and a new part wil be sent to you.

Parts List:

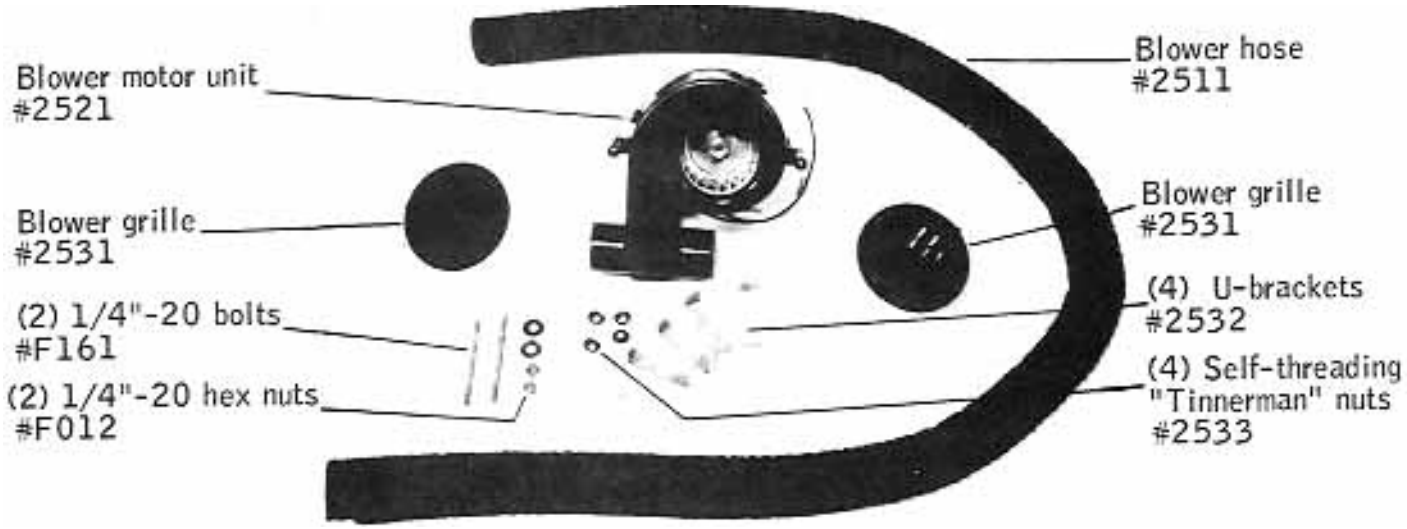


Photo A

After checking the parts list, Fiberfab suggests you assemble the necessary tools required for the installation of the Defogger Kit.

Tools needed:

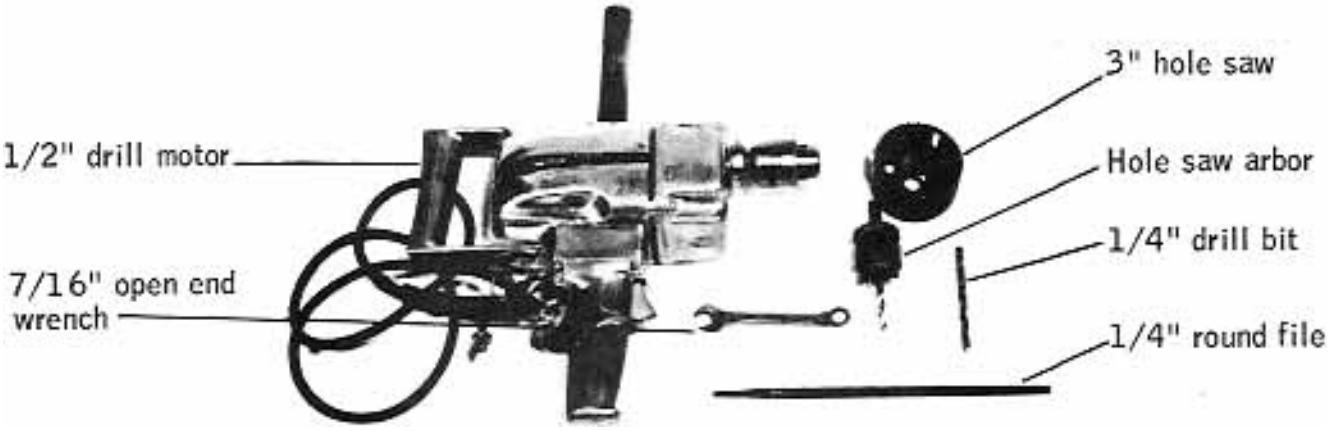


Photo B

Also needed: A small amount of clear or black marine sealant or GE silicone sealer.

