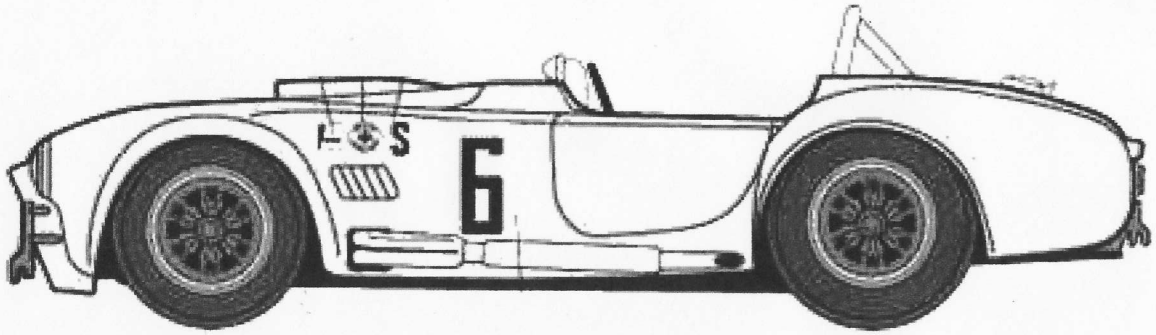
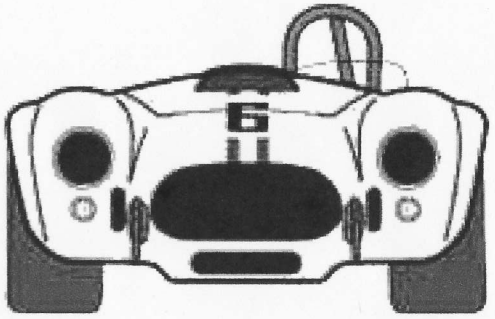
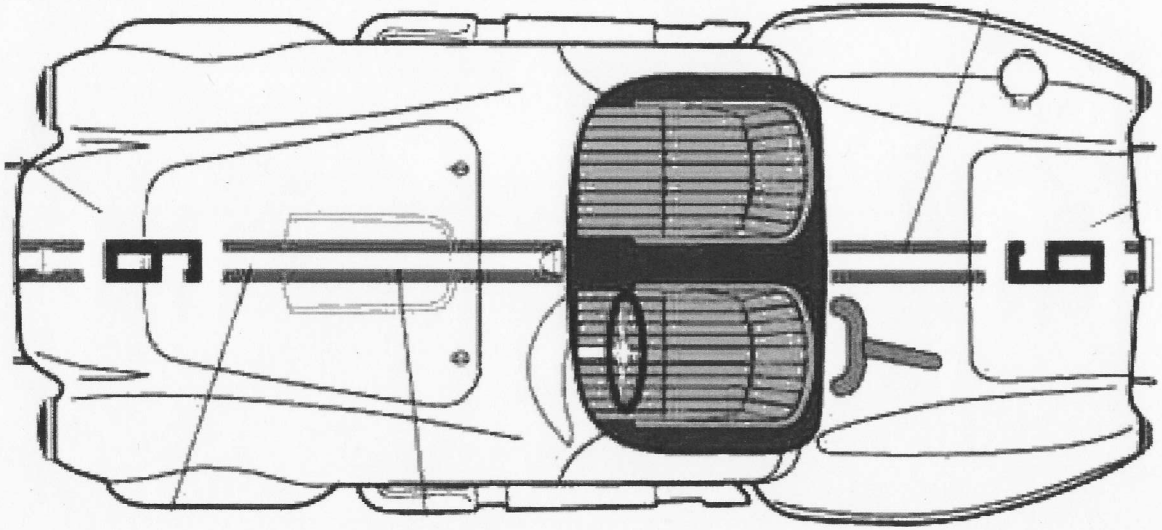
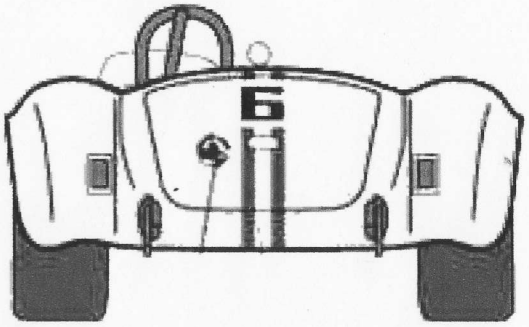
Fiberfab Cobra Owners Manual
Assembly & Parts Reference









CHAPTER I INTRODUCTION - PARTS, TOOLS, AND SPECIFICATIONS

BEFORE STARTING

Thank you for choosing this quality product. We recommend that you read your Assembly Manual thoroughly before starting work. If you need any additional information, please call one of our technical representatives.

Rehearse the installation procedures before you do them so that you have a clear idea of what must be done at each step.

Have all the tools you need before you start.

Be sure your work space is large enough.

When obtaining used components, be sure that you save all related attachment parts and wiring connectors. If you try to buy all of these pieces separately, they may cost a lot more or may not be obtainable.

Have masking tape ready to label parts, attaching hardware, wires, fuel lines, clips, etc. It would al be a good idea to have a variety of small containers to hold small loose items such as nuts, bolts, and washers.

Keep records and receipts. You will need these when you register your completed car. Call your state Department of Motor Vehicles and find out what their requirements are. We supply a manufacturer's state of origin (MSO) with each assembly kit.

Important information that you'll need to know is presented as follows:

WARNING

Describes procedure during which damage to vehicle may result.

CAUTION

Describes procedure during which care must be taken to avoid injury.

NOTE

Describes procedure which requires additional knowledge or help or alerts you to the possibility of using alternate parts.

CHECK

Describes procedure which should be followed by an inspection. Check completed part for fit and operation before going on to the next step.

CONSIDERATIONS WHEN BUYING YOUR COMPONENT PARTS

Ford utilized a variety of gear ratios in their rear axles and while all of them will work, it is strongly recommend to use a rear axle that came from a car with a V8 engine.

Some late 1970's and early '80's Ford senior series cars used the same rear axle arrangement, which may be used. Axle widths vary from application to application, so before purchasing your rear axle, measure from hub to hub as shown in **Figure 1-1.** It should measure 59 1/2 inches for late model Mustangs or 601/2 inches for late model "T" Birds or Cougars.

The kit is designed to utilize a small block Ford V8. This type is among the most popular engines produces by the automobile industry and are still being manufactured at present. Cubic inch displacement varies.

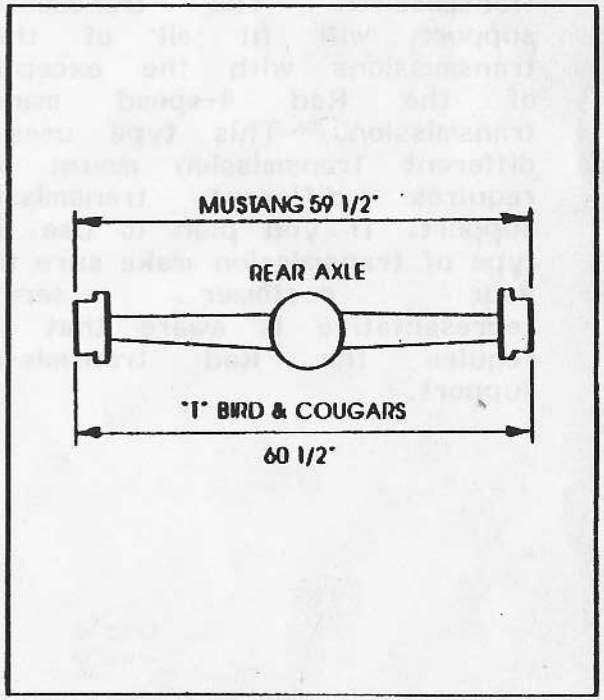


Figure 1-1

You can use any of the following five types of transmissions. For manual transmissions you may use the Ford Rad 4-speed which was used in the Mustang II from 1974 to 1979, or the Ford T-5 5-speed transmission, currently used in Mustangs. Both can be bolted to the small block Ford engine providing the appropriate bell housing and flywheel are used. Three types of automatic transmissions may be used, a C-4, a C-6 or an automatic overdrive transmission. The transmission support will fit all of these transmissions with the exception of the Rad 4-speed manual transmission. This type uses a different transmission mount and requires different transmission support. If you plan to use this type of transmission make sure that your customer service representative is aware that you require the Rad transmission support.

MECHANICAL COMPONENTS CHECK LIST

COMPONENT	REFERENCE CHAPTER/SECTION	
☐ Front Suspension	2	A
☐ Manual Rack & Pinion	2	A
☐ Power Rack & Pinion	2	A
☐ Front Springs	2	A
☐ Front Shocks	2	A
☐ Rear Axle & Suspension	2	B
☐ Rear Shocks	2	B
☐ Rear Springs	2	B
☐ Quad Shock	2	B
☐ Engine	2	C
☐ Transmission	2	C
☐ Emergency Brake Handle	2	D
☐ Fuel Lines	2	E
☐ Fuel Line Clamp	2	E
☐ Fuel Filter	2	E
☐ Shifters	2	F
☐ Pedal Cluster	2	F
☐ Clutch Cable	2	F
☐ Master Cylinder	2	G
☐ Brake Proportioning Valve	2	G
☐ Steering Column	2	H
☐ Gas Pedal	2	H
☐ Accelerator Cable	2	H
☐ Automatic Kick-down Linkage	2	H
☐ Radiator	2	I
☐ Radiator Hoses	2	I
☐ Electric Fan	2	J
☐ Brake Light Switch	2	J
☐ Driveshaft	2	K
☐ Wiper Assembly	3	E
☐ Speedometer Cable	3	F
☐ Horns	4	A
☐ Seat Belts	4	D
☐ Exhaust Headers	4	E
☐ Side Pipes	4	E
☐ Tires, Front	5	A
☐ Tires, Rear	5	A
☐ Wheel	5	A

COMPONENTS CHECK LIST

IMPORTANT: Components are listed in order of installation. Be sure to have on hand all parts necessary for the task before you begin each section.

WHERE TO FIND YOUR COMPONENT PARTS

Performance Publications, Local Newspaper Classified Advertisement, Automobile Salvage Yards and Dealerships, Neighborhood flyers/ Newspapers and Auto Resale Magazines.

Tell your friends and fellow workers about your project, they may be of help.

The quickest way to find most of the component parts required to build your Replica is to purchase a 1974 through 1978 Mustang II with a small block Ford engine and 4-speed transmission already in it.

If you plan to use this method, inspect every part required thoroughly before purchasing a donor vehicle. This will insure that you do not have to replace worn or damaged parts later on during assembly.

You may not have some of the tools needed to build the Classic Cobra. They can be rented or borrowed. Tell your friends and fellow workers about your car project; they may be of help. If you encounter difficulties acquiring a specific tool, contact a technical representative for recommendations.

Make sure your tools are in good shape. The Classic Cobra is a state of the art replica. The job you do is only as good as the tools you use.

CONSUMABLE CHECK LIST	QUANTITY
☐ Flat black spray paint	6 cans
☐ Glossy black spray paint	3 cans
☐ Rust retardent spray paint	4 cans
☐ 3M spray 90 high strength adhesive	6 cans
☐ Mineral spirits	1 gallon
☐ Acetone	1 gallon
☐ Penetrating oil	1 can
☐ China markers (black & white)	6 (3 each)
☐ 2" brush (throw-away bristle type)	2 each
☐ 1 1/2 oz. fiberglass mat	5 sq. yards
☐ Polyester fiberglass resin and hardener	1 gallon
☐ 3M Window-weld primer Pt#051135-08644	1 pint
☐ 3M Super weather strip adhesive Pt#051135-08008	1 tube
☐ Sandpaper, 60 grit	10 sheets
☐ Sandpaper, 80 grit	10 sheets
☐ Sandpaper, 220 grit	4 sheets
☐ Sandpaper, 400 grit	4 sheets
☐ Sandpaper 600 grit	4 sheets
☐ Plastic filler and hardener	2 quarts
☐ 3M Fine line tape Pt #06301	1 roll
☐ 3/4 inch masking tape	3 rolls
☐ 2 inch masking tape	2 rolls
☐ Paint mixer stick (wooden)	6
☐ Super glue (gel type)	2 tubes
☐ Solder, electronic	1 roll
☐ Heatshrink (shrinks to 16GA wire)	5 feet
☐ Hog rings	80
☐ 3/16 and 1/8 pop rivets	

WORKING SPACE

You need a working space approximately the size of a two-car garage. The assembled chassis measures aproximately 150 inches by 44 inches wide. The fiberglass body occupies approximately the

TOOL CHECK LIST	DETAIL
☐ Spring compressor	May be rented
☐ Hydraulic floor jack (rolling type)	May be rented
☐ Hydraulic engine hoist	May be rented
☐ 4 sturdy jack stands	
☐ Ball joint tool	May be rented
☐ Electric drill	Must be able to use up to 1/2" bit
☐ Sabre saw & fine tooth blade	
☐ "C" clamps	Assorted sizes
☐ Set of drill bits	1/8"-1/2" diameter
☐ Flat, round, and rat tail files	
☐ Vise grips	
☐ Hole saw set	7/8, 1, 1 1/2, 2 1/8, 2 1/2, 3 1/4
☐ Metric wrench set	7mm to 21mm
☐ Standard wrench set	1/4" to 1"
☐ Metric socket set	7mm to 21mm
☐ Standard socket set	1/4" to 15/16"
☐ 1 1/16 socket	
☐ Torque wrench	Foot pounds
☐ Tape measure	
☐ Utility knife	
☐ Scissors	
☐ Hog ring pliers	
☐ Wire brush	
☐ Rotary wire brush	
☐ Hacksaw & fine tooth blades	
☐ Hammer	
☐ Screwdriver, common & Phillips	
☐ Allen wrench set	
☐ Putty knife	
☐ Pliers	
☐ Pop rivet gun	1/8 & 3/16 rivets
☐ Cold chisel	
☐ Center punch	
☐ Caulking gun	
☐ Tubing bender	
☐ 1/4-20 tap	
☐ 1/4-20 die	
☐ Solder iron or gun	
☐ Wire strippers	
☐ Crimping tool	

same space. During initial construction you will need room for both the chassis and the body until both are finished. Once the fiberglass body is mated to the chasis, only half the original space is required.

Be sure to allow sufficient space for walking, storage of parts, and access to the car.

UNPACKING

Your Classic Cobra assembly is shipped in one or more crates and a number of cardboard cartons. The total number of items in the shipment is indicated on the shipping documents. Since you may have ordered options, the number of items in your shipment may differ from other customers. Be sure to sign the bill of lading noting any observable damages and any missing crates or cartons.

Carefully check each container for evidence of damage to container or contents. If you find damage, immediately call the shipper's local office and follow shipper's instructions for submitting a claim.

Become familiar with the parts. Save your packing lists. Tag parts as they are identified and mark the back side of fiberglass components with a grease pencil. This will enable you to locate parts quickly.

HARDWARE AND FASTENERS

WARNING: Check factory service manual for torque specifications when reassembling removed hardware. There are some bolts that the manufacturer suggests should not be used after removal.

Structural bolts and nuts should only be replaced with equivalent parts. Replacement parts must be of equal or better strength as indicated by standard bolt and nut markings (radial lines on bolt head, raised dots on nuts.)

Special chrome hardware is supplied with the deluxe kit. However, ordinary fasteners are not supplied since they can be obtained from hardware or automotive supply houses. For your convenience an optional nut and bolt package is available. (See Chapter 5 for nomenclature.)

USE OF FIBERGLASS

The mixture of fiberglass resin and hardener, or of auto body filler and hardener, varies with different brands. Follow the manufacturer's instructions completely to prevent any damage to the body during use.

FOLLOW THESE DO'S AND DON'TS

DO'S

Do keep a fire extinguisher in your work area.

Do keep a first aid kit in your work area.

Do disconnect the battery (negative) cable whenever working on electrical system.

Do use the proper tools.

Do clean and maintain your tools. Clean your work area often.

Do use approved containers for gasoline and flammable liquids. Put away and out of reach of children, when not in use.

Do wear safety glasses or goggles when grinding, drilling, sanding, painting glassing, or when handling the battery.

Do read all instructions thoroughly.

Do pay attention to warning labels.

Do use adequate ventilation when using chemicals, spraying paint, or fiberglassing. Wear a mask over mouth and nose when necessary.

Do use electrical extension cords of proper gauge and with proper plugs in good condition.

Do wear proper clothing and shoes. Remove ties, jewelry, and other items that can get caught in moving components.

Do use jack stands to support vehicles. Only use a floor jack or hydraulic engine hoist for lifting.

DON'TS

Don't smoke when working around gasoline or other flammable chemicals.

Don't use open flame heaters around gasoline or when using flammable chemicals.

Don't smoke when working around the battery.

Don't run engine in a garage without proper ventilation.

Don't leave tools where someone can trip over them.

CAUTION: USE COMMON SENSE

Develop safe work habits. Take every possible precaution. Clean up any spilled fluids to prevent slips or falls.

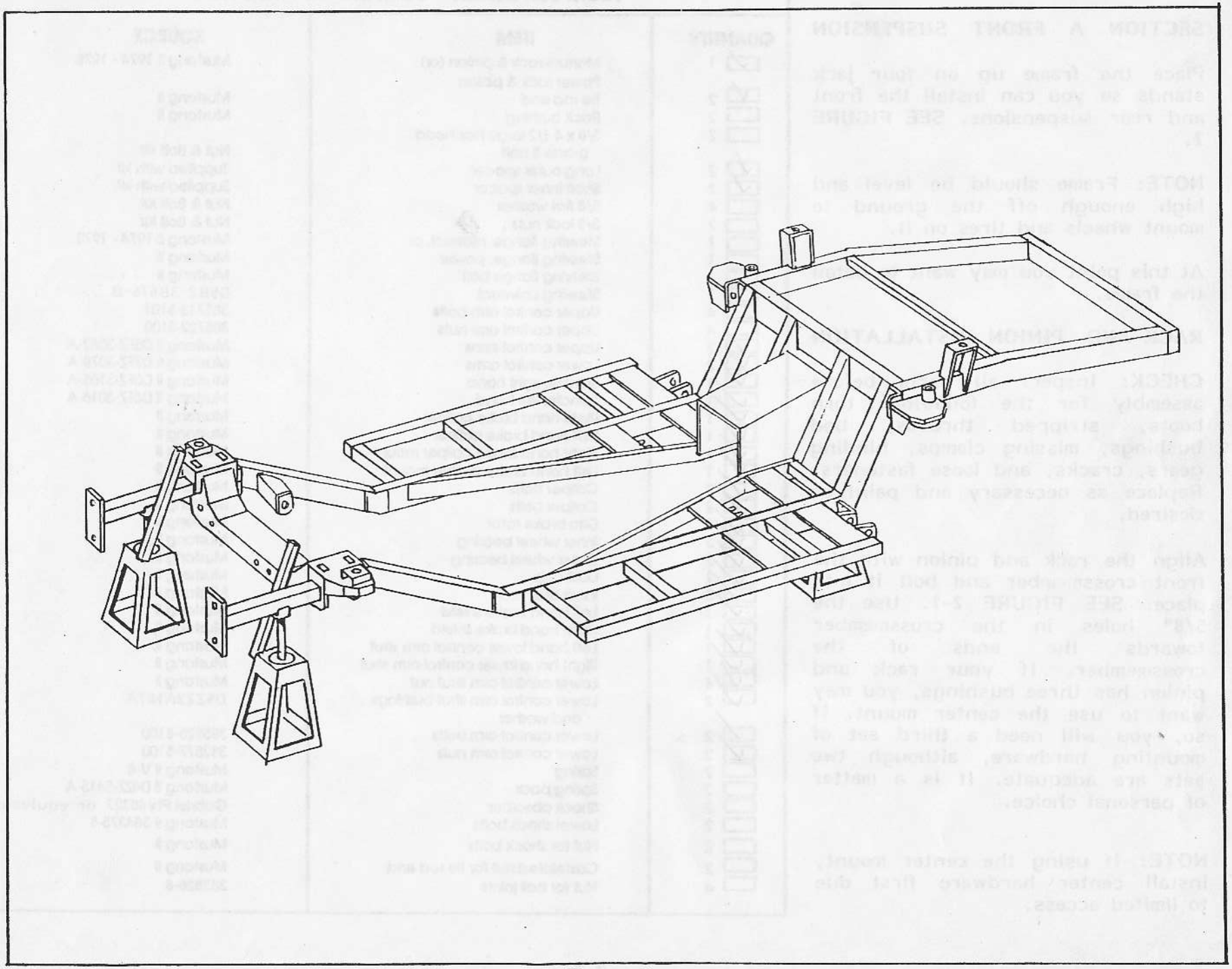


Figure 2

SECTION A FRONT SUSPENSION

Place the frame up on four jack stands so you can install the front and rear suspensions. **SEE FIGURE 2.**

NOTE: Frame should be level and high enough off the ground to mount wheels and tires on it.

At this point you may want to detail the frame.

RACK AND PINION INSTALLATION

CHECK: Inspect all parts before assembly for the following: torn boots, stripped threads, bad bushings, missing clamps, binding gears, cracks, and loose fasteners. Replace as necessary and paint as desired.

Align the rack and pinion with the front crossmember and bolt it into place. **SEE FIGURE 2-1.** Use the 5/8" holes in the crossmember towards the ends of the crossmember. If your rack and pinion has three bushings, you may want to use the center mount. If so, you will need a third set of mounting hardware, although two sets are adequate. It is a matter of personal choice.

NOTE: If using the center mount, install center hardware first due to limited access.

FRONT SUSPENSION - COMPONENTS CHECK LIST

QUANTITY	ITEM	SOURCE
☑ 1	Manual rack & pinion (or) Power rack & pinion	Mustang II 1974 - 1978
☑ 2	Tie rod end	Mustang II
☐ 2	Rack bushing	Mustang II
☐ 2	5/8 x 4 1/2 large hex head grade 8 bolt	Nut & Bolt Kit
☑ 2	Long outer spacer	Supplied with kit
☑ 2	Short inner spacer	Supplied with kit
☐ 4	5/8 flat washer	Nut & Bolt Kit
☐ 2	5/8 lock nuts	Nut & Bolt Kit
☐ 1	Steering flange, manual, or	Mustang II 1974 - 1978
☐ 1	Steering flange, power	Mustang II
☐ 1	Steering flange bolt	Mustang II
☐ 1	Steering universal	D9BZ-3B676-B
☐ 4	Upper control arm bolts	385713-S101
☐ 4	Upper control arm nuts	385732-S100
☑ 2	Upper control arms	Mustang II D5FZ-3082-A
☑ 2	Lower control arms	Mustang II D7FZ-3078-A
☑ 1	Spindle, right hand	Mustang II D5FZ-3105-A
☑ 1	Spindle, left hand	Mustang II D5FZ-3016-A
☑ 1	Right hand brake caliper	Mustang II
☑ 1	Left hand brake caliper	Mustang II
☑ 1	Right hand brake caliper mount	Mustang II
☑ 1	Left hand brake caliper mount	Mustang II
☑ 2	Caliper bolts	Mustang II
☑ 2	Caliper bolts	Mustang II
☑ 2	Disc brake rotor	Mustang II
☑ 2	Inner wheel bearing	Mustang II
☑ 2	Outer wheel bearing	Mustang II
☑ 2	Dust cap	Mustang II
☑ 2	Inner dust seal	Mustang II
☑ 1	Left hand brake shield	Mustang II
☑ 1	Right hand brake shield	Mustang II
☑ 1	Left hand lower control arm strut	Mustang II
☑ 1	Right hand lower control arm strut	Mustang II
☑ 4	Lower control arm strut nut	Mustang II
☑ 2	Lower control arm strut bushings and washer	D5ZZ3A187A
☑ 2	Lower control arm bolts	385925-S100
☑ 2	Lower control arm nuts	383577-S100
☐ 2	Spring	Mustang II V-8
☐ 2	Spring pads	Mustang II D4ZZ-5415-A
☐ 2	Shock absorber	Gabriel Pt#48327 or equivalent
☐ 2	Lower shock bolts	Mustang II 384375-S
☐ 2	Nut for shock bolts	Mustang II
☐ 2	Castelated nut for tie rod end	Mustang II
☐ 4	Nut for ball joints	382826-S

Insert the 5/8" bolts and washers through the front of the rack and pinion bushing. Slide the outer spacer onto the bolt on the back side of the bushing. The angled side of spacer faces the crossmember. Place bolts into crossmember holes. Slide inner spacer onto end of the bolt inside crossmember and install the flatwasher and lock nut at this time.