DEFOGGER KIT INSTALLATION INSTRUCTIONS

Instalation of Defogger Kit

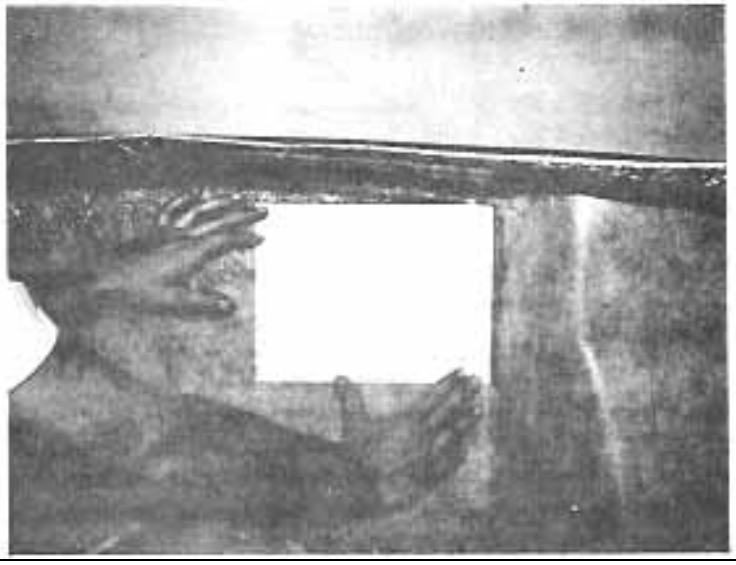
Start by placing the template provided in the upper right corner of the forwar d bulkhead (firewall in front engine bodies) as shown in Photo C. Tape or glu e template to bulkhead in proper position and using the 3" hole saw through te mplate where blower motor is marked. File a small notch as shown on templates ing the 1/4" drill bit drill through the template where 1/4" mounting holes ar e marked. Remove template.

To mount blower motor unit place the motor through the 3" hole in bulkhead. B e certain the two wires (one wire is to be connected to the chassis ground sys tem and the other to a source of switched - 12V) remain on the cockpit side of the bulkhead-- the filed notch is where they return throught the bulkhead int o the cockpit area. See Figure 1 on page 3. Secure unit with 1/4"-20 hardwar e. Put sealant around motor as it projects into the gas tank area -- do not p ut sealant around motor in cockpit area.

To install blower grilles-- locate grille duct outlets on the top of the dash- board as shown in Figure 2 on Page 3. Draw a line straight across dash betwee nthe lower, outside corners of the windshield opening (Ⓐ in Figure 2). Measure 16-1/4" from each corner Ⓐ and draw a line (Ⓑ in Figure 2). Then measure 1" from line Ⓐ toward hood and draw a line (Ⓒ in Figure 2) that will intersect line Ⓑ.

The point where Ⓑ and Ⓒ intersect is the center of the grille hole. Drill 3" hole with the hole saw for each grille duct. If padded dash is to be instaled ,drill holes before installing padded dash, but inset the grilles after installing the padded dash. Uuse a razor blade and cut a 2-1/2" + in the padded dash in the center of the 3" grille hole). Insert grille duct into holes in dash. Place U-brackets over plastic studs then use the self-threadin gTinnerman nuts to secure. See Figure 3 on Page 3.

Measure and cut the proper length of blower hose needed to get from mototr uni tto each grille duct. To attach hose just slide hose over nozzles of the blow erand grille-- no clamps are necessary to hold hoses in place.



Location for template marking mounting holes for blower motor unit.

Note: Pictured from inside of car, passenger side of cockpit, before dashboard is mounted.

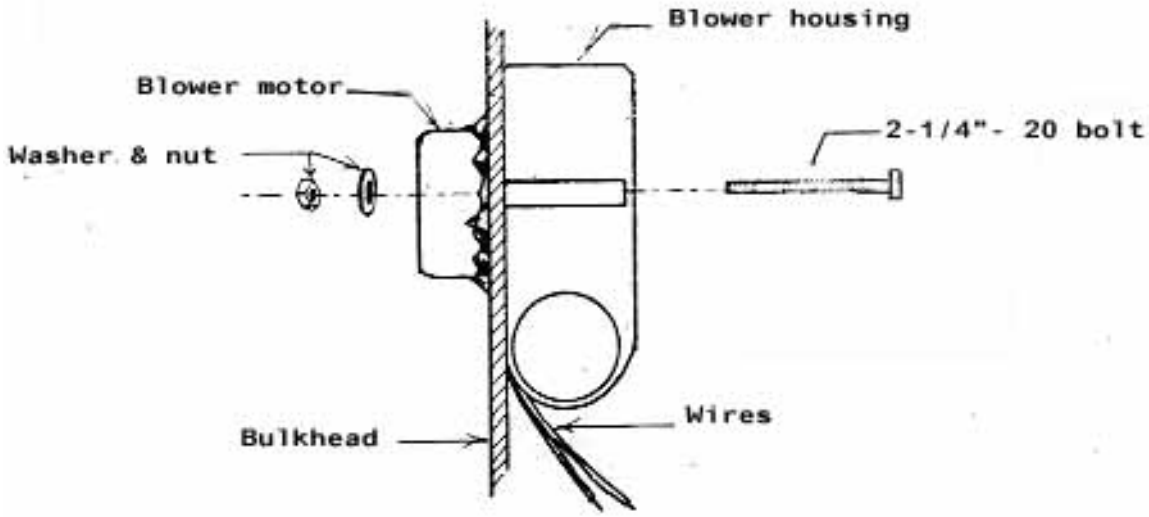


Figure 1.