WARNING: Rack mount bolts must be torqued to Ford specifications. Consult a Mustang II service manual for appropriate torques.

Align the spacer as follows: the outer spacer has the small section up and the inner spacer has the large section up. **SEE FIGURE 2-1, DETAIL A.** Tighten nuts and torque to specification.

NOTE: Spacers may be tack welded to prevent them from shifting.

UPPER CONTROL ARM AND SPINDLE INSTALLATION

NOTE: This manual covers installation of parts as originally used on Ford Mustang II. Because of the popularity of this front end, there is a growing number of after-market parts, i.e.: larger disc brakes, tubular upper control arms. If you plan to go this route, use this manual as a basic guide and refer to the manufacturer's instructions for specifics.

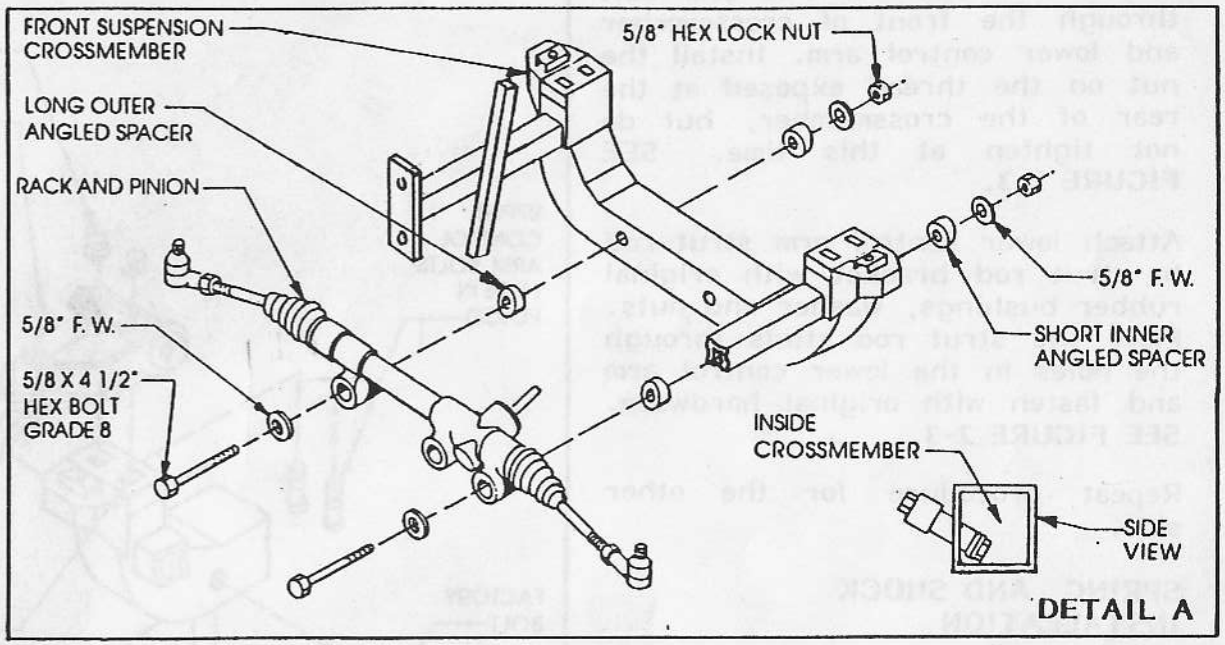


Figure 2-1

CHECK: Inspect upper control arms and spindles for the following: torn or damaged ball joint boots, missing grease fittings, damaged or worn bushings, bent or cracked parts. Clean and paint as necessary.

Insert the bolts into the slots in upper crossmember with the threads pointing up. You can use tape to hold the bolts in position while installing the upper control arm. Position the bolts so they fit the slot in the upper control arm and install the nuts. Position the control arm so that it is centered in the slots and tighten the nuts. Do not torque at this time. The nuts should be tightened enough to prevent the upper control arm from sliding in the slots. **SEE FIGURE 2-2.**

Attach the spindle, with the tie rod arm forward, to the upper control arm ball joint. Tighten the nut, but do not install the cotter pin at this time. Repeat this procedure for the other control arm and spindle. Remove the tape from the bolts at this time.

LOWER CONTROL ARM AND STRUT INSTALLATION

CHECK: Inspect the lower control arm and strut as already covered. Clean and paint as necessary.

WARNING: As with all suspension components, original factory bolts should be used. Care should be taken to prevent over torqueing the lower control arm bolt.

Insert the lower control arm bolt through the front of crossmember and lower control arm. Install the nut on the thread exposed at the rear of the crossmember, but do not tighten at this time. **SEE FIGURE 2-3.**

Attach lower control arm strut rod to strut rod bracket with original rubber bushings, washer and nuts. Place the strut rod studs through the holes in the lower control arm and fasten with original hardware. **SEE FIGURE 2-3.**

Repeat procedure for the other side.

SPRING AND SHOCK INSTALLATION

CAUTION: The springs should only be installed with the use of a spring compressor tool.

CHECK: The springs must be the same height with the same number of coils. The spring pads should not be torn or damaged. Ensure that the shocks have snubbers on them and that they are in good condition.

NOTE: NAPA replacement springs Part #277-3039 may be used instead of the stock Mustang II front springs.

Glue the spring pads on the underside of the upper crossmember. Using a spring compressor, install

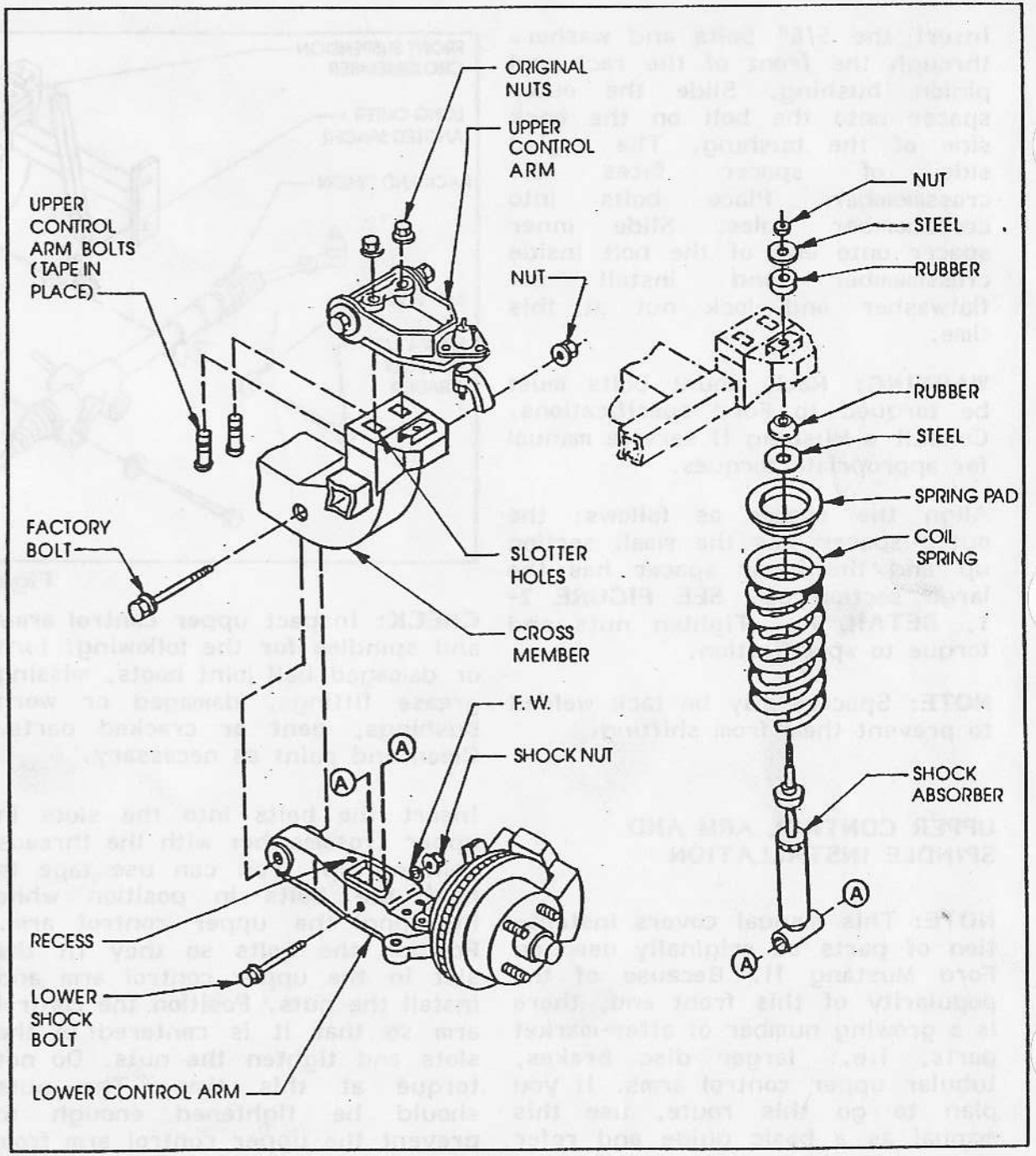


Figure 2-2

the spring into the upper crossmember. Raise the lower control arm and align spring with indentation on the lower control arm. Attach the lower control arm ball joint to spindle and tighten the nut. Remove the spring compressor.

NOTE: In the previous step a floor jack and additional help may be required.

Extend the shock to its full length. Install lower washer and bushing on the shock stud. Insert the shock through the bottom of the lower control arm and through the spring to the hole provided in the upper crossmember. Attach the upper bushing, washer and nut at this time. Leave the nut loose to allow the lower shock bolt to be installed.

Insert the lower shock bolt through the front of the lower control arm. A screw driver may be inserted in the rear of the lower control arm to assist in the installation of the bolt. Attach the nut and tighten the lower shock bolt. Tighten the upper shock nut at this time. Repeat for the other side.

NOTE: Tighten all nuts and bolts except upper control arm bolts to Ford torque specifications at this time.

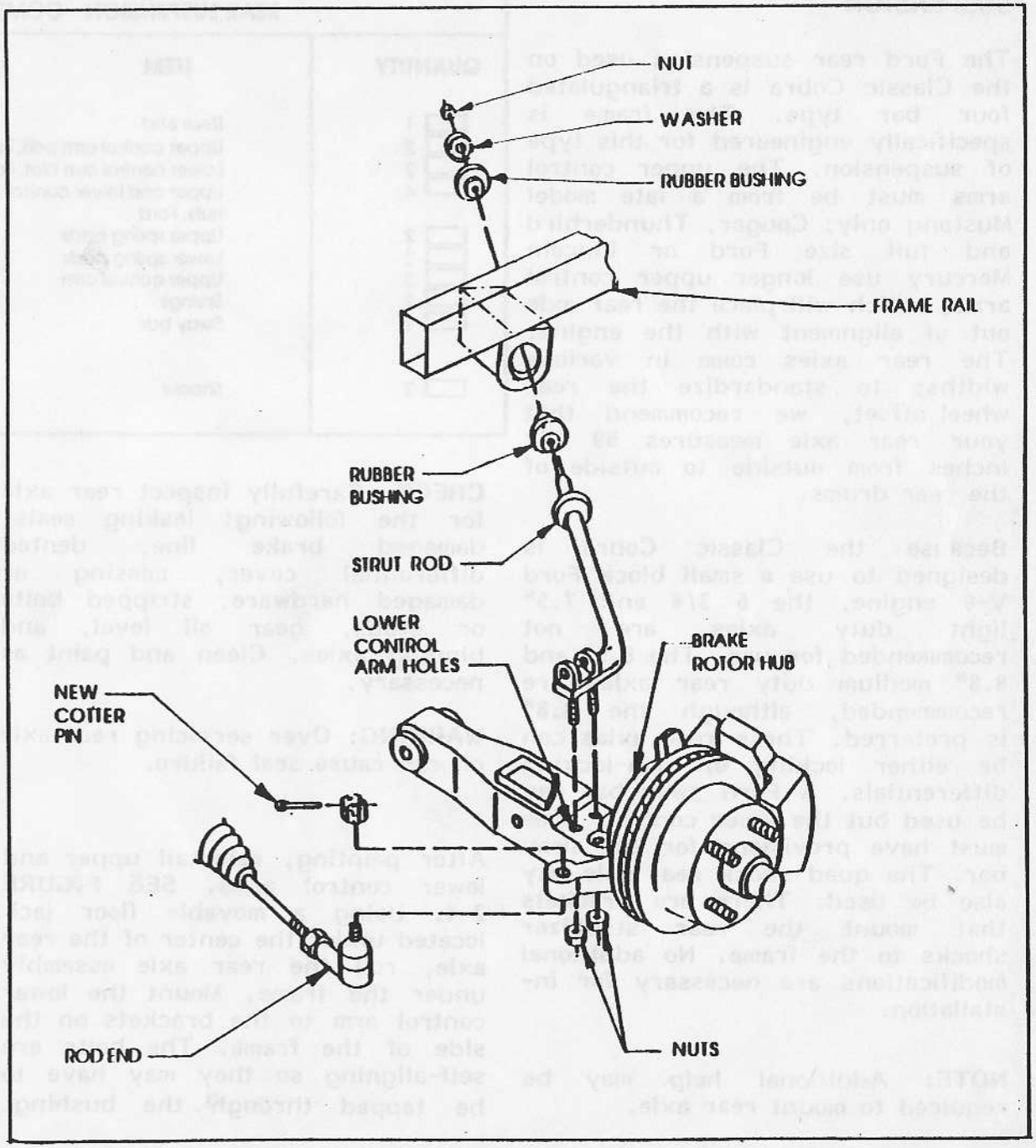


Figure 2-3

SECTION B REAR SUSPENSION

The Ford rear suspension used on the Classic Cobra is a triangulated four bar type. The frame is specifically engineered for this type of suspension. The upper control arms must be from a late model Mustang only; Cougar, Thunderbird and full size Ford or Lincoln Mercury use longer upper control arms, which will place the rear axle out of alignment with the engine. The rear axles come in various widths; to standardize the rear wheel offset, we recommend that your rear axle measures 59 1/2 inches from outside to outside of the rear drums.

Because the Classic Cobra is designed to use a small block Ford V-8 engine, the 6 3/4 and 7.5" light duty axles are not recommended for use. The 8.5" and 8.8" medium duty rear axles are recommended, although the 8.8" is preferred. These rear axles can be either locking or non-locking differentials. A Ford sway bar can be used but the lower controls arms must have provisions for the sway bar. The quad shock rear axle may also be used. There are brackets that mount the rear stabilizer shocks to the frame. No additional modifications are necessary for installation.

NOTE: Additional help may be required to mount rear axle.

REAR SUSPENSION - COMPONENTS CHECK LIST

QUANTITY	ITEM	DESCRIPTION
☐ 1	Rear end	Late model Ford (see text)
☐ 2	Upper control arm bolt, Ford	Pt #N-800933-S (AB-210-R)
☐ 2	Lower control arm blot, Ford	Pt #N-800933-S (AB-210-R)
☐ 4	Upper and lower control arm nuts, Ford	Pt #N-800937-S (AM 5-VO)
☐ 2	Upper spring pads	Mustang D9BZ5536A
☐ 2	Lower spring pads	Mustang D8BZ5536A
☐ 2	Upper control arm	Mustang D9BZ5500A
☐ 2	Springs	E7SC-5560-GA
☐ 1	Sway bar	Late model ford (must have correct lower control arm
☐ 2	Shocks	NAPA 2162 or equivalent

CHECK: Carefully inspect rear axle for the following: leaking seals, damaged brake line, dented differential cover, missing or damaged hardware, stripped bolts or studs, gear oil level, and binding axles. Clean and paint as necessary.

WARNING: Over servicing rear axle oil can cause seal failure.

After painting, reinstall upper and lower control arms. **SEE FIGURE 2-4.** Using a movable floor jack located under the center of the rear axle, roll the rear axle assembly under the frame. Mount the lower control arm to the brackets on the side of the frame. The bolts are self-aligning so they may have to be tapped through the bushing. After installing the bolts, check the exposed threads against the thickness of the nut, allowing for at least 1/4 inch of exposed threads when the bolt is in place. Shorten the bolt if necessary. Install the nut and tighten.

NOTE: For added security, you may want to tack weld the nuts to the bracket.

UPPER CONTROL ARM INSTALLATION

Loosen the upper control arm bolts on the rear axle. This will help you to line up the upper control arms. Raise or lower jack to assist in aligning the bushing. The bolts should be inserted so that the

threads point outward from the center line of the frame. Install the nuts , but leave them loose at this time. Lower the jack until the rear axle is ready to hang free.

SPRING AND SHOCK INSTALLATION

CAUTION: The springs should be installed with the aid of a spring compressor.

Glue large spring pad to upper spring mount on frame. Glue small pad to lower control arm. Install shock on rear axle, and extend to full travel. Install washer and lower bushing onto shock stud. Compress spring with spring compressor and position spring on lower control arm spring pad. Slowly jack up the rear axle, while aligning the spring and the shock into position in the mount.

NOTE: Additional help is suggested for this procedure.

Attach the bushing, washer and nut to the shock stud at this time. **SEE FIGURE 2-5.** Tighten the shock nut and remove spring compressor. Repeat procedure for the opposite side. Once the spring and shocks have been installed on both sides, torque all the upper and lower control arm bolts to Ford torque specifications.

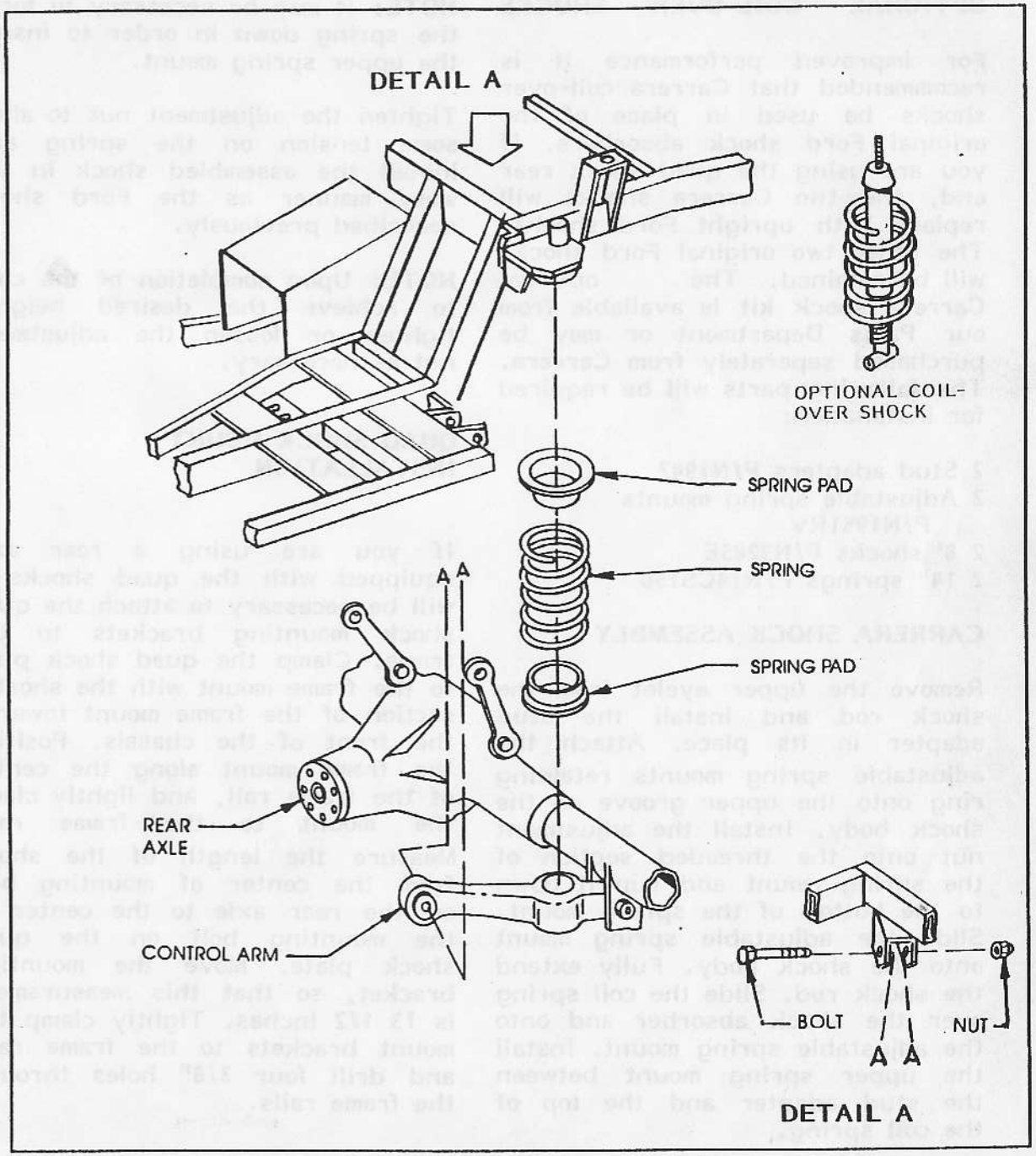


Figure 2-4

OPTIONAL COIL-OVER SHOCKS

For improved performance it is recommended that Carrera coil-over shocks be used in place of the original Ford shock absorbers. If you are using the quad shock rear end, the two Carrera shocks will replace both upright Ford shocks. The other two original Ford shocks will be retained. The optional Carrera shock kit is available from our Parts Department or may be purchased seperately from Carrera. The following parts will be required for installation:

2 Stud adapters P/N1947
2 Adjustable spring mounts P/N1951RV
2 8' shocks P/N3285E
2 14" springs P/N14CS150

CARRERA SHOCK ASSEMBLY

Remove the upper eyelet from the shock rod and install the stud adapter in its place. Attach the adjustable spring mounts retaining ring onto the upper groove on the shock body. Install the adjustment nut onto the threaded section of the spring mount and run it down to the bottom of the spring mount. Slide the adjustable spring mount onto the shock body. Fully extend the shock rod. Slide the coil spring over the shock absorber and onto the adjustable spring mount. Install the upper spring mount between the stud adapter and the top of the coil spring.

NOTE: It may be necessary to force the spring down in order to install the upper spring mount.

Tighten the adjustment nut to allow some tension on the spring and install the assembled shock in the same manner as the Ford shock described previously.

NOTE: Upon completion of the car, to achieve the desired height, tighten or loosen the adjustment nut as necessary.

QUAD SHOCK MOUNT INSTALLATION

If you are using a rear axle equipped with the quad shocks it will be necessary to attach the quad shock mounting brackets to the frame. Clamp the quad shock plate to the frame mount with the shorter section of the frame mount towards the front of the chassis. Position the frame mount along the center of the frame rail, and lightly clamp the mount to the frame rail. Measure the length of the shock from the center of mounting bolt on the rear axle to the center of the mounting bolt on the quad shock plate. Move the mounting bracket, so that this measurement is 13 1/2 inches. Tightly clamp the mount brackets to the frame rails and drill four 3/8" holes through the frame rails.