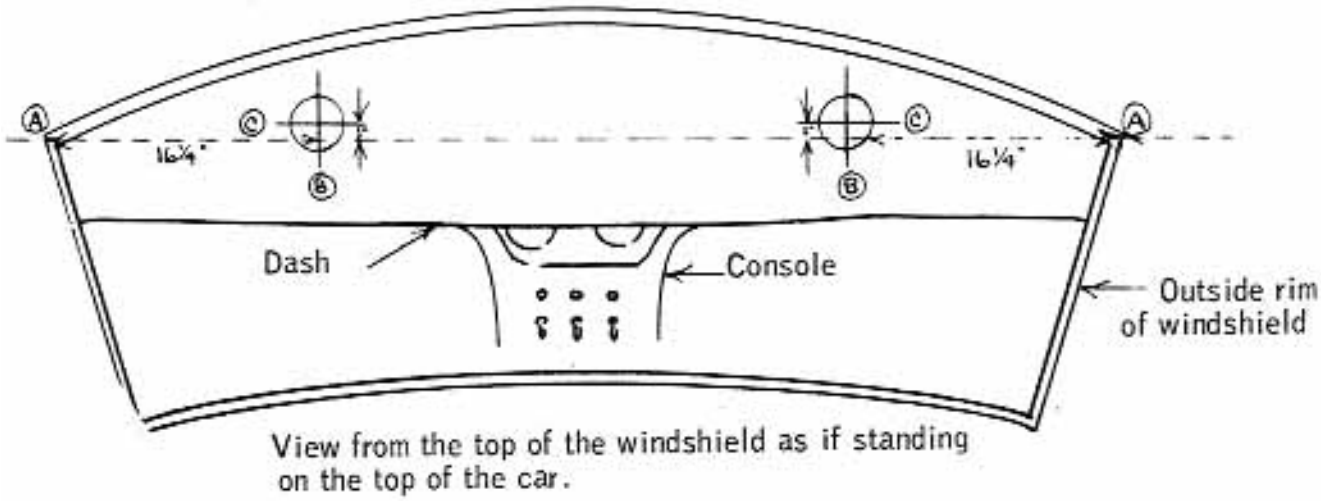
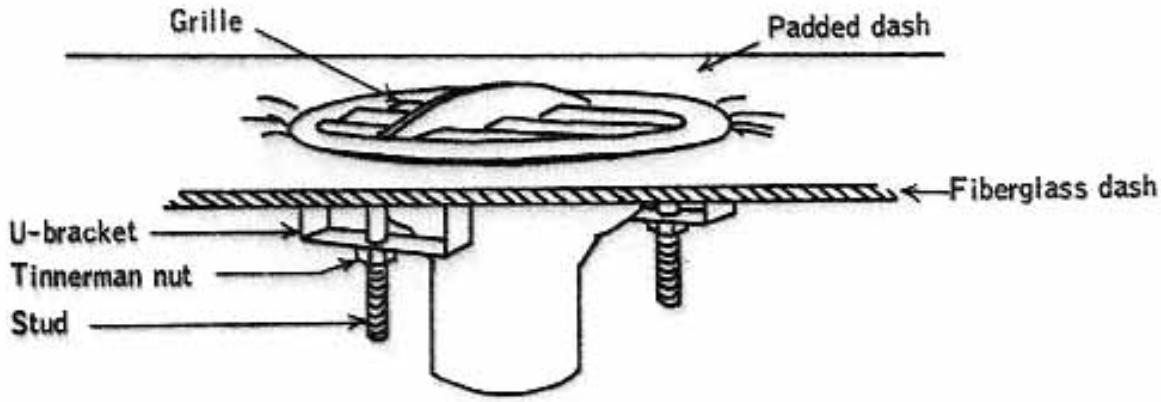
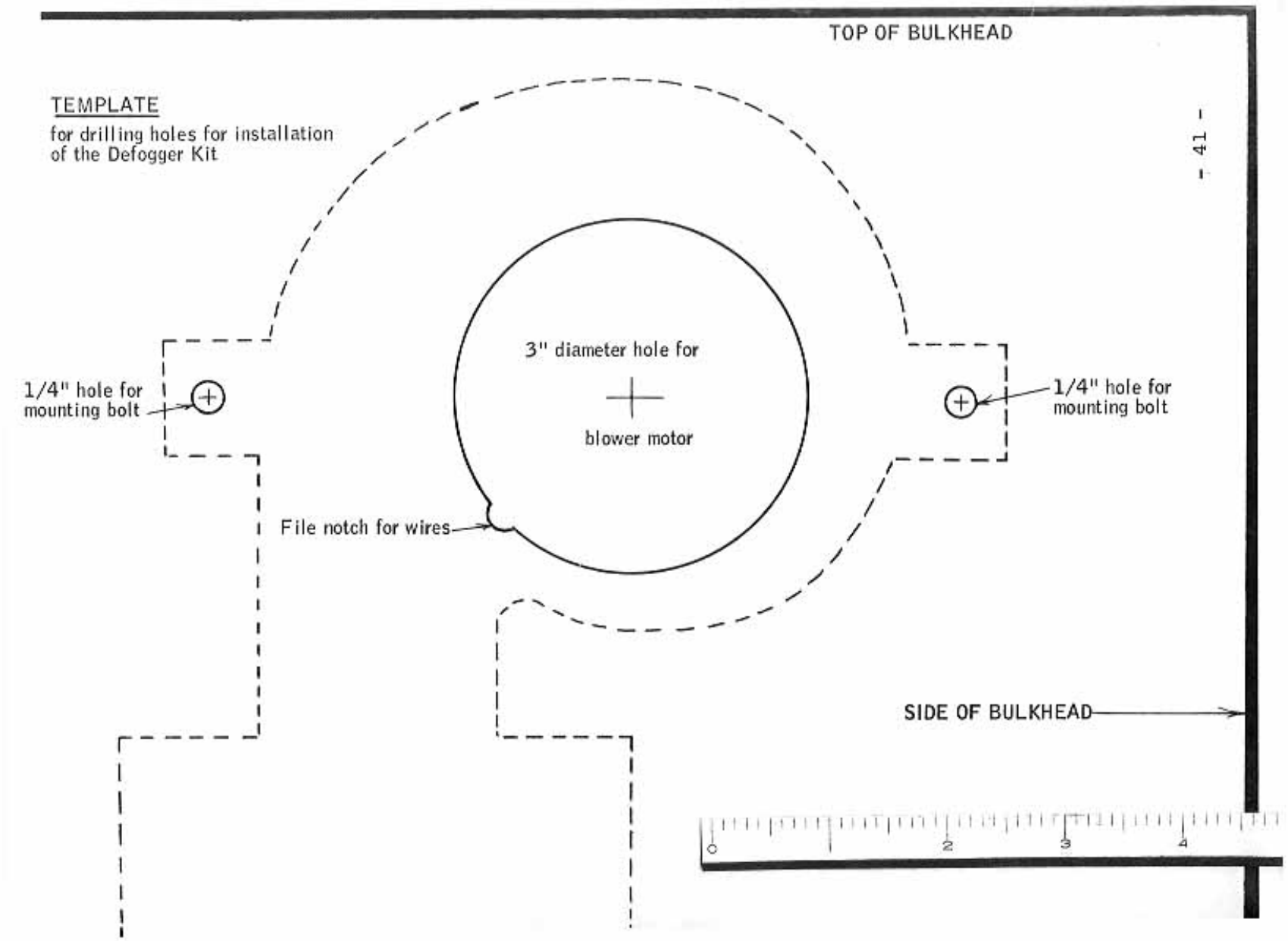