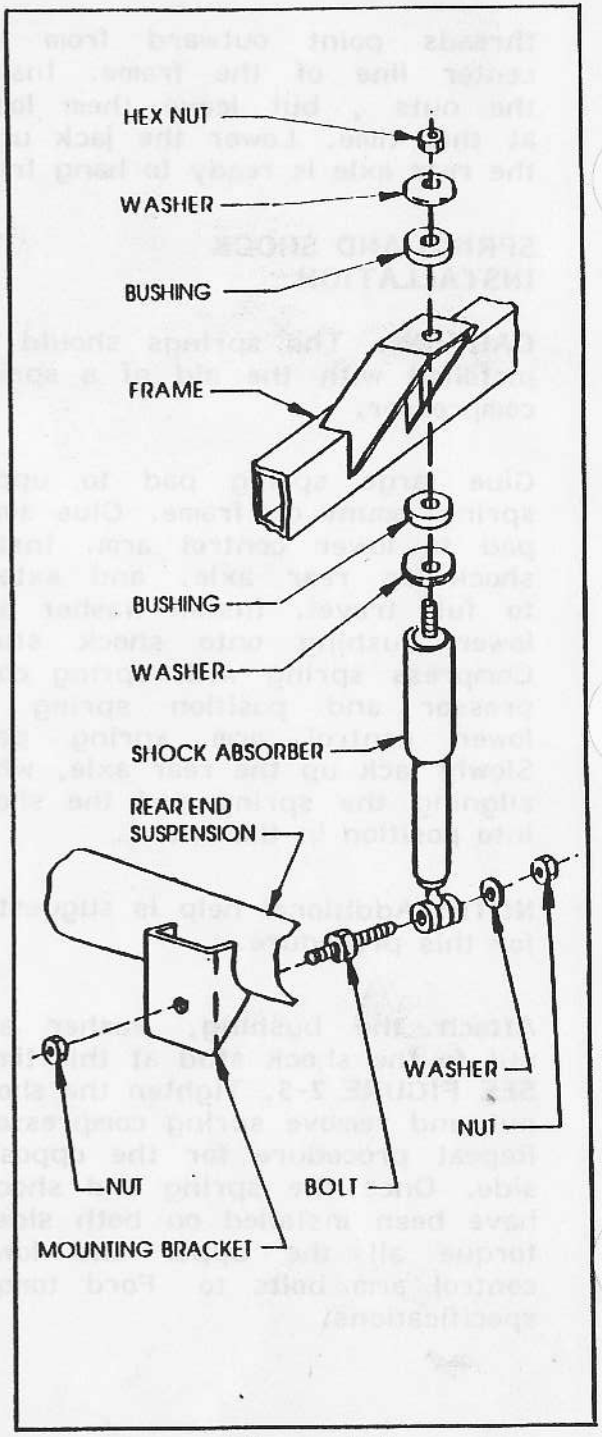


Figure 2-5

Attach the frame mounts to the frame rails, using four 3/8 x 3" hex bolts, eight 3/8" flat washers, and four 3/8" lock nuts. Make sure that the threaded end of the bolts are on the mount side of the frame rail. This will allow the fuel tank to be installed later. Drill four 3/8" holes through the frame mount and attach the shock plate to the frame mount bracket, using four 3/8 x 1 1/4" hex bolts, eight 3/8" flat washer, and four 3/8" lock nuts.

NOTE: The frame mount bracket may be welded to the frame for additional security.

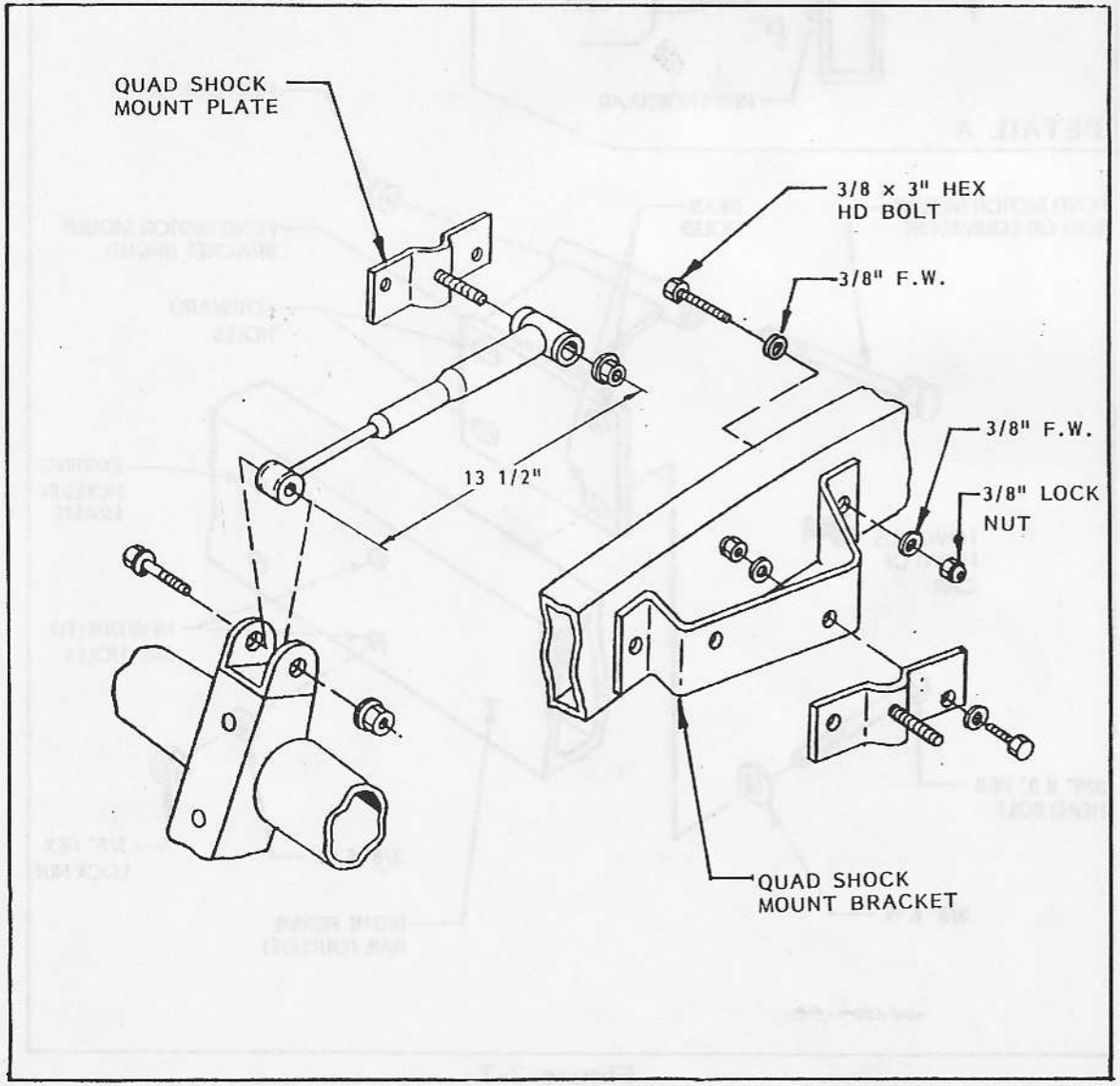


Figure 2-6

SECTION C - ENGINE AND TRANSMISSION INSTALLATION

ENGINE INSTALLATION

NOTE: It is recommended that you clean, detail, and assemble all accessories on your engine and transmission prior to installing them.

MOTOR MOUNT BRACKET INSTALLATION

CHECK: To insure that the motor mount brackets are installed on the correct side, check the position of the tube for the motor mount bolt. It should be angled up slightly at the front. If the tube is angled up more than the frame, then the mount brackets are reversed.

Take the right motor mount bracket (**See Figure 2-7**) and align the two forward holes on the bracket with the two pilot holes on the right frame rail. Mark and drill the two rear holes to 3/8" diameter through the frame rail. Also drill the two front pilot holes out to 3/8" diameter. Be sure that while drilling the holes in the frame, that the drill bit is perpendicular to the frame rail and parallel to the top. **See Figure 2-7, Detail A.**

Secure the motor mount bracket using four 3/8 x 3" hex head bolts, eight 3/8" flatwasher and four 3/8" lock nuts. Bolts and hardware must be at least grade 5. Repeat the same steps for the left motor mount bracket.

MOTOR AND TRANSMISSION MOUNT

Throughout the production run of their small block V-8 engine, Ford has used a variety of motor mounts. To simplify the assembly of your Classic Cobra, use the following Ford motor mounts: Right hand motor mount Part Number D7ZZ-6038-A; left hand motor mount Part Number D7Z7-6038-B. These are the motor mounts that were used to make the frame and motor mount brackets.

If you are using the Ford RAD 4 speed transmission, use the Ford transmission mount Part Number D7ZZ-6068-A. If you are using a C-4, C-6, AOD, or a T-5 transmission use a Ford transmission mount NAPA Part Number 620-1040. Even if the engine and transmission already has the correct mounts it is recommended that you replace them with new mounts.

Install the new motor mounts to the engine using the original factory bolts. Hand tighten only.

Attach the transmission mount to the transmission using the original mounting hardware. Hand tighten only.

The engine and transmission are now ready to install into the frame.

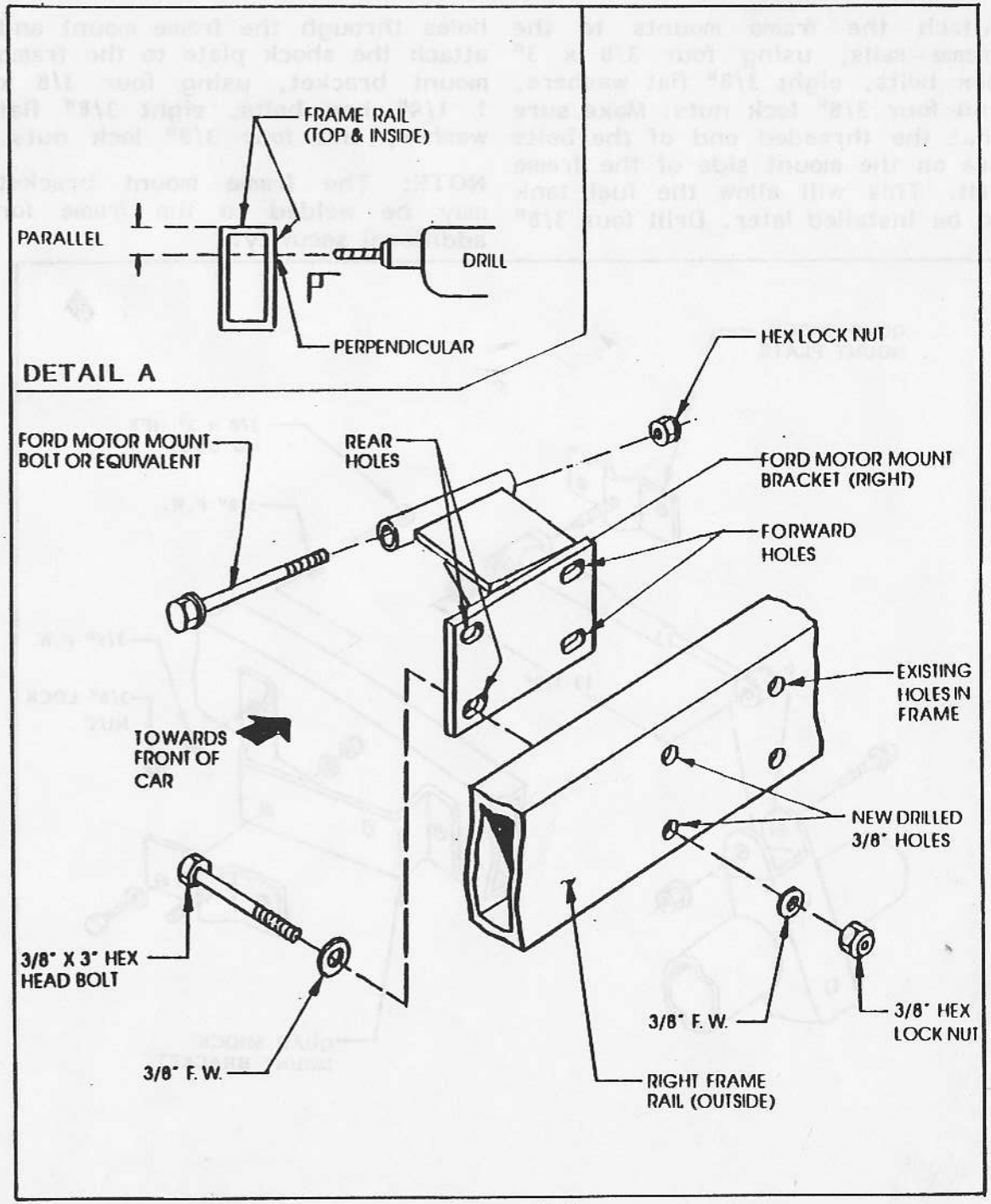


Figure 2-7

ENGINE MOUNTING

Attach the engine and transmission as a complete unit to an engine hoist and carefully lower onto the motor mount brackets.

NOTE: To assist you in this operation, it is suggested that you utilize a movable floor jack to support the transmission. The transmission drive shaft yoke or a suitable plug should be inserted into the rear of the transmission to prevent transmission fluid or oil leakage.

CAUTION: This is not a one person operation. Get additional help. Care must be taken to prevent the engine hoist from tipping under the load.

Carefully line up the motor mount brackets with the motor mounts and install the original motor mount clevis bolt. If the original bolt is not available, replace it with a comparable one with equal or greater rating.

TRANSMISSION MOUNTING SUPPORT

Raise the tail section of the transmission to enable you to install the transmission support. If your small block Ford has either the C-4 or AOD automatic transmission **see figure 2-8** for proper location. The center mounting place should face toward the front of the car. Secure into place using four 7/16 x 1 1/4" grade 5 hex head bolts, eight 7/16" flatwashers and four 7/16" lock nuts. Lower the transmission onto the transmission support and attach the original mounting hardware.

NOTE: The mounting plates on the frame have three slots in them and only the two forward slots are used at this time.

If you are using the T-5 transmission lower the transmission and attach the transmission support to the transmission mount. Jack the transmission up into position and check the position of the holes on the transmission support. It may be necessary to drill additional holes. Secure the transmission support into place using the same hardware.

If you are using the larger C-6 transmission, install the transmission support so that the center mounting plate points toward the rear. **Refer to Figure 2-8**

If you are using the RAD 4 speed found in the 1974 through 1978 Mustang II, you must use the transmission support specially made for its transmission mount. Attach it in the same way as the normal transmission support using the same hardware. **Refer to Figure 2-8.**

WARNING: Once the engine and transmission are installed, tighten and torque all nuts and bolts to original factory specifications.

TRANSMISSION LINES

Transmission lines should be made from 5/16 x 60" steel line. They should be installed after the installation of the radiator. Transmission lines must be bent to conform with the radiator you are using. All transmission lines should be run under the engine using a bracket to mount the lines underneath the engine. This bracket may be fabricated from a piece of flat steel with the transmission line clamped to it.

WARNING: Rubber hose should never be used to make transmission lines. Serious damage to the transmission will occur when the hose starts to deteriorate.

SECTION D -EMERGENCY BRAKE INSTALLATION

There are two types of emergency brake handles that may be used on your Classic Cobra. The first is used on Mustang II's. It is 15" long and painted black. The second one was used on early Pintos. It is 13" long and chrome plated. Both handles work and mount the same way. The shorter Pinto brake handle is recommended, because it will not interfere with the operation of the shifter.

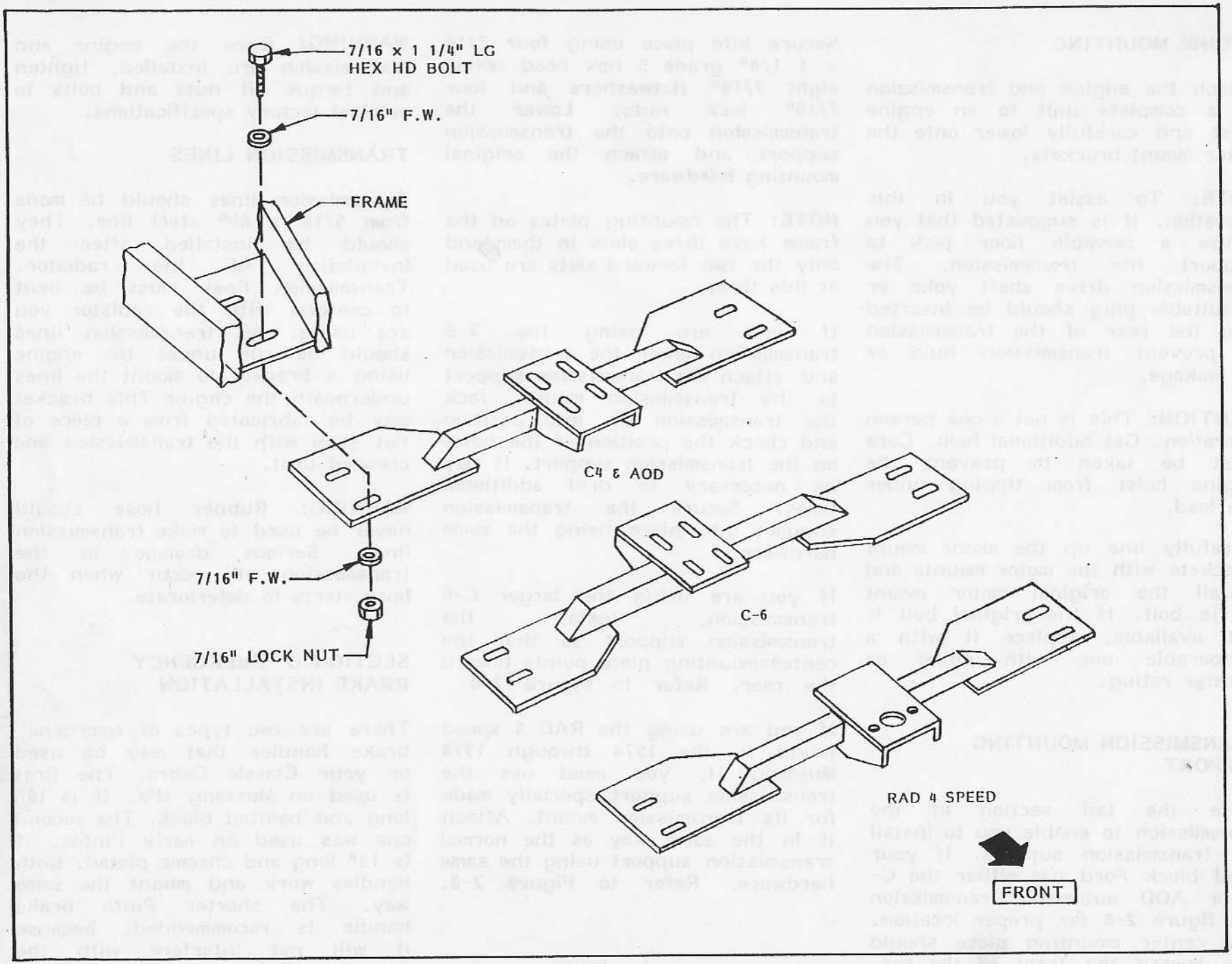

7/16 x 1 1/4" LG
HEX HD BOLT
7/16" F.W.
FRAME
C4 & AOD
7/16" F.W.
C-6
7/16" LOCK NUT
RAD & SPEED
FRONT

Figure 2-8

Mark a line along the top of the frame's drive shaft, 1 3/8" from the left hand edge. From the rear edge of the tunnel, place two marks along this line. The first mark, 5 1/2" from the rear and the second, 9 1/2" from the rear. Using a 5/16" drill bit, drill a hole through each mark. **See Figure 2-9.**

Mark a line across the front of the frame tube at the rear of the tunnel, 7/8" above the weld. Measure from the diagonal frame tube on the left side and place two marks on the line; the first mark 2 1/8" from the tube and the second mark, 4 1/2" from the tube.

Drill a 1/4" hole through the frame tube at each mark. Redrill the front of the frame tube using a 1" hole saw. Drill the back side of the frame tube, using a 9/16" drill bit.

Take the emergency brake spacer, a 5" long piece of 1" square tubing, and drill two 5 1/6" holes through it, 4" apart.

Insert two 5/16 x 2 1/4" hex head bolts, with washers, up through the holes in the frame tunnel. Plate the spacer onto the bolts, then attach the emergency brake handle to the bolt using two 5 1/6" flatwashers and two 5/16" lock nuts.

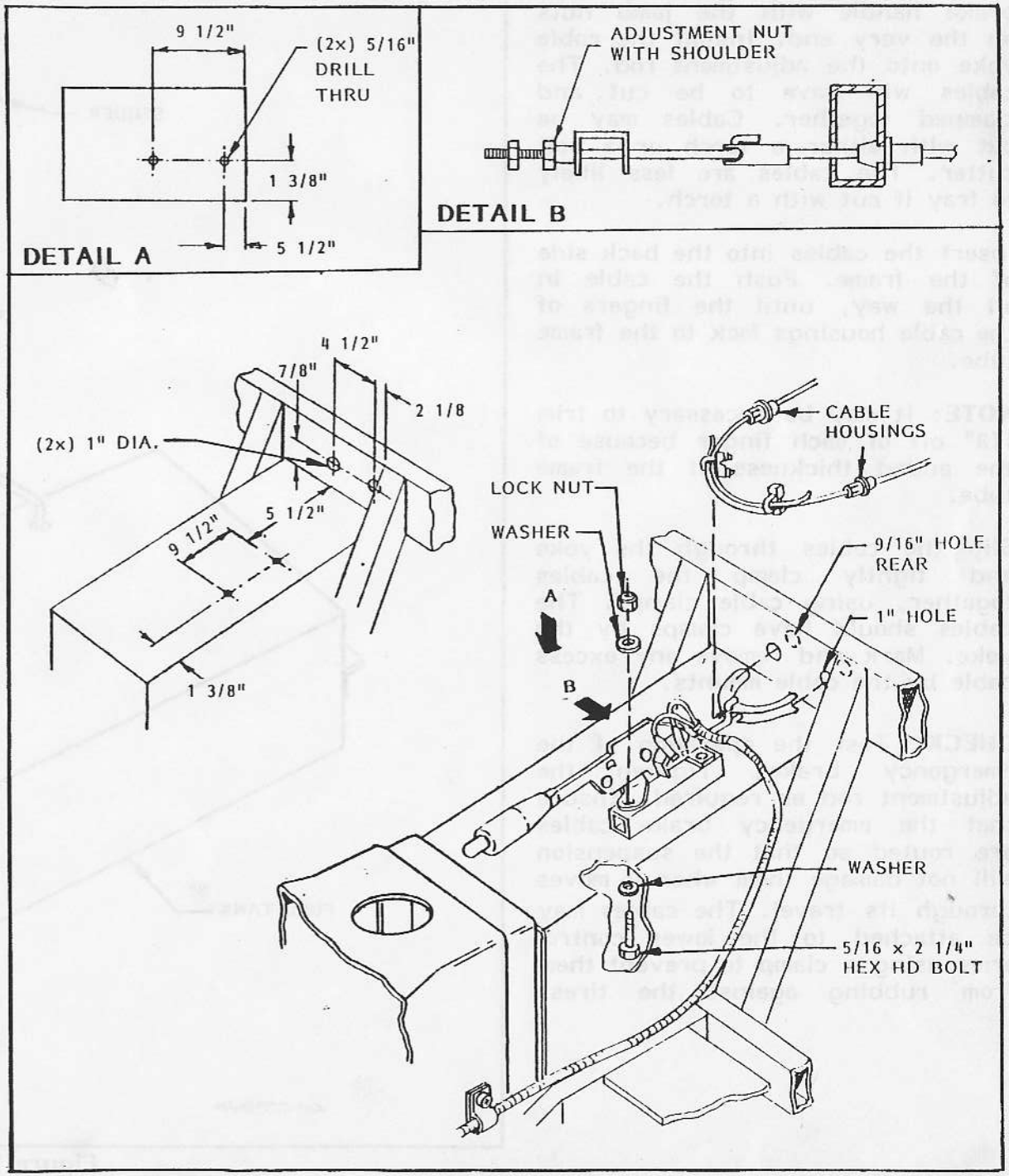


Figure 2-9

Install the adjustment rod on the brake handle with the jamb nuts on the very end. Install the cable yoke onto the adjustment rod. The cables will have to be cut and clamped together. Cables may be cut with either a torch or a bolt cutter. The cables are less likely to fray if cut with a torch.

Insert the cables into the back side of the frame. Push the cable in all the way, until the fingers of the cable housings lock to the frame tube.

NOTE: It may be necessary to trim 1/8" off of each finger because of the added thickness of the frame tube.

Slip the cables through the yoke and tightly clamp the cables together, using cable clamps. The cables should have clamps by the yoke. Mark and remove any excess cable by the cable mounts.

CHECK: Test the operation of the emergency brake. Tighten the adjustment rod as required. Ensure that the emergency brake cables are routed so that the suspension will not damage them when it moves through its travel. The cables may be attached to the lower control arms using a clamp to prevent them from rubbing against the tires.

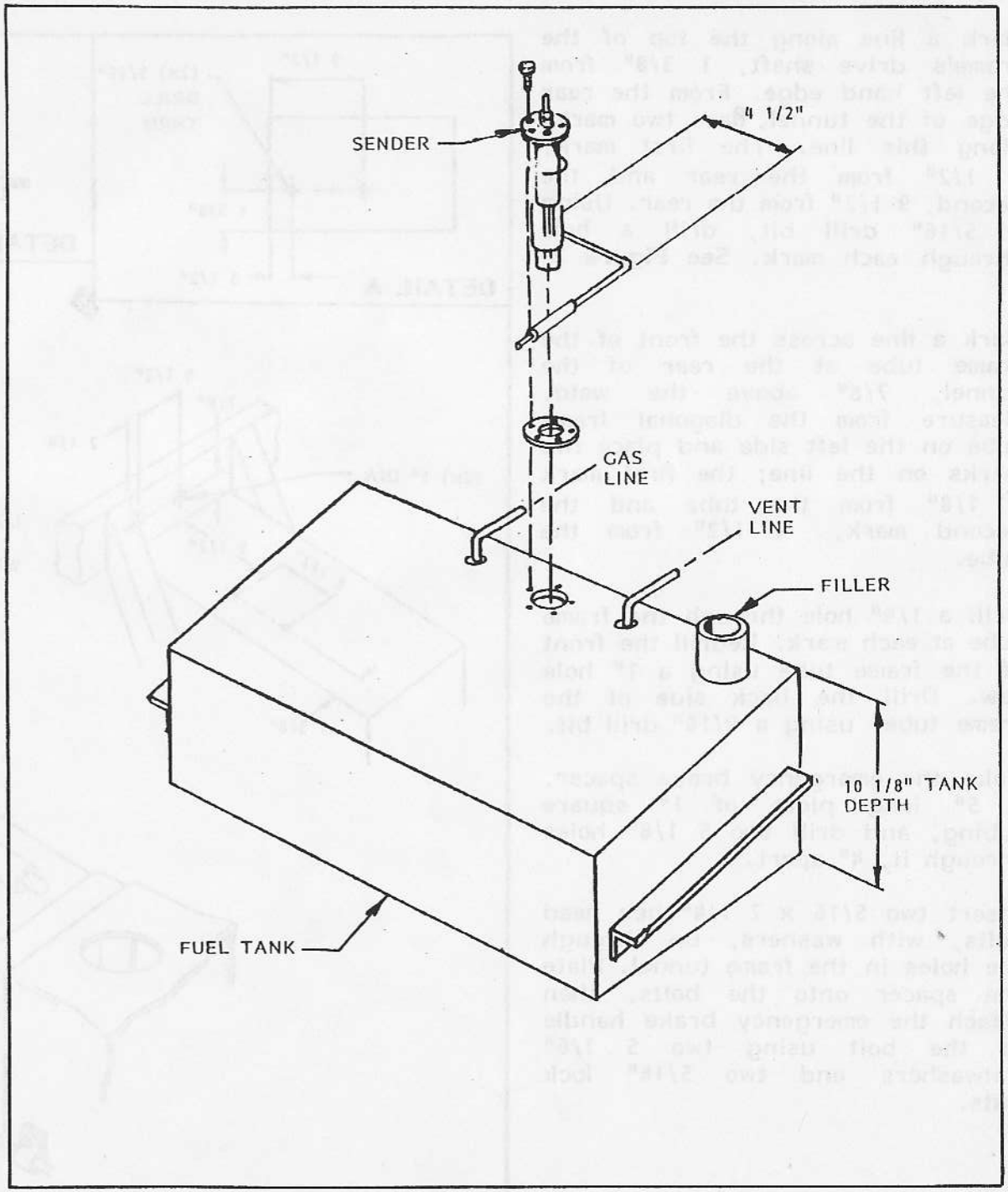


Figure 2-10

SECTION E FUEL TANK AND FUEL LINE INSTALLATION

FUEL SENDER INSTALLATION

NOTE: The fuel gauge and the fuel sender are a matched set. Fuel gauge Part No. 06-1075-XX must be used with the fuel sender Part No. 06-1083-00.

Place the fuel tank sender gasket on top of the fuel tank. Measure from the bottom of the tank to the top of the sender gasket. This measurement will be about 10 1/8". Add 3/16" to this measurement. Use half of this measurement to position the center of the resistor housing on the support arm. After the resistor housing has been moved to its new position, tie wrap the wire to the support arm. **See Figure 2-10.**

Cut off the support arm 1/2" below the bottom of the resistor housing.

Measure from the center of the float, 4 1/2" along the arm. At that mark bend the arm 90 degrees towards the float. Cut off the excess 1/4" away from the arm. Insert the arm into the retaining hole on the resistor arm housing and crimp the flanges around the float arm.

Carefully slide the gasket over the float arm and the resistor housing until it is flat on the mounting flange. Align the holes on the gasket with the holes on the mounting flange.

NOTE: The holes on the gasket and the mounting flange are off spaced. Line up the groove on the gasket with the dot on the mounting flange.

Using two pieces of thread, to hold the gasket in place, insert the float arm and sender into the tank.

With the float arm pointing towards the left hand side of the tank, mark the location of the holes on the mounting flange onto the tank.

Remove the float tank sender and drill five 5/32" holes on the marks from the mounting flange. Vacuum out the tank to remove any shavings that may have fallen into it. Reinsert the fuel tank sender and attach it with four of the five hex head screws provided with the sender.

Remove the threads holding the sender.

CHECK: To insure that the float arm moves freely inside the tank, make sure it does not touch the sides of the tank and that the baffle does not touch the resistor housing. If the baffle touches the fuel sender it may be gently pushed away using a common screwdriver or a broom handle.

FUEL TANK INSTALLATION

Position the fuel tank into the frame. Make sure that it is centered from left to right and that the rear of tank is 3/8" away from the inside of the rear frame rail, and clamp it into position. **See Figure 2-11.**

WARNING: If you are using the quad shock brackets insure that the head of the bolts are on the inside of the frame rails next to the tank. If the nuts are placed on the inside they may damage the tank during installation.

Drill eight 1/8" pilot holes through gas tank mounting flange into the frame rail (four per side). Remove the tank and enlarge the pilot hole on the tank mounting flange to 1/4". Redrill the pilot holes in the frame using a 7/32" drill bit.

Using the 1/8" thick by 1" wide of hard rubber supplied with your kit, cut two strips, 18 inches long. Attach each strip to the mounting flanges on the fuel tank, using 3M 1300 Rubber and Gasket Adhesive. Once the glue has dried, drill through the rubber, using 1/4" drill bit at each hole location.

Clamp the fuel tank back into position and attach the fuel tank to the frame using eight 1/4 x 3/4" hex washer head self-tapping screws and eight 1/4" flatwashers. Remove the clamps.

FUEL LINE INSTALLATION

Start you fuel line along the front side of the square tubing. The fuel outlet on the tank is located to the left of the sending unit. Attach a 3/8" rubber fuel hose to the outlet and to the start of your fuel line

Position the fuel line along the front side of the square tubing, so that the hose from the outlet to the fuel line is not collapsed or under any strain. Bend the tubing to fit along the inside edge of the frame rails. Bend it again at the corner of the frame rail and the frame tube that the upper control arms mount to. Bend it down and through the drive shaft tunnel.

Attach the fuel line into position, using 3/8" padded line clamp and selt-tapping screws or rivets.

NOTE: Because the fiberglass trunk liner and rear floor liner sit on top of the frame, the fuel line must be positioned just below the upper edge of the frame tubes.

Install a 3/8 union onto the fuel line and attach an additional line to the line in the tunnel. Bend the line along the inside edge of the tubing by the transmission.

Continue to bend the line along the inside of the frame rail until it is by the fuel pump. Connect the fuel pump to the fuel line, using 3/8" rubber fuel hose. Clamp the second section of fuel line into position, using 3/8" padded clamps and self-tapping screws or rivets.

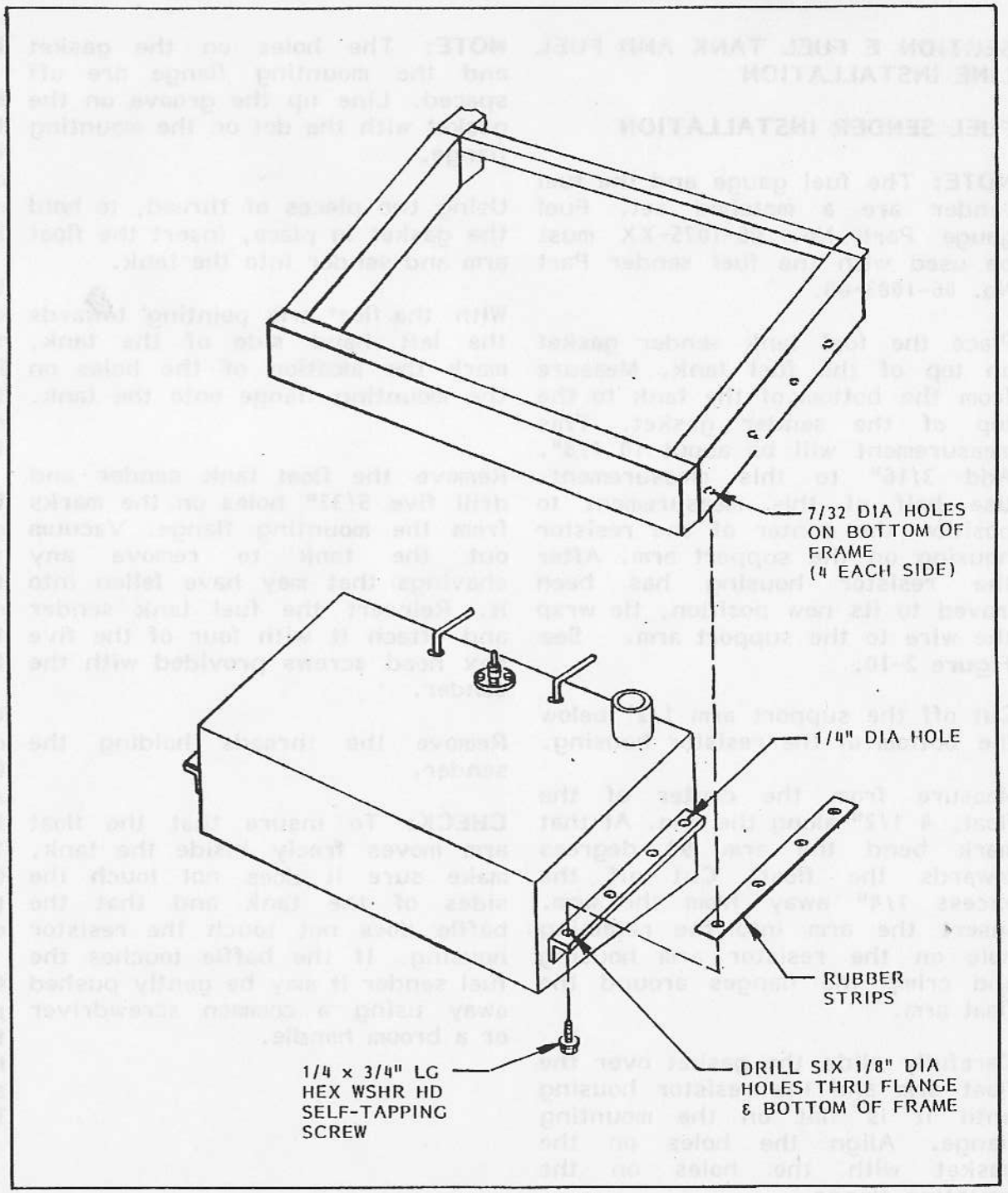


Figure 2-11

FUEL TANK VENT HOSE INSTALLATION

Attach a 40" long piece of 5/16" rubber fuel hose to the fuel tank vent on the right of the sending unit. Clamp it to the front side of the square tubing using a 3/8" padded clamp and a self-tapping screw. Coil the excess and tie wrap it to the frame for now. The fuel vent hose will be completed after the mounting of the body.

FUEL LINE INSTALLATION HINTS

Use a tubing bending on oil lines.

Plan out the way your line will run along the frame.

Avoid areas where vibration might rub a hole in the lines.

Make your installation look professional.

Remember to make allowance for parts not yet installed, i.e.: fuel pump, fuel regulator, engine mount and steering shafts, and exhaust pipe.

Make sure that couplings will not leak onto the exhaust.

Take care not to overtighten lines.

Use care when bending line to avoid crimping.

Support couplings with clamps.

Check all connections for leaks during initial running of the engine.

Don't run fuel lines below frame rails.

COBRA FUEL LINE- COMPONENTS CHECK LIST

QUANTITY	ITEM	SOURCE
3	3/8 x 60 steel lines	Auto Parts Supplier
3	3/8 line couplings	Auto Parts Supplier
10	3/8 padded line clamps	Auto Parts Supplier

SECTION F FORWARD FLOOR LINER INSTALLATION

The forward floor liner consists of the following elements: the foot wells, the fire wall, the transmission tunnel and the forward floor area. The gel-coated surface of the floor liner is marked in certain areas where holes must be opened prior to installation.

SHIFTER OPENINGS

Turn over the forward floor liner so that the gelcoat surface is facing up. At the rear of the transmission tunnel there is a 3 1/2" circular mark. This area must be cut out if you are using the Rad 4 speed. Remove this area using a 3 1/2" hole saw. **See Figure 2-12.**

If you are using an automatic transmission or another type of manual transmission, such as the T-5 5 speed, it will be necessary to mark the locations for the shifter opening.

On each of the outside frame tubes there are two pilot holes drilled for the location of the steering column support. Using a 3/8" drill bit redrill these holes. Near the edge of the floor liner there are four marks in the gelcoat at the same locations as the 3/8" holes you just drilled through the frame tubes. Drill through the floor liner at each mark, using a 3/8" drill bit. If you are using the Rad 4 speed skip ahead to the shifter modifications. If you still need to make your shifter openings, continue on.

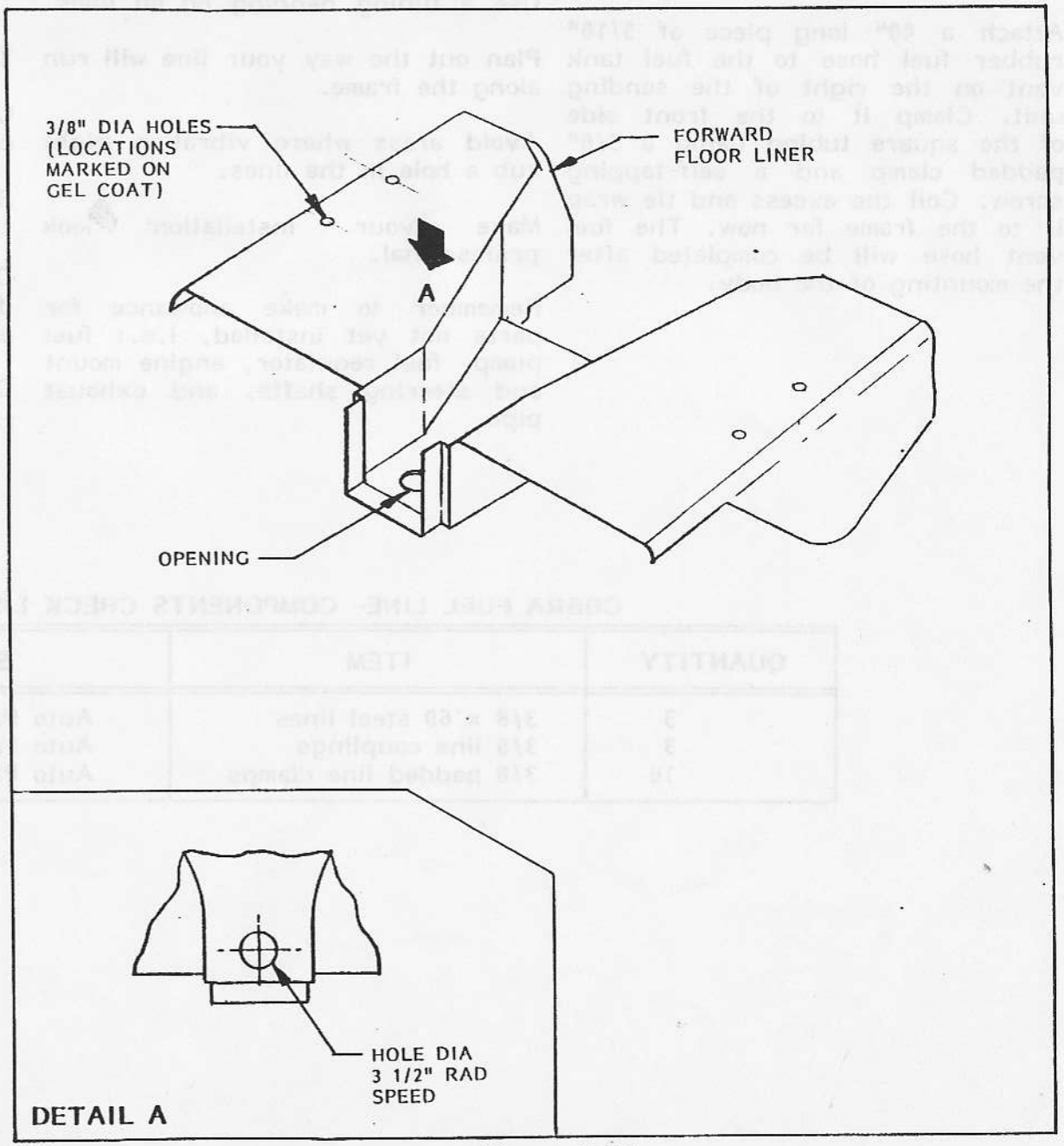


Figure 2-12

If you have an original style shifter that mounts to the transmission, remove the shifter from the transmission. Place the floor liner into position by aligning the holes on the floor liner with the holes in the frame tubes. Place bolts through the holes to hole the liner in position, and mark the rear edge of the floor liner onto the frame using a white grease pencil.

Remove the floor liner and reinstall the shifter. Measure from the pivot point of the shifter to the grease pencil line on the frame using this measurement. Mark the shifter hole location onto the top of the floor liner.

Measure the shifter pivot point to each outer frame tube. If the shifter is centered, mark the center of the tunnel on the previous mark If the shifter is off center, mark the tunnel with the offset.

Measure the pivot point to find the diameter of the hole to be drilled in the floor. Drill the hole in the tunnel of the floor liner. Position the floor liner onto the frame.

CHECK: Move the shifter through the gears several times. Make sure the shifter or its lingages do not make contact with floor liner. If the linkage does make contact, bend and reposition it away from the floor liner. If the shifter handle makes contact with the floor liner, mark where it does, and file the floor liner for additional clearance.

FORD AUTOMATIC SHIFTER OPENINGS

Position the floor liner onto the frame. Attach the shift linkage rod to the transmission shift lever. Move the transmission shift lever to the forward most position. Mark the floor liner where the center of the adjustment slot on the linkage rod is located. **See Figure 2-13.**

NOTE: When marking the floor liner, position the linkage rod so that it is the same distance away from the floor liner as it would be if it was connected to the shifter.

Move the transmission shift lever to the rearward-most position and mark the floor liner where the center of the adjustment slot on the linkage rod is. Remove the floor liner and transfer the two marks to the top of the floor liner. Mark the center between the two marks.

Use the center mark to mark an opening 3 inches wide and 3 1/2 inches long on the top of the floor liner tunnel. Drill a hole the size of a sabre saw blade inside one corner of the opening location and use a sabre saw to make the opening.

CHECK: Before mounting the shifter lever assembly to the floor liner, make sure that the shifter arm does not contact the inside of the floor liner tunnel. If it does, bend the shifter arm in to clear the tunnel.

Drill four 1/4" holes into the floor liner tunnel using the shifter lever assembly"s original mount holes as a guide. Attach the shifter assembly to the floor liner using four 1/4" x 1" long hex head bolts, either 1/4" flatwashers, four 1/4" lockwashers, and four 1/4" hex nuts. Position the floor liner onto the frame and connect the linkage rod to the shifter.

CHECK: Move the shifter lever through the gears several times, and make sure the linkage rod and the transmission lever does not contact the floor liner. Once the shifter and linkage have been checked, move onto the mounting of the floor pan.

AFTER-MARKET SHIFTER OPENINGS

A cable operated after-market automatic shifter can be mounted on the floor liner tunnel. Refer to the manufacturer's installation instructions. A rod actuated after-market shifter may also be used. However, it may require more modification than a Ford shifter. **See Figure 2-13.**

NOTE: Remember that whatever shifter you decide to use, always check your linkages carefully to insure smooth, safe operation of the shifter.

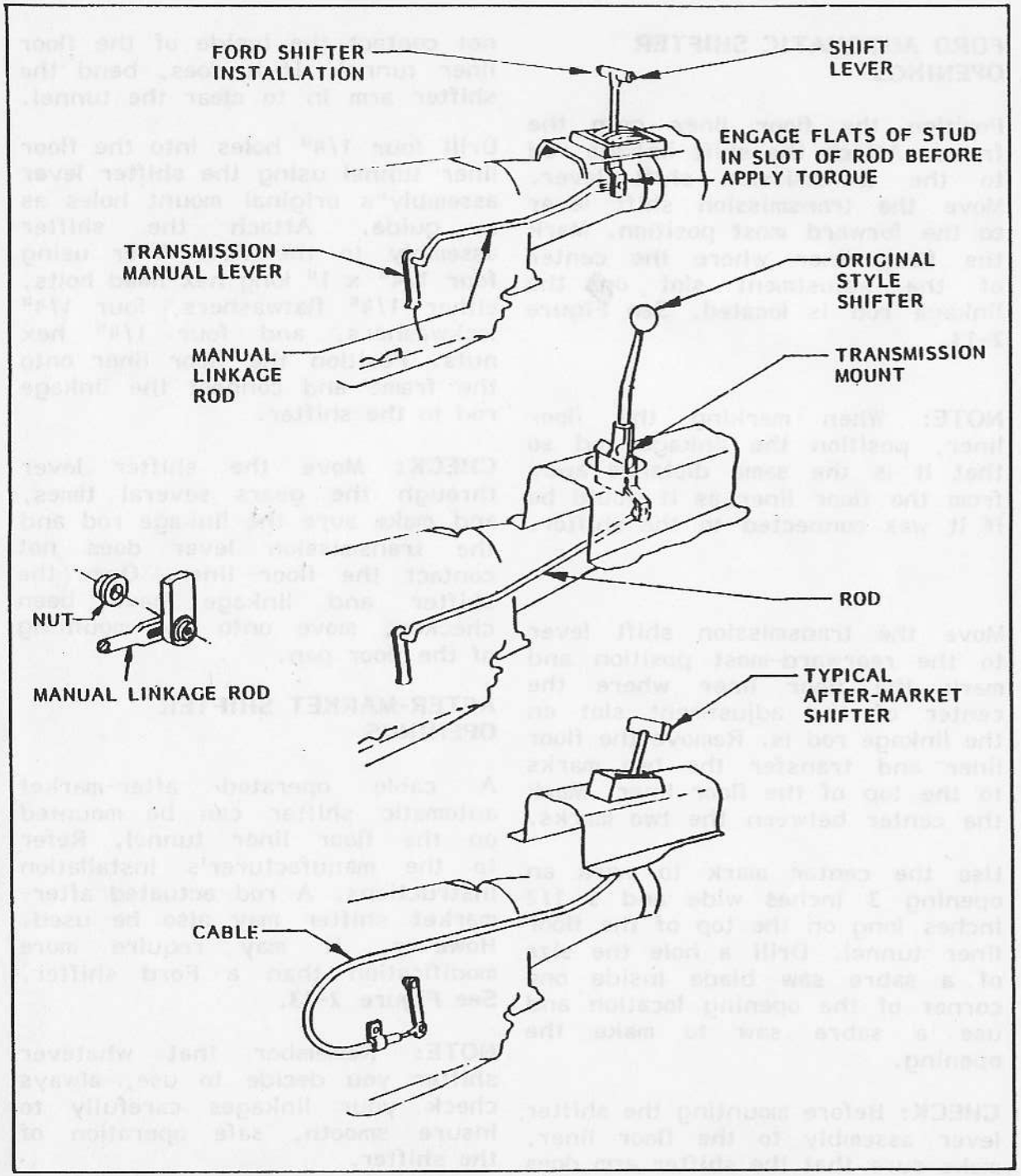


Figure 2-13

SHIFTER MODIFICATIONS

Because shifter handle for the RAD 4-speed and the T-5 5-speed are mounted at the very rear of the transmission, you may want to modify the shifter handle to move the handle forward.