A
C
B
16¼"
16¼"
Dash
Console
Outside rim
of windshield
View from the top of the windshield as if standing
on the top of the car.

Figure 2.


Grille
Padded dash
Fiberglass dash
U-bracket
Tinnerman nut
Stud


TOP OF BULKHEAD
TEMPLATE
for drilling holes for installation
of the Defogger Kit
3" diameter hole for
blower motor
1/4" hole for
mounting bolt
1/4" hole for
mounting bolt
File notch for wires
SIDE OF BULKHEAD
0
2
3
4

UPHOLSTERY - INTERIOR FINISHING

The upholstering of your GT is purely a matter of personal taste. You can be as austere or as elaborate as you desire, purely functional for the "road machine" buff or posh for the grand touring enthusiast.

At the factory, we use the GT upholstery kit available from Fiberfab (as an accossory kit, at extra cost). Fiberfab's upholstery kit consists of automotiv egrade carpets, cut to fit and bound. It also includes the headliner, vinyl do orpanels, seat covers, trim screws and a quart of adhesive.

If you have access to a commercial, heavy-duty machine you can make your own carpeting and interior trim.

The materials required are:
6 yards vinyl - - 12 yards carpeting (36" wide) - - jute padding, carpet binding, adhesive and trim screws.

Use heavy paper to make patterns of the interior surfaces of the car. Transfer this pattern to the carpet (making sure it is not upside-down) and cut. Sew o n binding. The same "pattern" technique is used to develop door panels, constructed of vinyl sewn to panel-board. A customizing effect can be gained b ysandwhiching up to 1" foam rubber sheet between the vinyl and panel-board and then stitching a design in the vinyl.

Before installing the carpets, headliner, etc., rough-up the fiberglass surface sto be covered with any coarse sand paper. After sanding, wipe the surface wit h lacquer thinner or acetone.

When surfaces are prepared, coat them thickly with adhesive-also coat the back side of the carpet, etc. When the adhesive is tacky, install the carpet. Door panels may be glued in place, or attached with trim screws.

Other items to be considered for interior finishing include ashtrays mounted in the console, interior lights mounted behind the window openings, etc.

LET YOUR IMAGINATION BE YOUR GUIDE!!!!

INSTALLING WINDSHIELD AND READ GLASS

The GT body is designed to use the Corvair ('65 or newer) standard windshield and surrounding chrome trim. The windshield is supplied as part of the "Deluxe "kit. The chrome trim is available from your local Chevrolet dealer, if you wi shto use it on your GT.

The windshiled is installed using the "butyl tape and silicone sealant" available from local auto glass installers.