Both types of transmissions have no external rods or linkages for the shift lever. The shifter handle mechanism on both can be removed by unbolting it from the transmission. **See Figure 2-14.**

The RAD 4-speed shifter handle is not removable from the shifter mechanism, therefore in order to modify the shifter handle so that it angles forward, the handle must be cut.

Mark the shifter handle 1" up from the nylon washer on top of the spring. Mark a vertical line through the 1" mark on the front and the rear of the shifter handle. These vertical marks will be used to realign the shifter handle on the shifter mechanism.

NOTE: The shifter modification described here are guidelines on how the shifter handle may be modified if you need to change the shifter handle. There may be other ways to modify the handle to best suit your needs, or you may not need to modify the handle at all.

Cut the shifter handle off at the 1" mark. Place the shifter handle pointing forward. If necessary the handle may be bent forward further by placing the cut end in a vise and heating the handle with a torch to allow it to bend.

CAUTION: Do not try to bend the shifter handle without a torch. It is hardened steel and will break. Do not try to bend the shifter handle while it is still attached to the mechanism. This could damage the shifter fork, the nylon bushings, or the mount plate.

Once the shifter handle is modified to a better position have it welded back on in the new position.

NOTE: The shifter handle should only be welded on with either a mig or an arc welder to prevent damage to the nylon washers and bushings.

If you prefer the shifter handle to resemble a Cobra shifter cut the shifter handle off at the 1" mark, as previously described. The new handle may be made two different ways.

The first method is to use either a three or four speed shifter handle from a 1965 or '66 Ford Mustang. The four speed handle has a reverse tee on it. It may be left on but cannot be made functional. Cut the rectangular block off the bottom of the handle and position the handle on the mechanism and weld it into place.

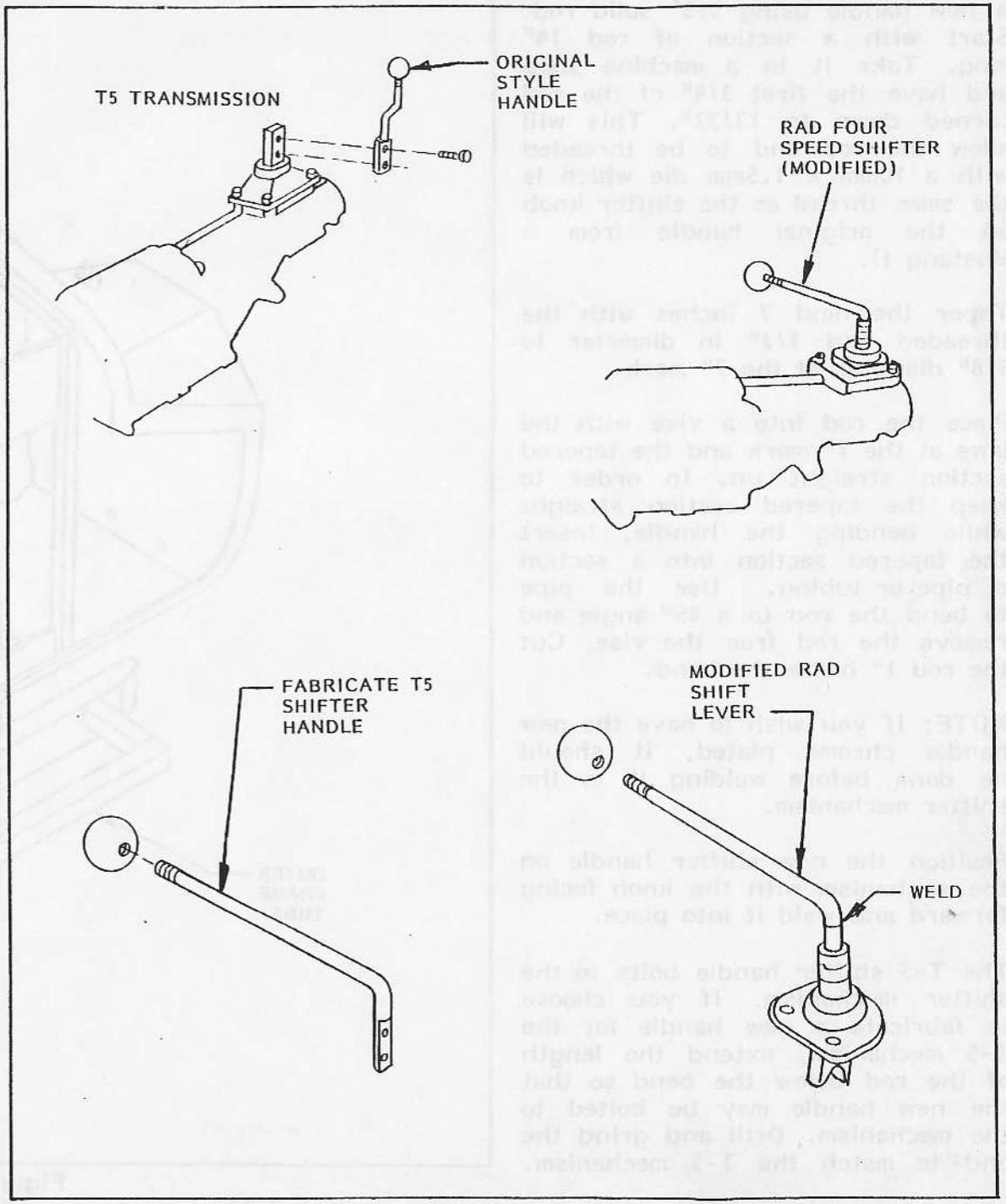


Figure 2-14

The second method is to fabricate a new handle using 5/8" solid rod. Start with a section of rod 14" long. Take it to a machine shop and have the first 3/4" of the rod turned down to 13/32". This will allow the rod end to be threaded with a 10mm x 1.5mm die which is the same thread as the shifter knob on the original handle from a Mustang II.

Taper the next 7 inches with the threaded end 1/2" in diameter to 5/8" diameter at the 7" mark.

Place the rod into a vise with the jaws at the 7" mark and the tapered section straight up. In order to keep the tapered section straight while bending the handle, insert the tapered section into a section of pipe or tubing. Use the pipe to bend the rod to a 45° angle and remove the rod from the vise. Cut the rod 1" below the bend.

NOTE: If you wish to have the new handle chrome plated, it should be done before welding it to the shifter mechanism.

Position the new shifter handle on the mechanism with the knob facing forward and weld it into place.

The T-5 shifter handle bolts to the shifter mechanism. If you choose to fabricate a new handle for the T-5 mechanism, extend the length of the rod below the bend so that the new handle may be bolted to the mechanism. Drill and grind the end to match the T-5 mechanism.

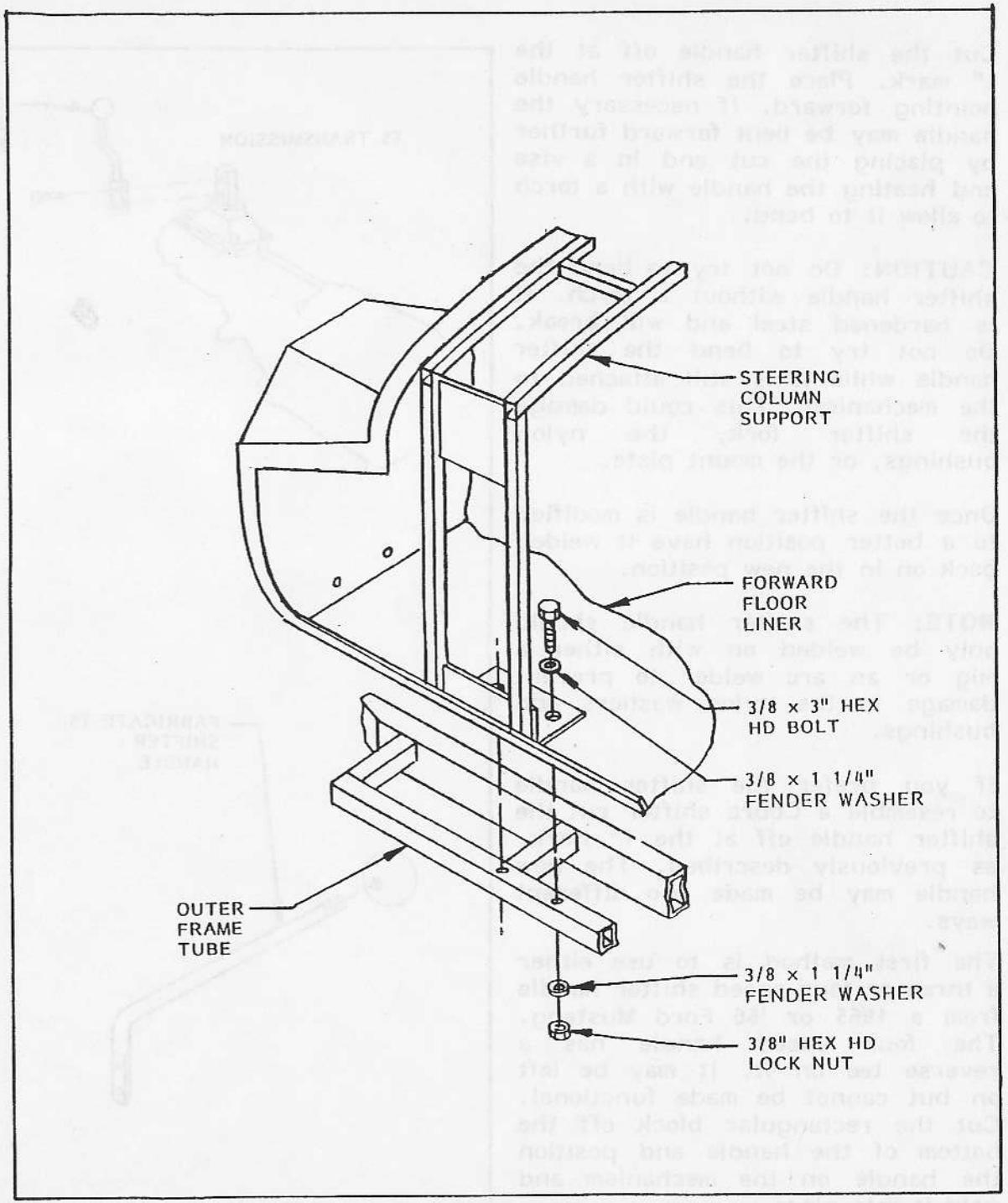


Figure 2-15

CHECK: Upon completion of the modification to the shifter handle, check the shifter to insure smooth, safe operation of the shifter mechanism

FORWARD FLOOR LINER INSTALLATION

CHECK: From now until the completion of the body and door installation the frame must be kept level at all times to insure the proper installation of all body parts. Place a leveling device on the frame and check that it is level on the jack stands, from side to side and front to rear. Use paint sticks or spacers to level the frame on the jack stands. Check the level each time you start working on the car and especially if the car is taken off the jack stands.

If you have not already done so, place the forward floor liner back into position on the frame. Align the four holes on the floor liner with the four holes on the outer frame tube. Place the steering column support into position with the four holes on the support bases aligned with the holes in the frame tube and the liner. **See Figure 2-15.**

Attach the steering column support to the frame tubing using four 3/8 x 3 1/4" hex head bolts, eight 3/8 x 1 1/4" fender washers, and four 3/8" lock nuts. Hand tighten only. Adjust the steering column support so that it is equally spaced from side to side on the forward floor liner. Tighten the bolts.

PEDAL CLUSTER MODIFICATION

The Classic Cobra is designed to use the same pedal cluster as the 1974 through 1978 Mustang II, but it must be trimmed to attach it to the steering column support. **See Figure 2-16.**

NOTE: When removing the pedal cluster from the donor Mustang II or from a Mustang II in an auto salvage yard, insure that you have all the bushings, retaining washers, pins, and the brake light switch for the pedal cluster.

Using a jag saw or a hack saw, trim the pedal cluster as shown in **Figure 2-16.**

PEDAL CLUSTER INSTALLATION

On the gel coat side of the driver's foot well, the following hole locations are marked: the master cylinder, the clutch cable, and the master cylinder plate bolts. Using these marks as a guide, drill these locations to the appropriate sizes.

Power master cylinder	2 1/4" hole saw
Manual master cylinder	1 3/4" hole saw
Master cylinder bolts	3/8" drill bit
Clutch cable	1 1/8" hole saw
Clutch cable bolts	1/4" drill bit
Mount plate	3/8" drill bit

Once all the holes are drilled place the master cylinder mount plate into position on the gel coat side of the foot well. Attach the mount plate to the foot well and the mount plate angle using two 3/8 x 1 1/2" hex head bolts, four 3/8" flatwashers and two 3/8" lock nuts.

CHECK: After insuring that the frame is level, check the mount plate to insure that it is level also. If it is not, adjust the mount plate to level and tighten the bolts. It may be necessary to file some hole locations.

Drill two 3/8" holes through the holes on the mount angle into the floor and the frame. Attach the mount angle to the frame using two 3/8 x 3" long hex head bolts, four 3/8" flat washers and two 3/8" lock nuts. The additional mount angle is in the passenger's foot well. Use the same hardware as the driver's side.

Place the pedal cluster into the foot well and clamp it to the steering column support. Align the holes on the pedal cluster with the holes on the mount plate.

NOTE: If you are using the manual master cylinder, you will need to drill two additional holes to mount the master cylinder.

Once the pedal cluster is aligned, drill two 5/16" holes through the pedal cluster and the support. Attach it to the steering column support, using two 5/16 x 1" hex head bolts, four 5/16" flat washers and two 5/16" lock nuts. **See Figure 2-17.**

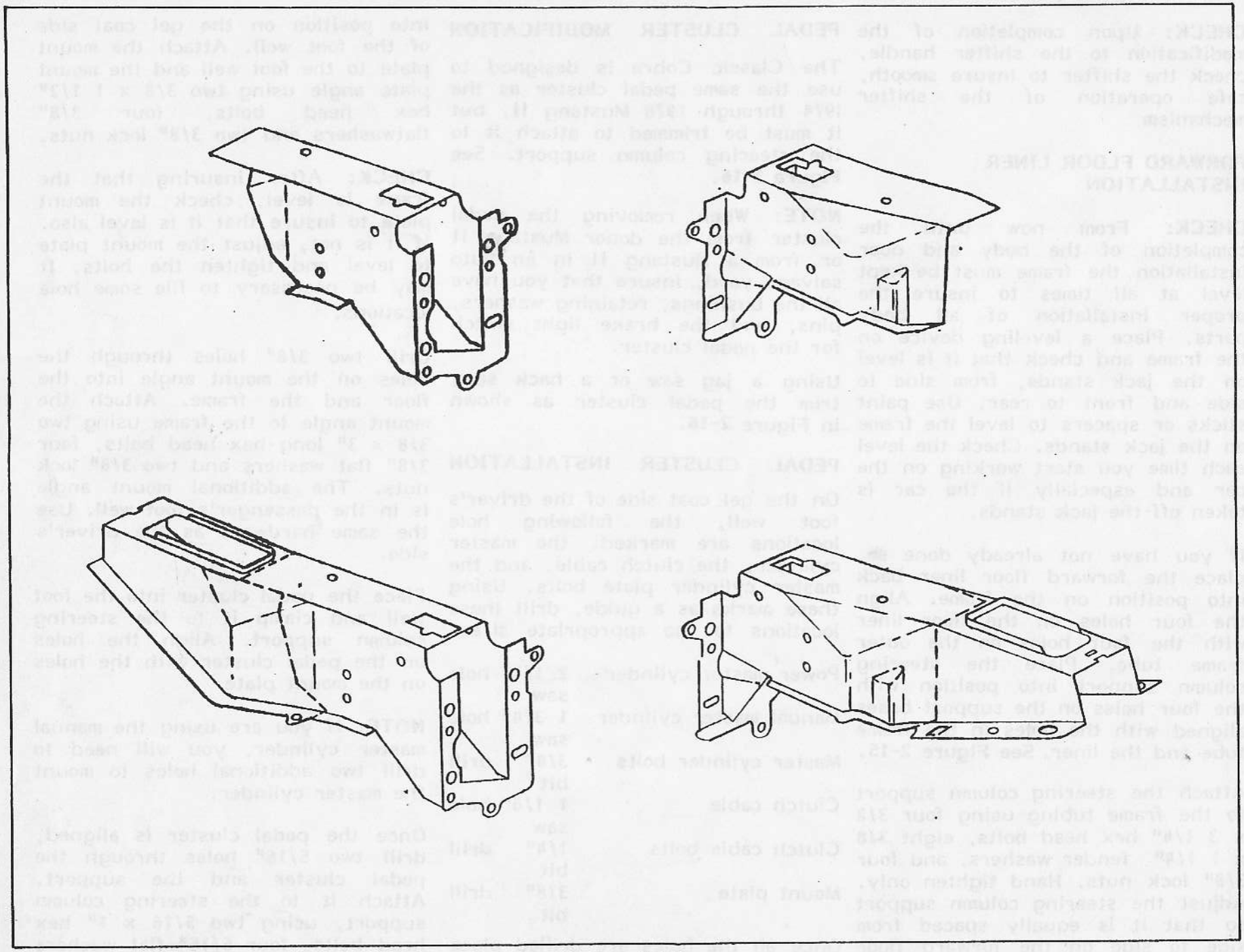


Figure 2-16

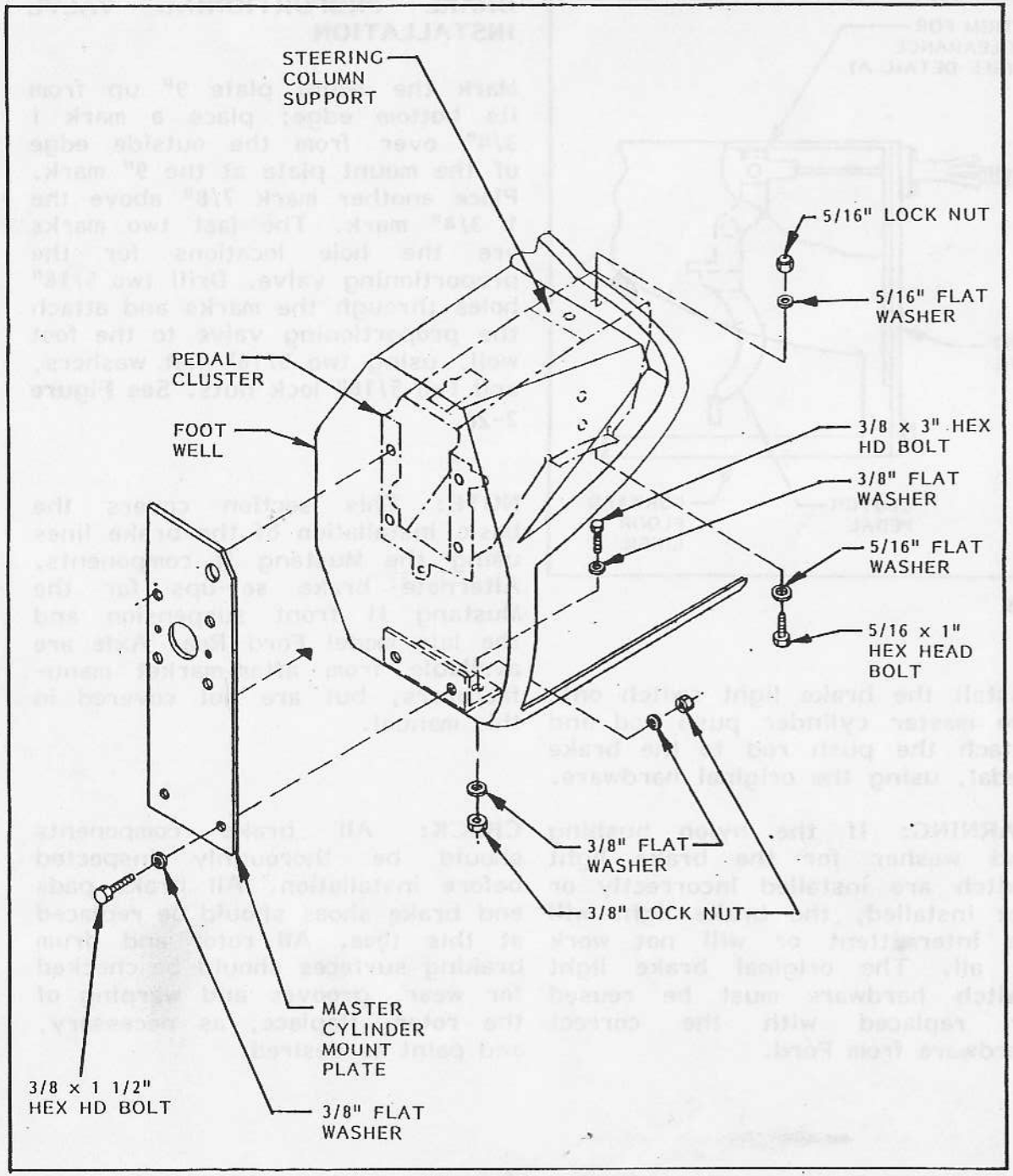


Figure 2-17

CLUTCH CABLE INSTALLATION

Gently remove the studs from the clutch cable housing by tapping them out with a hammer. Insert the cable into the hole in the mount plate and attach it using two 1/4 x 2" hex head bolts, four 1/4" flat washers, and two 1/4" lock nuts. Connect the cable end to the clutch pedal, using the original hardware. **See Figure 2-18.**

CHECK: Test the operation of the clutch pedal for binding and that the upper end of the pedal does not rub against the fiberglass in the upper foot well. It may be necessary to grind off some of the upper end so that it does not touch the fiberglass.

SECTION G MASTER CYLINDER OPERATION

NOTE: The Classic Cobra was designed to use either a manual or power master cylinder from a Mustang II 1974 through 1978, along with the brake proportioning valve from the same. It is recommended that you get the fittings that connect the brake lines to the master cylinder and proportioning valve from a donor car or an auto salvage yard. This will eliminate the need for special adapters. If you are using a power master cylinder you will need to run a vacuum line to the engine.

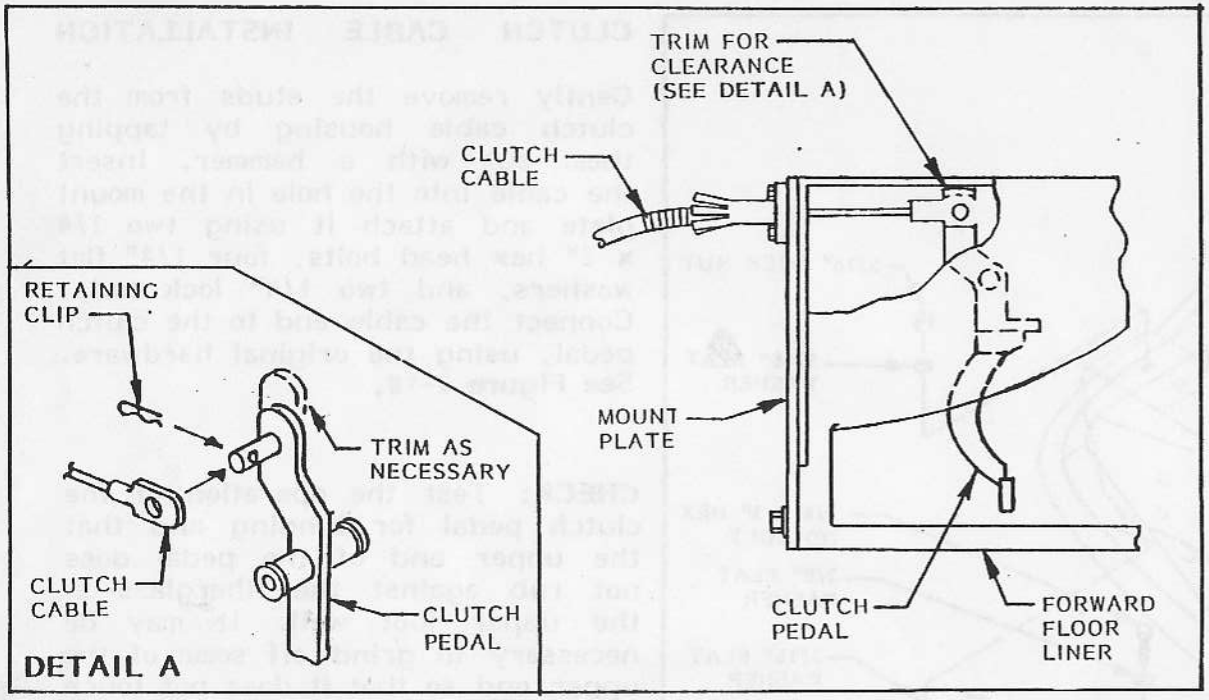


Figure 2-18

Slide the master cylinder mounting studs through the holes in the mount plate and the pedal cluster. Attach the master cylinder using four 3/8" lock nuts and four 3/8" flat washers. **See Figure 2-19.**

If you are using a manual master cylinder, attach the pedal cluster to the mount plate using four 3/8 x 2" hex head bolts, eight 3/8" flat washers, and four 3/8" lock nuts. Install the master cylinder using two 3/8 x 2" hex head bolts, four 3/8" flat washers, and two 3/8" lock nuts.

Install the brake light switch onto the master cylinder push rod and attach the push rod to the brake pedal, using the original hardware.

WARNING: If the nylon bushing and washer for the brake light switch are installed incorrectly or not installed, the brake light will be intermittent or will not work at all. The original brake light switch hardware must be reused or replaced with the correct hardware from Ford.

BRAKE PROPORTIONING VALVE INSTALLATION

Mark the mount plate 9" up from its bottom edge; place a mark 1 3/4" over from the outside edge of the mount plate at the 9" mark. Place another mark 7/8" above the 1 3/4" mark. The last two marks are the hole locations for the proportioning valve. Drill two 5/16" holes through the marks and attach the proportioning valve to the foot well, using two 5/16" flat washers, and two 5/16" lock nuts. **See Figure 2-20.**

NOTE: This section covers the basic installation of the brake lines using the Mustang II components. Alternate brake set-ups for the Mustang II front suspension and the late model Ford Rear Axle are available from after-market manufacturers, but are not covered in this manual.

CHECK: All brake components should be thoroughly inspected before installation. All brake pads and brake shoes should be replaced at this time. All rotor and drum braking surfaces should be checked for wear, grooves and warping of the rotor. Replace, as necessary, and paint as desired.

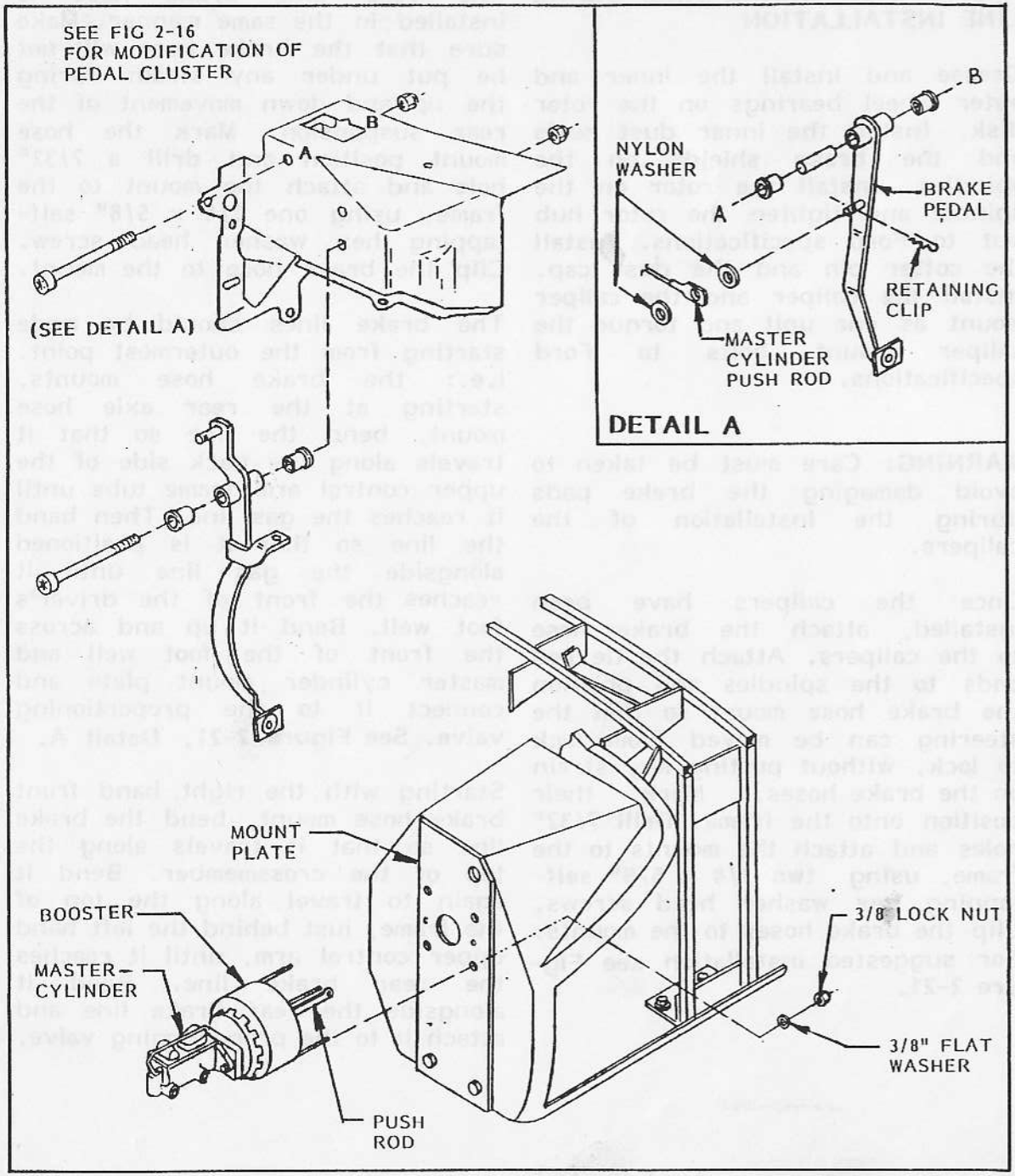


Figure 2-19

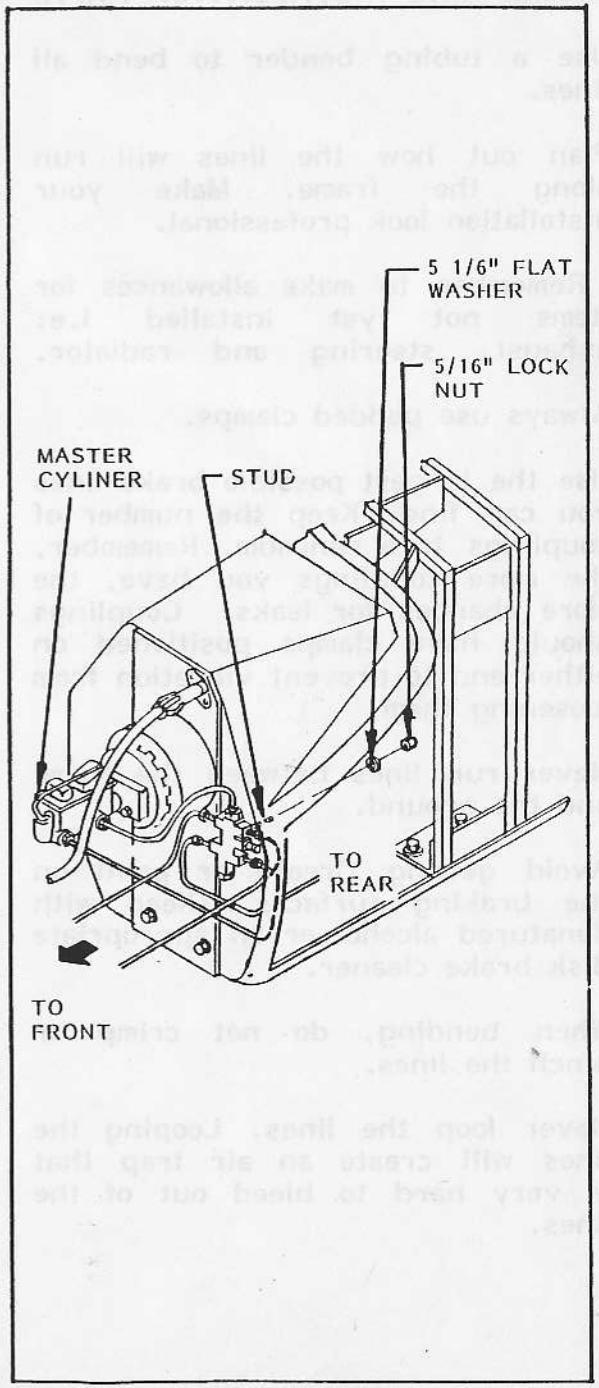


Figure 2-20

BRAKE LINE INSTALLATION HINTS

Use a tubing bender to bend all lines.

Plan out how the lines will run along the frame. Make your installation look professional.

Remember to make allowances for items not yet installed i.e: exhaust, steering and radiator.

Always use padded clamps.

Use the longest possible brake lines you can find. Keep the number of couplings to a minimum. Remember, the more couplings you have, the more chances for leaks. Couplings should have clamps positioned on either end to prevent vibration from loosening them.

Never run lines between the frame and the ground.

Avoid getting Grease or paint on the braking surfaces. Clean with denatured alcohol or an appropriate disk brake cleaner.

When bending, do not crimp or pinch the lines.

Never loop the lines. Looping the lines will create an air trap that is very hard to bleed out of the lines.

FRONT DISK BRAKE AND BRAKE LINE INSTALLATION

Grease and install the inner and outer wheel bearings on the rotor disk. Install the inner dust seals and the brake shields on the spindles. Install the rotor on the spindle and tighten the rotor hub nut to Ford specifications. Install the cotter pin and the dust cap. Install the caliper and the caliper mount as one unit and torque the caliper mount bolts to Ford specifications.

WARNING: Care must be taken to avoid damaging the brake pads during the installation of the calipers.

Once the calipers have been installed, attach the brake hose to the calipers. Attach the tie rod ends to the spindles and position the brake hose mount so that the steering can be moved from lock to lock, without putting any strain on the brake hoses. Mark their position onto the frame. Drill 7/32" holes and attach the mounts to the frame, using two 1/4 x 5/8" self-tapping hex washer head screws. Clip the brake hoses to the mounts. For suggested installation **see Figure 2-21.**

The rear axle brake hose is installed in the same manner. Make sure that the brake hose will not be put under any strain during the up and down movement of the rear suspension. Mark the hose mount position and drill a 7/32" hole and attach the mount to the frame, using one 1/4 x 5/8" self-tapping hex washer head screw. Clip the brake hose to the mount.

The brake lines should be made starting from the outermost point. i.e.: the brake hose mounts, starting at the rear axle hose mount, bend the line so that it travels along the back side of the upper control arm frame tube until it reaches the gas line. Then bend the line so that it is positioned alongside the gas line until it reaches the front of the driver's foot well. Bend it up and across the front of the foot well and master cylinder mount plate and connect it to the proportioning valve. **See Figure 2-21, Detail A.**

Starting with the right hand front brake hose mount, bend the brake line so that it travels along the top of the crossmember. Bend it again to travel along the top of the frame, just behind the left hand upper control arm, until it reaches the rear brake line. Bend it alongside the rear brake line and attach it to the proportioning valve.

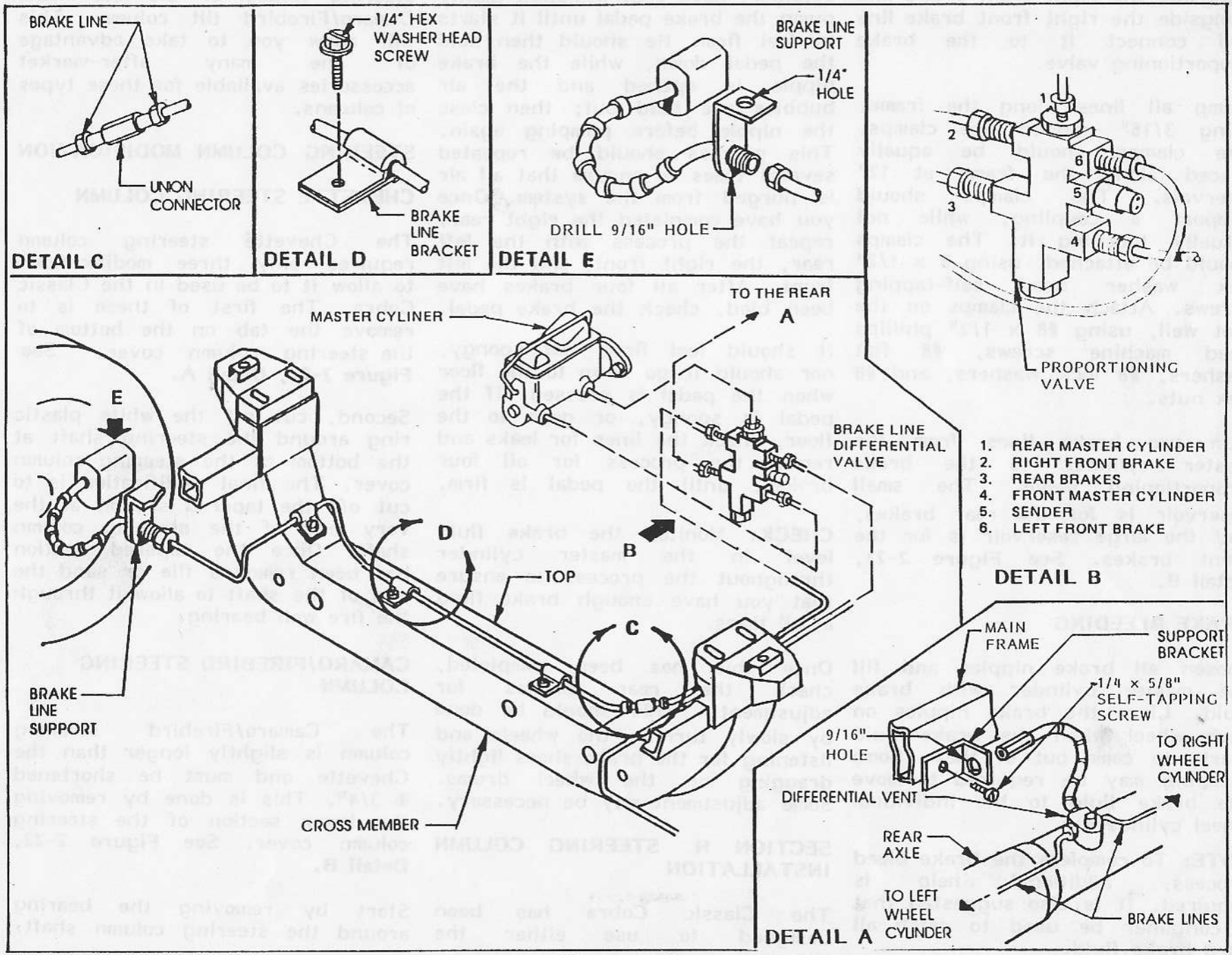

BRAKE LINE
UNION CONNECTOR
DETAIL C
1/4" HEX WASHER HEAD SCREW
BRAKE LINE BRACKET
DETAIL D
BRAKE LINE SUPPORT
1/4" HOLE
DRILL 9/16" HOLE
DETAIL E
1
2
3
4
5
6
PROPORTIONING VALVE
TO THE REAR
A
MASTER CYLINER
BRAKE LINE DIFFERENTIAL VALVE
E
D
B
C
TOP
BRAKE LINE SUPPORT
CROSS MEMBER
1. REAR MASTER CYLINDER
2. RIGHT FRONT BRAKE
3. REAR BRAKES
4. FRONT MASTER CYLINDER
5. SENDER
6. LEFT FRONT BRAKE
DETAIL B
MAIN FRAME
SUPPORT BRACKET
1/4 x 5/8" SELF-TAPPING SCREW
9/16" HOLE
TO RIGHT WHEEL CYLINDER
DIFFERENTIAL VENT
REAR AXLE
TO LEFT WHEEL CYLINDER
BRAKE LINES
DETAIL A

Figure 2-21

Bend the left front brake line alongside the right front brake line alongside the right front brake line and connect it to the brake proportioning valve.

Clamp all lines along the frame, using 3/16" padded line clamps. The clamps should be equally spaced along the frame at 12" intervals. The clamps should support a coupling, while not actually touching it. The clamps should be attached, using 8 x 1/2" hex washer head self-tapping screws. Attach the clamps on the foot well, using #8 x 1/2" phillips head machine screws, #8 flat washers, #8 lock washers, and #8 hex nuts.

Run two brake lines from the master cylinder to the brake proportioning valve. The small reservoir is for the rear brakes, and the large reservoir is for the front brakes. **See Figure 2-21, Detail B.**

BRAKE BLEEDING

Loosen all brake nipples and fill the master cylinder with brake fluid. Close the brake nipples on each wheel when the brake fluid starts to come out of them. Some pumping may be required to move the brake fluid to the individual wheel cylinders.

NOTE: To complete the brake bleed process, additional help is required. It is also suggested that a container be used to catch all used brake fluid.

Starting with the right rear brake cylinder, have your assistant gently pump the brake pedal until it starts to feel firm. He should then hold the pedal down, while the brake nipple is opened and the air bubbles are beld out; then close the nipple before pumping again. This process should be repeated several times to ensure that all air is purged from the system. Once you have completed the right rear, repeat the process with the left rear, the right front, and the left front. After all four brakes have been bled, check the brake pedal.

It should feel firm, not spongy, nor should it go down to the floor when the pedal is pressed. If the pedal is spongy, or goes to the floor, check the lines for leaks and repeat the process for all four brakes, until the pedal is firm.

CHECK: Monitor the brake fluid level in the master cylinder throughout the process to ensure that you have enough brake fluid at all times.

Once this has been completed, check the rear brakes for adjustment. This should be done by slowly turning the wheels and listening for the brake shoes lightly dragging on the wheel drums. Some adjustment may be necessary.

SECTION H STEERING COLUMN INSTALLATION

The Classic Cobra has been designed to use either the Chevrolet Chevette tilt or non-tilt steering column or the late model Camaro/Firebird tilt column. This will allow you to take advantage of the many after-market accessories available for these types of columns.

STEERING COLUMN MODIFICATION

CHEVETTE STEERING COLUMN

The Chevette steering column requires only three modifications to allow it to be used in the Classic Cobra. The first of these is to remove the tab on the bottom of the steering column cover. **See Figure 2-22, Detail A.**

Second, cut off the white plastic ring around the steering shaft at the bottom of the steering column cover. The final modification is to cut off the tapered section at the very end of the steering column shaft. Once the tapered section has been removed file or sand the end of the shaft to allow it through the fire wall bearing.

CAMARO/FIREBIRD STEERING COLUMN

The Camaro/Firebird steering column is slightly longer than the Chevette and must be shortened 3 3/4". This is done by removing the lower section of the steering column cover. **See Figure 2-22, Detail B.**

Start by removing the bearing around the steering column shaft.

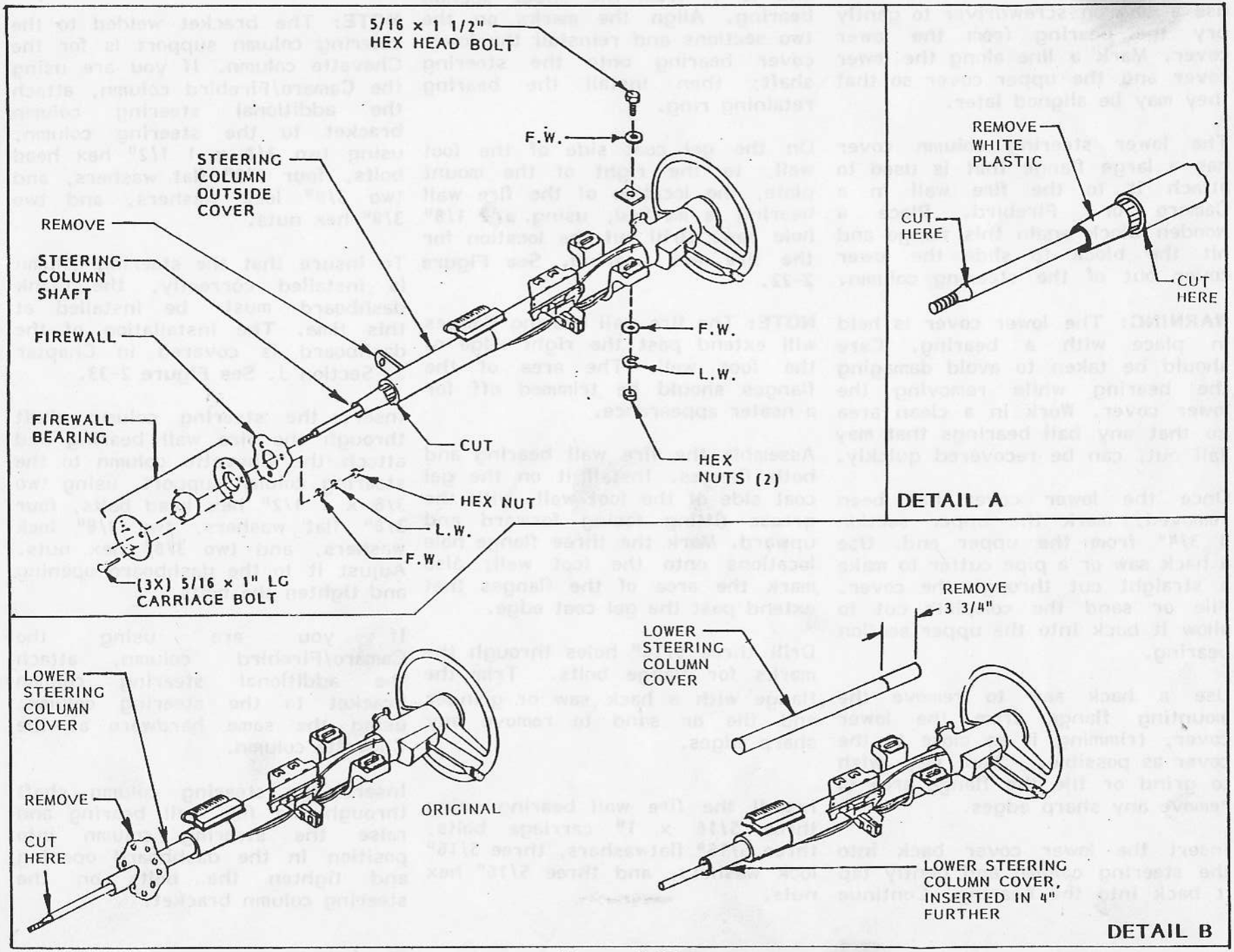

5/16 x 1 1/2" HEX HEAD BOLT
F.W.
STEERING COLUMN OUTSIDE COVER
REMOVE
STEERING COLUMN SHAFT
FIREWALL
FIREWALL BEARING
CUT
F.W.
L.W.
HEX NUTS (2)
HEX NUT
L.W.
F.W.
(3X) 5/16 x 1" LG CARRIAGE BOLT
REMOVE WHITE PLASTIC
CUT HERE
CUT HERE
DETAIL A
LOWER STEERING COLUMN COVER
REMOVE
CUT HERE
ORIGINAL
REMOVE 3 3/4"
LOWER STEERING COLUMN COVER
LOWER STEERING COLUMN COVER, INSERTED IN 4" FURTHER
DETAIL B

Figure 2-22

First take off the ring that holds the bearing on the cover. Then use a common screwdriver to gently pry the bearing from the lower cover. Mark a line along the lower cover and the upper cover so that they may be aligned later.