The opening is 1" smaller (all the way around) than the glass itself. In other words, the glass has a 1" lip to retain it in place. A block of wood (2"x6") with a hole drilled 1" from one end, may be used as a tool to mark cuting line inside windshield opening (retaianing lip).

If chrome trim is to be used, (12) retaining clips should be secured in place around the edge of the window opening before the glass is installed (before headliner, also), see sequence, page 1. Clip may be held in place with small pop rivets.

The windshield "butyl tape" has the appearance of a 5/16" diameter rope formed of a tar-like substance. It is now laid around the lip of the windshield openin g(be sure it is clean). Then, the windshield is pressed firmly into the openin g,compressing the "tape" in the process. The silicone rubber sealant is squeez ed in the gap around the glass, on the retaining clips and the chrome trim is immediatly installed by pressing into the clips and sealant. Remove the excess sealant as soon as possible before it commences to set.
DO NOT DISTURB FOR AT LEAST EIGHT HOURS.

The rear window opening of the GT is designed to accept the Ford Mustang Fastback ('65-'66) rear glass (also included in "Deluxe" kit). It is installed in the same manner as the front glass, however, the "butyl tape" should be 3/8 ".

SPECIAL NOTE ON CLIPS: Moulding retaining clips for moulding on the windshield should be installed flush with the body; the clips for the rear should be below the level of the body, 1/8" - 1/4".

REAR WINDOW NOT USED IN THE VALKYRIE GT-X MODEL. See louvered panel in rear of manual.

EXTERIOR FINISH OF YOUR GT

The most important item in the area of exterior finish is the painting. The first impression others will have of your car is dependent on the quality of the painting.

Fortunately, it is possible to achieve a beautiful exterior finish using only a spray gun, no elaborate bake-ovens, etc. are required. Fiberglass is very compatible with acrylic lacquers.
Lacquers, also, are the easiest and most trouble-free finishes to apply. They can be applied in a slightly dusty environment, later the dust and any spraying imperfections can be subsequently rubbed out. Just follow the instructions which accompany the lacquer - spray where there's plent of ventilation and don't attemp spraying on cold and/or damp days.

About body surface preparation - most fiberglass bodies have slight imperfections such as pin holes or marks made by mold parting lines. Often a few scratches will be added during shipment. Body putty (eg. Bond-O) and fine sand paper should take care of any body surface imperfections you might encounter.

We are proud of the surface finish of our bodies, we use special care in preparing mold surfaces and special materials around body edges to minimize chipping. One of our own Avengers, which has travelled over 50,000 miles in all types of weather and over all types of roads, does not have one body crack. It still retains its original paint, too.

Your GT body will have a color when you recieve it. This is not the finished color, It is special gel-coat finish, used to give the body the best possible surface.

Before you paint your GT, the entire body should be sanded with #400 sandpaper (wet). The sanding is done in order to "scuff up" the surface which is other wise too slick to allow the paint to properly adhere. Remember to sand lightly - you are scuffing the surface, not re-styling the body.

Following the sanding, the body should be washed with PREPSOL, (or any equivalent surface-preparation agent) and wiped dry or wiped with a specially-treated cloth such as a TACK-RAG in order to eliminate any lingering dust, oil or dirt (be expecially careful to remove oils from fingerprints which, even though unseen, can produce (fisheyes) in the finish).

Now all chrome trim, headlights, window glass, etc. should be masked with tape; for large surfaces, use paper, held in place with tape. When the masking is complete the body is ready for the application of primer and paint.

CUTTING OPEN LOUVERED GT REAR PANEL, INSTALLATION OF SAME

Cutting the slats open in three sections, is suggested, thus leaving two vertical supports.

Leave 1/4" lip on the vertical portion of each louver, both at top and bottom.

See illustrations below:

To secure: Use any hood pin kit, eg. Eelco, Mr. Gasket.

Note: Louvers are supplied with the Valkyrie GT-X deluxe kit and used in place of the rear glass, for engine access.

The louvers may be used as an accessory on all of the GT models. The louvers overlay the body and will not interfere with the rear glass on trim moulding.

It will act as an excellent sun shade for the rear glass.