The lower steering column cover has a large flange that is used to attach it to the fire wall in a Camaro or Firebird. Place a wooden block again this flange and hit the block to slide the lower cover out of the steering column.

WARNING: The lower cover is held in place with a bearing. Care should be taken to avoid damaging the bearing while removing the lower cover. Work in a clean area so that any ball bearings that may fall out, can be recovered quickly.

Once the lower cover has been removed, mark the upper section 3 3/4" from the upper end. Use a hack saw or a pipe cutter to make a straight cut through the cover. File or sand the complete cut to allow it back into the upper section bearing.

Use a hack saw to remove the mounting flange from the lower cover, trimming it as close to the cover as possible. You may wish to grind or file the flange area to remove any sharp edges.

Insert the lower cover back into the steering column and gently tap it back into the bearing. Continue to tap the lower cover in until the end is 4" from the upper section bearing. Align the marks on the two sections and reinstall the lower cover bearing onto the steering shaft; then install the bearing retaining ring.

On the gel coat side of the foot well, to the right of the mount plate, the location of the fire wall bearing is marked, using a 2 1/8" hole saw. Drill out the location for the fire wall bearing. **See Figure 2-22.**

NOTE: The fire wall bearing flanges will extend past the right edge of the foot well. The area of the flanges should be trimmed off for a neater appearance.

Assemble the fire wall bearing and both flanges. Install it on the gel coat side of the foot well, with the grease fitting facing forward and upward. Mark the three flange hole locations onto the foot well; also mark the area of the flanges that extend past the gel coat edge.

Drill three 5/16" holes through the marks for flange bolts. Trim the flange with a hack saw or grinder and file or sand to remove any sharp edges.

Install the fire wall bearing using three 5/16 x 1" carriage bolts, three 5/16" flatwashers, three 5/16" lock washers, and three 5/16" hex nuts.

STEERING COLUMN INSTALLATION

NOTE: The bracket welded to the steering column support is for the Chevette column. If you are using the Camaro/Firebird column, attach the additional steering column bracket to the steering column, using two 3/8 x 1 1/2" hex head bolts, four 3/8" flat washers, and two 3/8" lock washers, and two 3/8" hex nuts.

To insure that the steering column is installed correctly, the blank dashboard must be installed at this time. The installation of the dashboard is covered in Chapter 2, Section J. **See Figure 2-33.**

Insert the steering column shaft through the fire wall bearing and attach the Chevette column to the steering column support, using two 3/8 x 1 1/2" hex head bolts, four 3/8" flat washers, two 3/8" lock washers, and two 3/8" hex nuts. Adjust it to the dashboard opening and tighten the bolts.

If you are using the Camaro/Firebird column, attach the additional steering column bracket to the steering column, using the same hardware as the Chevette column.

Insert the steering column shaft through the fire wall bearing and raise the steering column into position in the dashboard opening and tighten the bolts on the steering column bracket.

Measure from the rear edge of the Camaro steering column bracket to the rear edge of the Chevette steering column bracket. Slide the column in or out of the fire wall bearing until that measurement is 15 1/2".

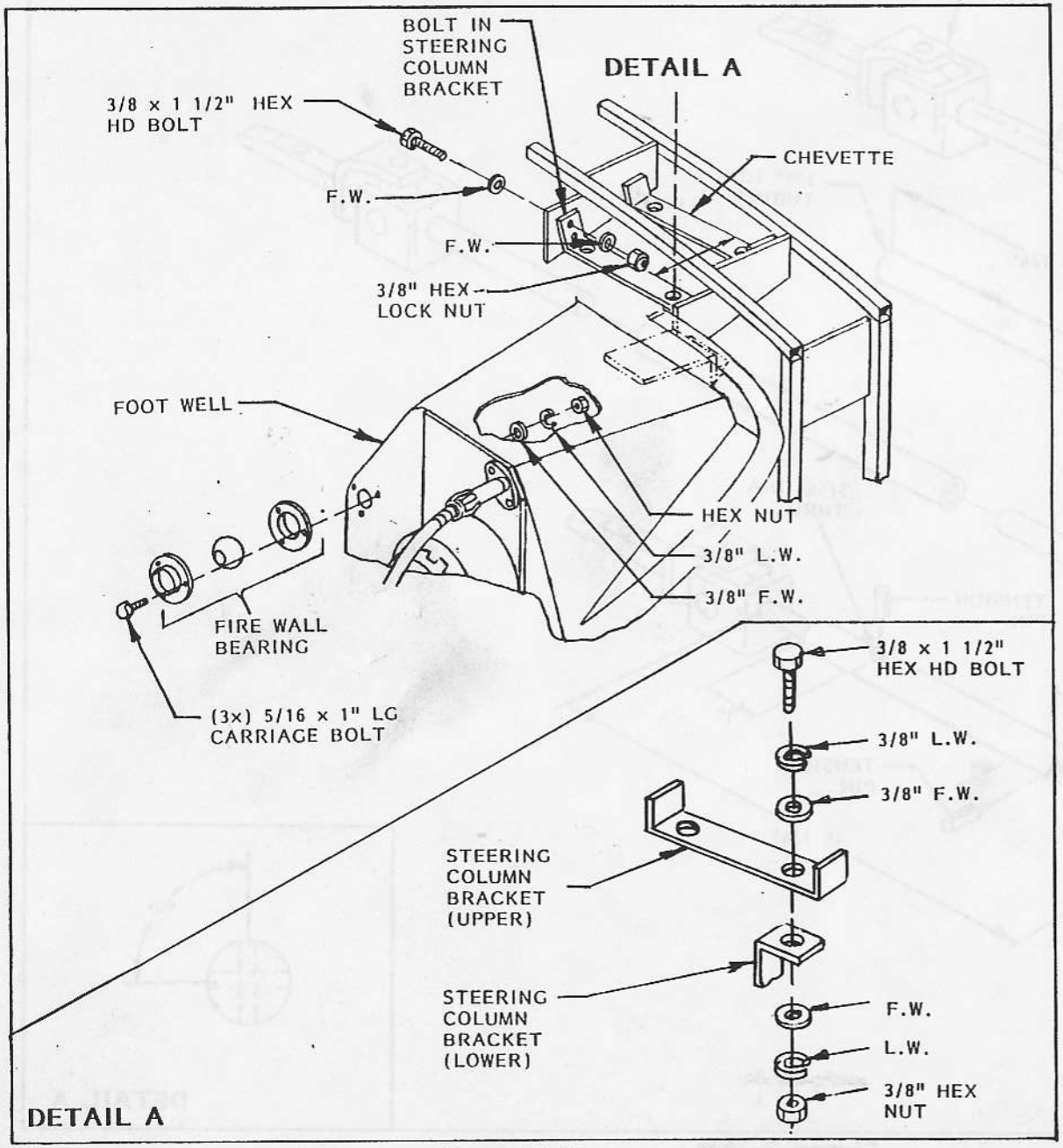


Figure 2-23

Clamp the steering column bracket securely into place and drill four 3/8" holes through the bracket and the plates. Then attach the bracket to the steering column support, using four 3/8 x 1 1/2" hex head bolts, eight 3/8" flat washers, and four 3/8" lock nuts.

NOTE: Use a center punch to mark the hole locations and to prevent the drill bit from walking. Start with a smaller bit, such as 1/8", and work up to a 3/8" drill bit. This will make it easier to drill through the bracket and plates. If you have access to a mig or arc welder the bracket may be welded into position instead.

EXTENDED STEERING LINK FABRICATION

NOTE: The extended steering link is available as an optional part,so that you will not have to fabricate your own.

Attach the steering flange to the rack and pinion unit. You will need to purchase the following parts to fabricate the extended steering link:

1 Ford link assembly
Pt. #D9BZ-3B676-B

1 14 1/4" long 3/4 I.D. steel tubing with at least an 1/8" thick wall

2 5/16 x 1 1/4" tension pin

2 ft. of .040 safety wire

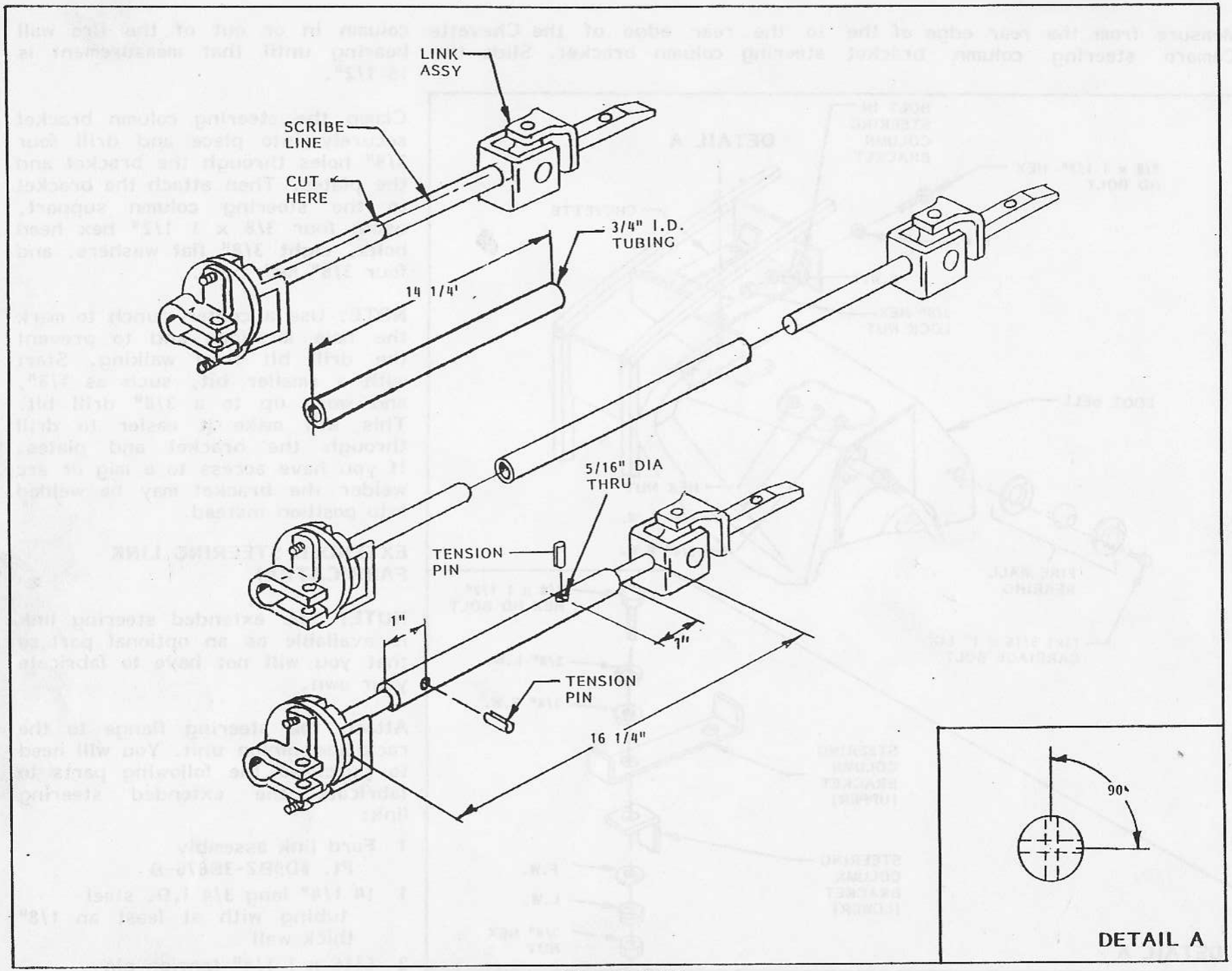

LINK ASSY
SCRIBE LINE
CUT HERE
3/4" I.D. TUBING
14 1/4"
5/16" DIA THRU
TENSION PIN
1"
1"
TENSION PIN
16 1/4"
90°
DETAIL A

Figure 2-24

Measure the length of the steering shaft that comes out of the fire wall bearing. Mark the exposed steering shaft 3 3/8" from the fire wall bearing. Cut off the excess shaft.

Mark the Ford link assembly with a straight line from a tab for the rubber coupling to the universal on the opposite end. This is your alignment line and must not be removed until the link is completed.

Cut the link assembly in half, and attach the section with the rubber ring to the steering flange on the rack and pinion assembly. Slide the steel tubing onto the lower section of the link assembly. Insert the universal section of the link assembly into the upper section of the tubing. Slide the insert side of the universal into the steering shaft.

Position the upper and lower sections of the Ford link assembly so that they are in perfect alignment. Measure from the tab for the rubber coupling to the bottom of the universal. **See Figure 2-24.**

Slide the upper section up until this measurement is 16 1/4". Position the tubing so that it is equally spaced between the two sections. Once you have the ends aligned, the tubing equally spaced and the correct length, tack weld the tubing to the ends of the link assembly.

NOTE: A mig or arc welder should be used to tack weld the tubing to the ends. The tack welds must be good enough to hold the end in position while checking the straightness of the extended link and installing the tension pins.

Install a wheel onto the left front rotor. Turn the wheel from lock to lock, so that the rack and pinion moves the extended link.

CHECK: Insure that the end on the entend link are straight and aligned. You may notice a slight wobble where the universal enters the steering shaft.

Once the extended link has been checked for straightness, remove the extended link from the chassis by disconnecting it from the steering flange on the rack and pinion.

Place the link into a vice and drill two 5/16" holes through the tubing and the end of the links. Rotate the link 90 degrees and drill two more 5/16" holes through the tubing and link ends. **See Figure 2-24, Detail A.**

Using a vise or a hammer, insert a tension pin through each of these holes.

After the tension pins have been installed, cut or grind off the exposed section of the tension pins. Cut four pieces of safety wire, 8 inches long. Insert the safety wire through the tension pins until there is about 1 inch on one side. Wrap the safety wire around half of the tubing and insert it through the tension pin again. Wrap the safety wire around the other half of the tubing and twist the two ends together.

NOTE: Start twisting the ends together as close to the tension pin as possible. A pair of needle nose pliers or vise grip pliers may be used to twist the safety wire together. Do not twist the ends tighter than 12 twists per inch or the safety wire may break.

Cut the twisted ends off an inch from the tension pin and bend the cut end back towards the tension pin so that the sharp edges are not exposed. Repeat for the other pin.

Once both pins have been safety wired the extended link tube should be fully welded, prior to being installed.

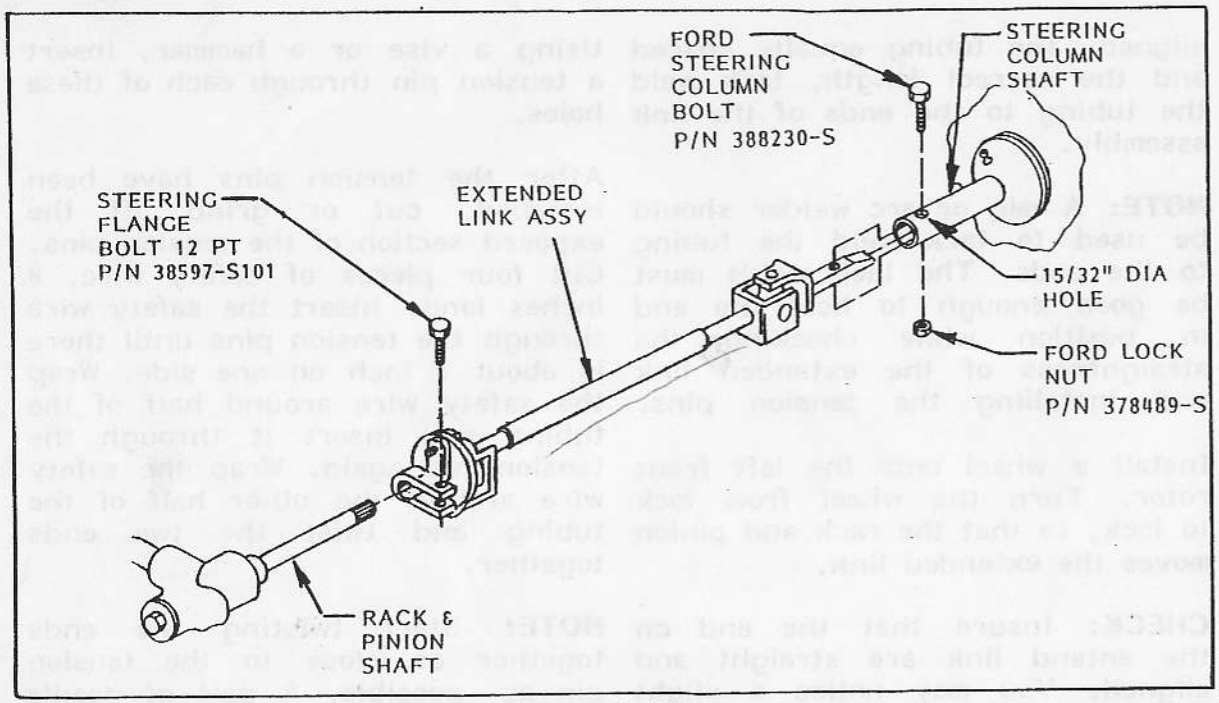


Figure 2-25

EXTENDED LINK INSTALLATION

Measure from the universal flange to the center of the bolt hole or the steering column connector. Insert the steering columr connector into the steering columr and attach the extended link assembly to the rack and pinior flange. **See Figure 2-25.**

Place the steering wheel and the front wheel or rotor disc, as if the car was going straight ahead. Mark the steering shaft with location for the connecting bolt, using the previous measurement. The location of the bolt hole on the extended link connector and the steering column shaft should be facing straight up.

Mark the hole location, using a center punch, and remove the extended link.

Drill through the steering column shaft, using a 7/16" drill bit.

NOTE: When you need to drill a large hole through metal, drill in steps; i.e.: first use a 1/8" drill bit, then a 1/4", then a 5/16", until you get to the correct size. This way is more accurate and easier on the drill bits, although it takes slightly longer.

Reinsert the extended link into the steering column and attach it to the steering column shaft, using the original bolt and lock nut for the Ford link assembly or a suitable substitute bolt and lock nut, that is grade 8 or stronger. Reattach the rack and pinion flange to the extended link and tighten all nuts and bolts to Ford specifications.

CHECK: Move the steering wheel from lock to lock to check for any binding and for straightness of the link.

To correct the slight wobble on the universal end of the link assembly, tack weld the steering column shaft to the link assembly's steering column connector. Tack weld in at least four places, while insuring the connector is centered in the shaft.

NOTE: The connector may be fully welded if you do not plan to remove the column later. There will be no need to remove the column or the link assembly during the assembly process.

ACCELERATOR INSTALLATION

Because of the locations of the foot well and engine, it is not possible to use the Mustang II throttle cable and accelerator pedal assembly. Instead your kit has an accelerator, pedal arm and mount. You will need an accelerator cable from Ford, Part No. C8UZ-9A758-A, and the pedal pad from the Mustang II pedal assembly.

Remove the gas pedal pad from the Mustang II pedal assembly, by tapping the retaining pin through the pedal arm. Cut or grind off the mounting tabs from the gas pedal pad. Position it onto the

pedal arm supplied with your kit and drill two 1/4" holes through the pad and the plate on the arm. Countersink the holes on the pad and attach the pad to the plate, using two 1/4 x 1" flat head allen machine screws, two 1/4" flat washers, and two 1/4" lock nuts.

Attach the pedal arm to the throttle cable mount, using one 5/16 x 1 1/2" hex head bolt, two 5/16" flat washers, and one 5/16" lock nut. Tighten enough to allow the pedal to swing freely. **See Figure 2-26.**

Have an assistant hold the pedal/ throttle cable mount against the forward foot well.

Sit in the chassis and have your assistant position the mount to the location that feels the most natural for you. Mark the location of the throttle sleeve and drill a 1 1/8 inch hole at that location, using a hole saw.

Drill a 1/4" hole straight through the throttle sleeve on the gas pedal mount, using a 5/16-18 tap. Thread each hole on the throttle sleeve. Install two 5/16 x 3/8" allen head set screws into the holes.

Mark the top end of the pedal arm 3/8" down. Drill a 5/32" hole through this mark. Thread this hole using a No. 10-32 tap. Install the throttle cable ball stud into the hole.

Slide the throttle sleeve through the hole in the foot well and drill three 1/4" holes through the hole on the mount plate.

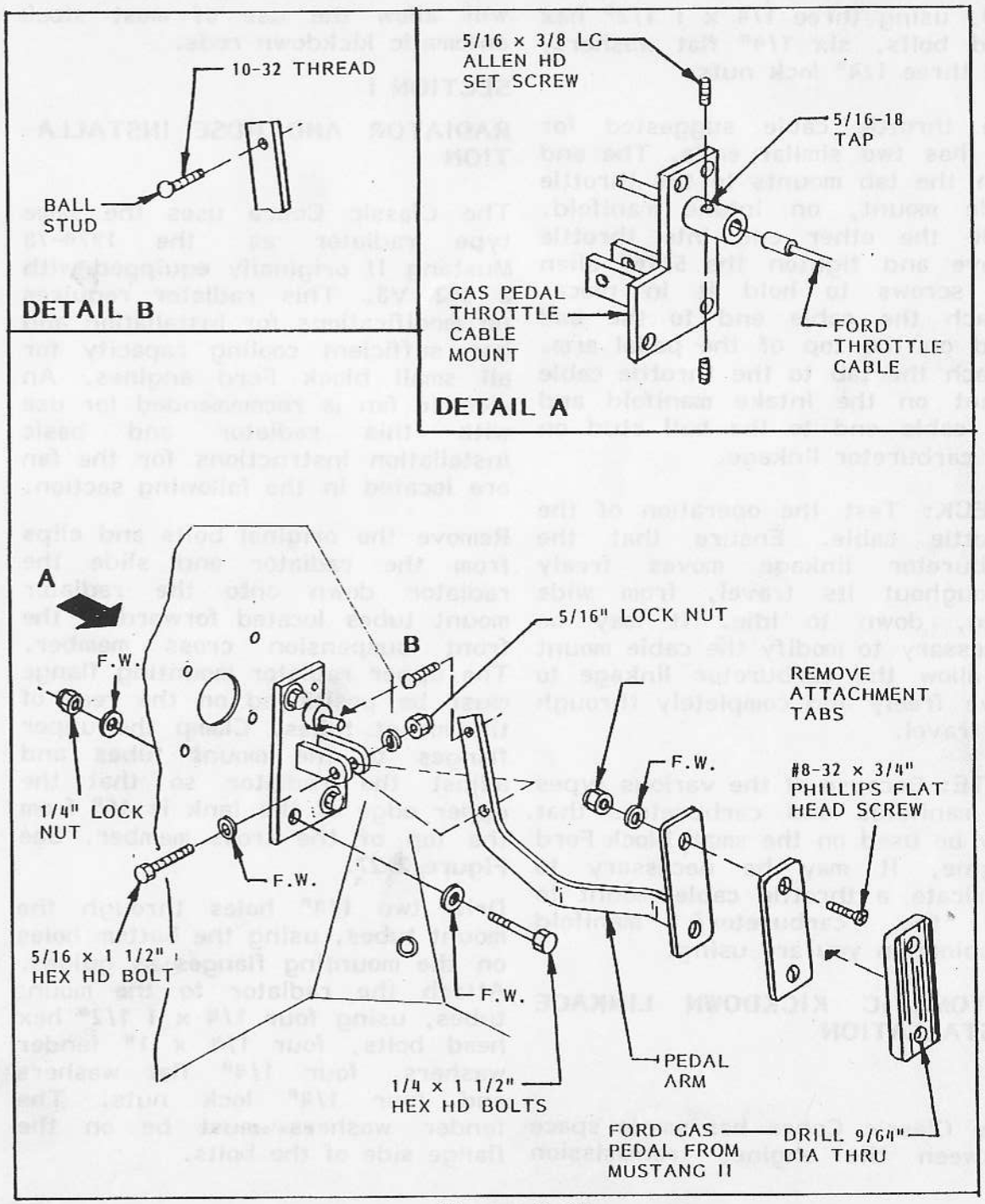


Figure 2-26

Attach the mount plate to the foot well, using three 1/4 x 1 1/2" hex head bolts, six 1/4" flat washers, and three 1/4" lock nuts.

The throttle cable suggested for use has two similar ends. The end with the tab mounts to the throttle cable mount, on intake manifold. Slide the other end into throttle sleeve and tighten the 5/16" allen set screws to hold it in place. Attach the cable end to the ball stud on the top of the pedal arm. Attach the tab to the throttle cable mount on the intake manifold and the cable end to the ball stud on the carburetor linkage.

CHECK: Test the operation of the throttle cable. Ensure that the carburetor linkage moves freely throughout its travel, from wide open, down to idle. It may be necessary to modify the cable mount to allow the carburetor linkage to move freely and completely through its travel.

NOTE: Because of the various types of manifolds and carburetors that may be used on the small block Ford engine, it may be necessary to fabricate a throttle cable mount to fit the carburetor/ manifold combination you are using.

AUTOMATIC KICKDOWN LINKAGE INSTALLATION

The Classic Cobra has ample space between the engine, transmission and the front cockpit liner. This will allow the use of most stock automatic kickdown rods.

SECTION I

RADIATOR AND HOSE INSTALLATION

The Classic Cobra uses the same type radiator as the 1974-78 Mustang II originally equipped with a 302 V8. This radiator requires no modifications for installation and has sufficient cooling capacity for all small block Ford engines. An electric fan is recommended for use with this radiator and basic installation instructions for the fan are located in the following section.

Remove the original bolts and clips from the radiator and slide the radiator down onto the radiator mount tubes located forward of the front suspension cross member. The upper radiator mounting flange must be positioned on the rear of the mount tubes. Clamp the upper flanges to the mount tubes and adjust the radiator so that the upper edge of the tank is 16" from the top of the cross member. **See Figure 2-27.**

Drill two 1/4" holes through the mount tubes, using the bottom holes on the mounting flanges as guides. Attach the radiator to the mount tubes, using four 1/4 x 1 1/2" hex head bolts, four 1/4 x 1" fender washers, four 1/4" flat washers and four 1/4" lock nuts. The fender washers must be on the flange side of the bolts.

RADIATOR HOSE INSTALLATION

For the upper radiator hose use NAPA hose, Part No. FM91 or its equivalent universal hole, 22" long with a 1 1/2" ID at each end.

For the lower radiator hose use NAPA hose, Part No. FF305 or its equivalent universal hose, 27" long, with a 1 3/4" ID at the water pump end and a 1 1/2" ID for the radiator.

RADIATOR HOSE MOUNT

An optional lower radiator hose mount is available from our Parts Department. This mount is used to secure and protect the radiator hose underneath the front suspension cross member.

Slide the lower radiator hose mount over the lower radiator hose. Connect the lower radiator hose to the radiator and position the hose mount on the underside of the cross member. Attach the mount to the cross member, using four 1/4 x 5/8" hex washer head self-tapping screws.

NOTE: On most early small block Ford engines the water pump outlet is on the passenger side of the engine. The Mustang II water pump can be installed on most of these engines. If it cannot, the radiator may be modified to relocate the lower outlet to the correct side.

WARNING: An electric fan is suggested for use on the Classic Cobra. If you choose to use an engine driven fan, ensure that it will not come in contact with either the upper radiator hose or the front suspension crossmember.

SECTION J WIRING INSTALLATION

After a careful study of the wiring harness schematics, lay out your wiring harness onto the chassis and flag and mark the eventual locations of all the wires. Additional wiring may be required for the following items:

Power antenna
Radio
Speakers
Windshield washer pump
Alarm system
Battery safety switch
Electric fuel pump
Fuel pump shut-off switch

NOTE: Some of these items appear on the wiring schematic to show how they might be installed. Radios and alarm systems are not covered in this manual due to the variety available.

Be sure that any additional wiring added is long enough to reach the locations of the items that you plan to install. When installing additional items, a ground wire may be required when mounting the part to the fiberglass.

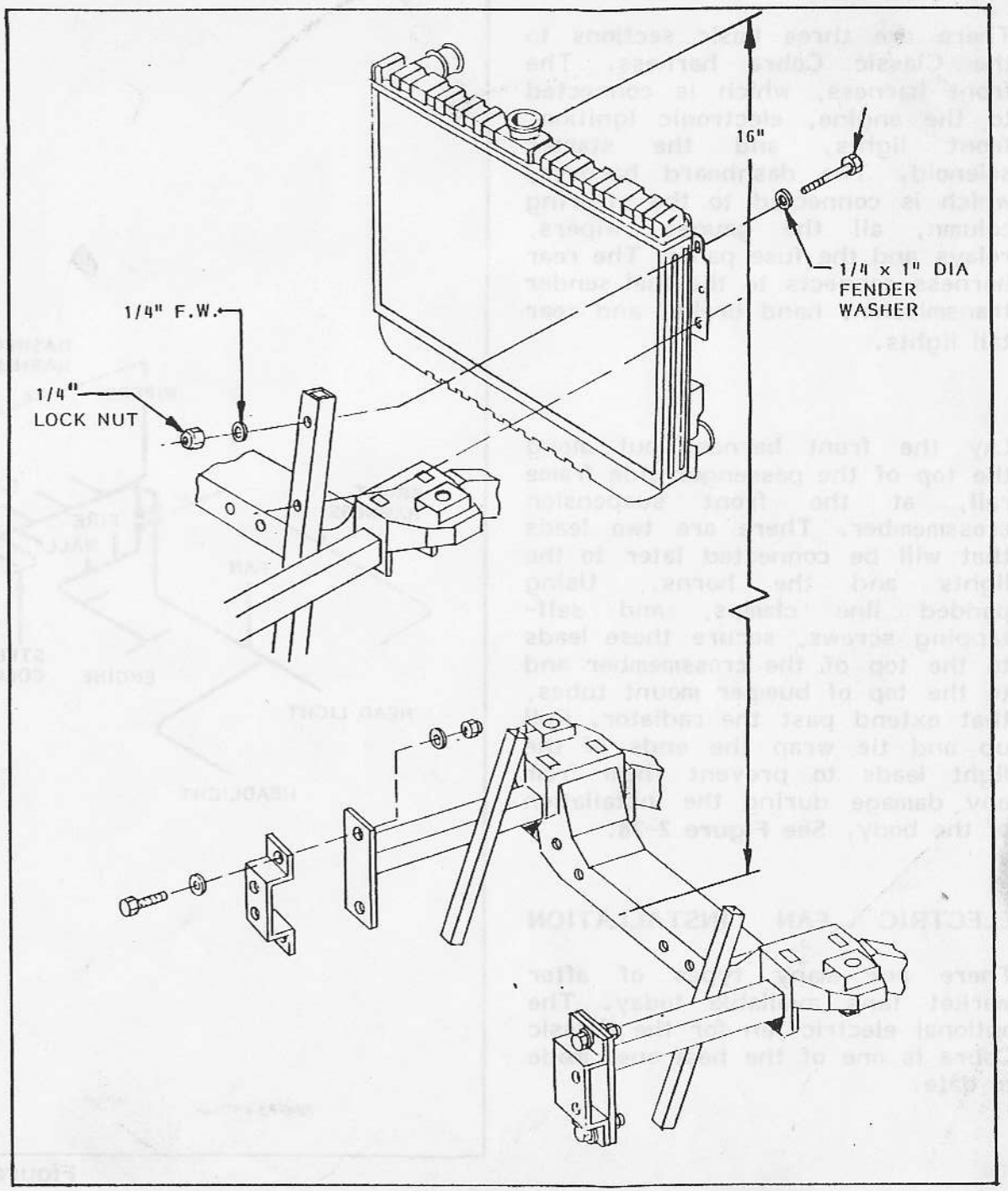


Figure 2-27

WIRING HARNESS ROUTING

There are three basic sections to the Classic Cobra harness. The front harness, which is connected to the engine, electronic ignition, front lights, and the starter solenoid. The dashboard harness, which is connected to the steering column, all the gauges, wipers, relays and the fuse panel. The rear harness connects to the fuel sender transmission, hand brake, and rear tail lights.

Lay the front harness out along the top of the passenger side frame rail, at the front suspension crossmember. There are two leads that will be connected later to the lights and the horns. Using padded line clamps, and self-tapping screws, secure these leads to the top of the crossmember and to the top of bumper mount tubes, that extend past the radiator. Roll up and tie wrap the ends of the light leads to prevent them from any damage during the installation of the body. **See Figure 2-28.**

ELECTRIC FAN INSTALLATION

There are many types of after market fans available today. The optional electric fan for the Classic Cobra is one of the best ones made to date.

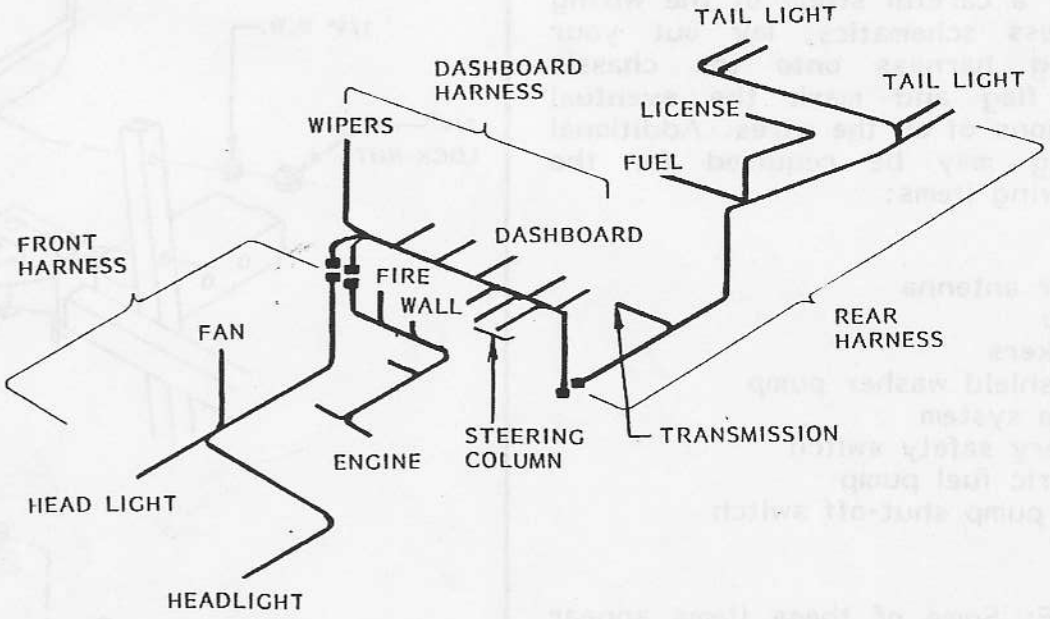


Figure 2-28

Attach the fan to the front of the radiator, using the hardware provided. Connect the fan to a battery to ensure that it blows through the radiator. If it blows away from the radiator, reverse the wires and mark the positive wires. **See Figure 2-29.**

Connect the ground wire for the fan motor to the chassis or splice it to the ground wire in the harness.

Connect the positive fan motor wire to the yellow 12 GA wire on the fan lead on the front harness.

Attach the thermostat switch to the radiator core using its installation hardware.

WARNING: Care should be taken when attaching the switch to the radiator to prevent damage to either of them.

Cut the middle of the pink/black loop on the fan lead and connect these two wires to the thermostat.

The thermostat switch supplied with the fan will turn the fan on when the face of the switch reaches 170°. An adjustable thermostat switch may be used as a replacement for this switch. The thermostat switch should only receive when the engine is on.

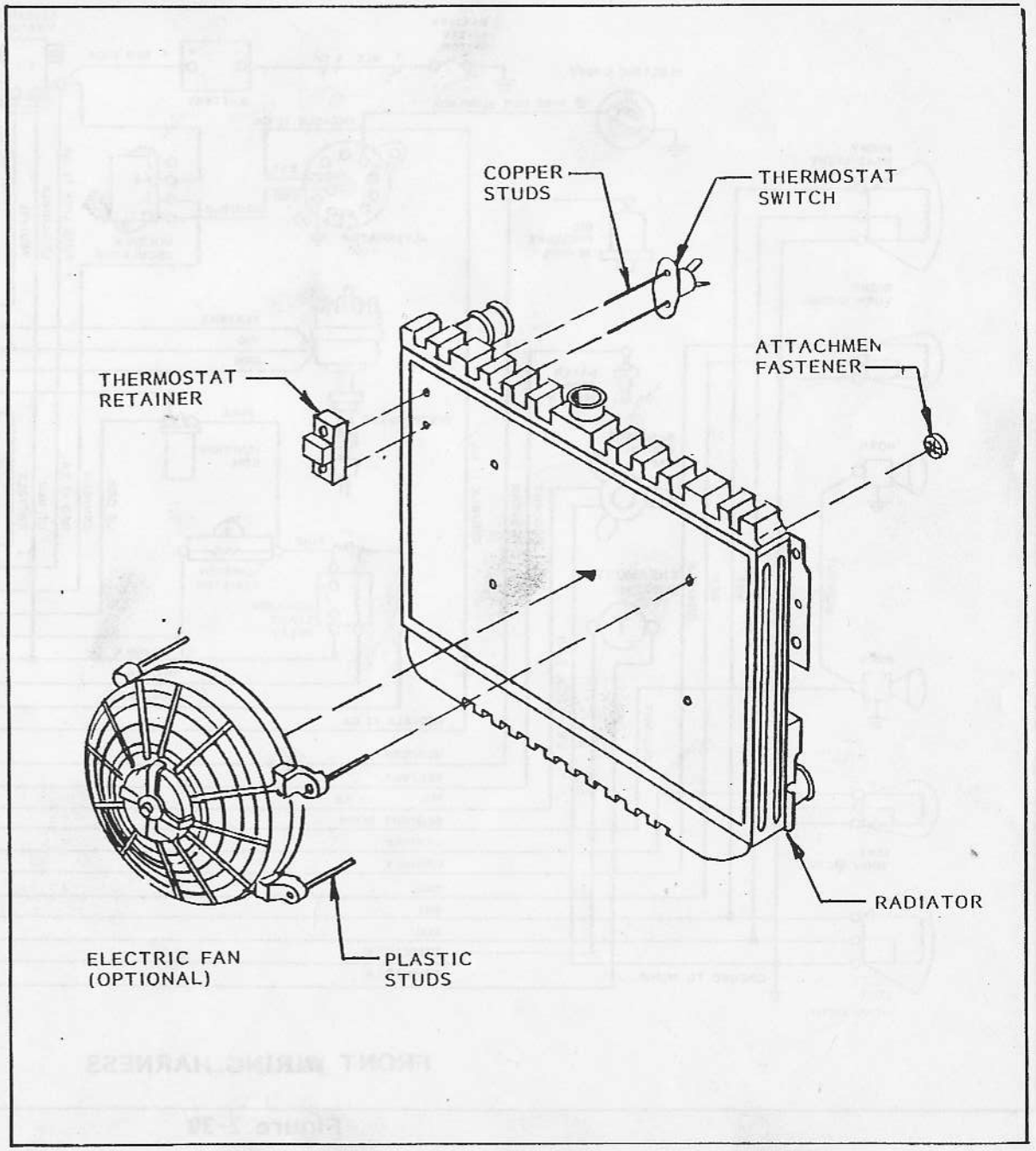
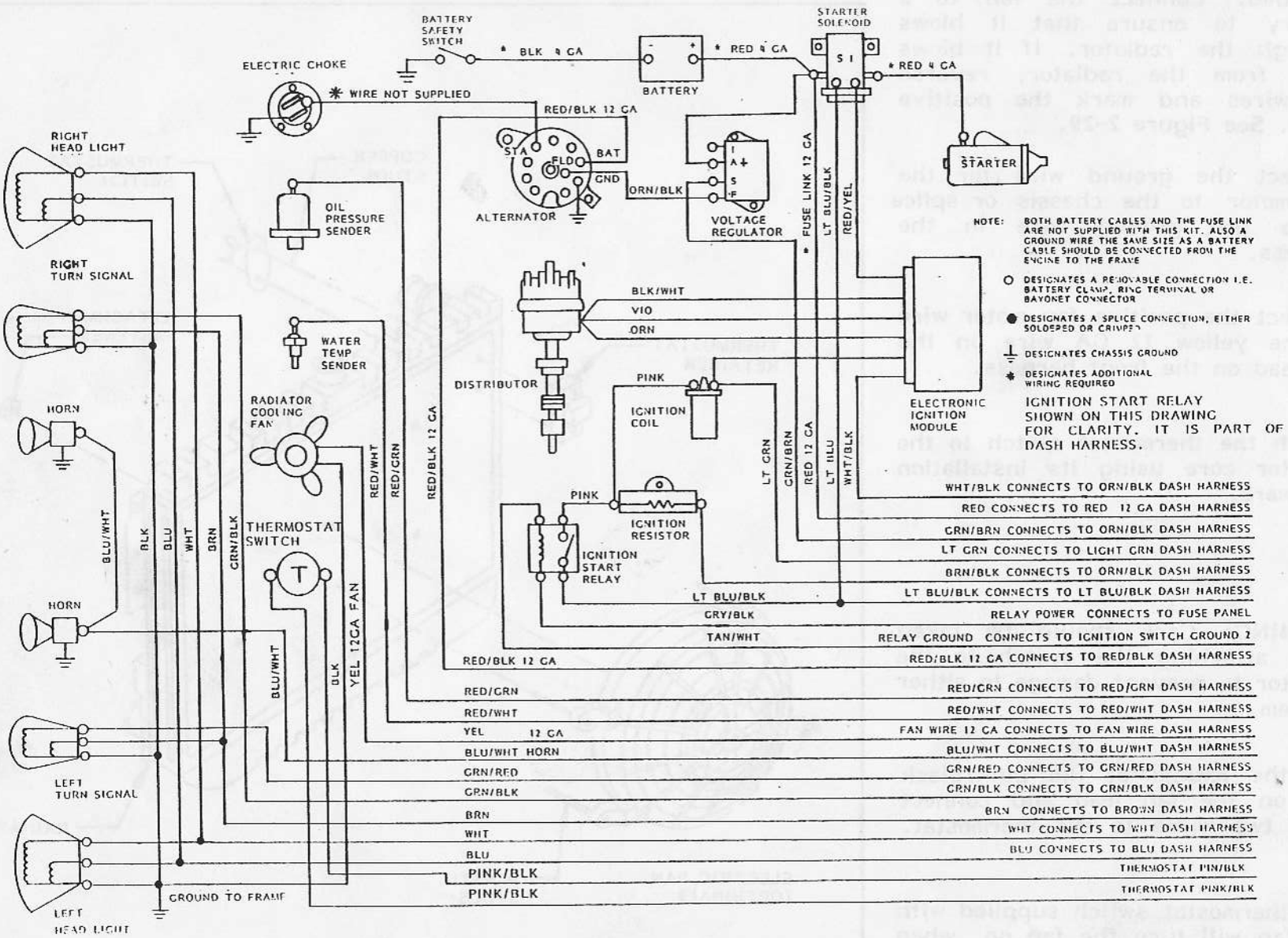


Figure 2-29



FRONT WIRING HARNESS

Figure 2-30

The relay and fan switch connection are located with the instructions for the dash wiring.

ENGINE WIRING

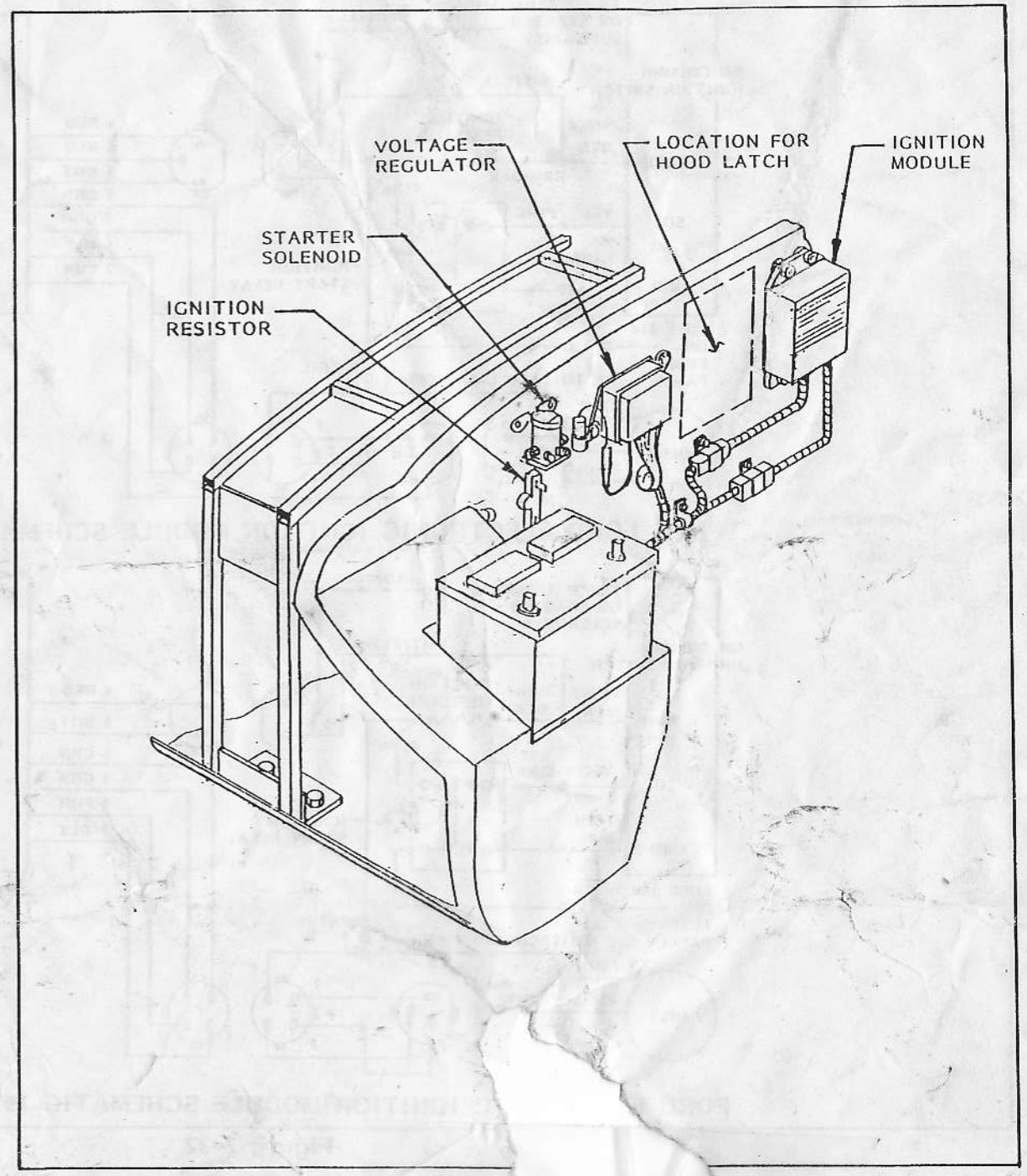
See Figure 2 for front harness schematics. **See Figure 2-30.**

Continue to clamp the front harness along the top of the frame rail from the front crossmember to the passenger foot well.

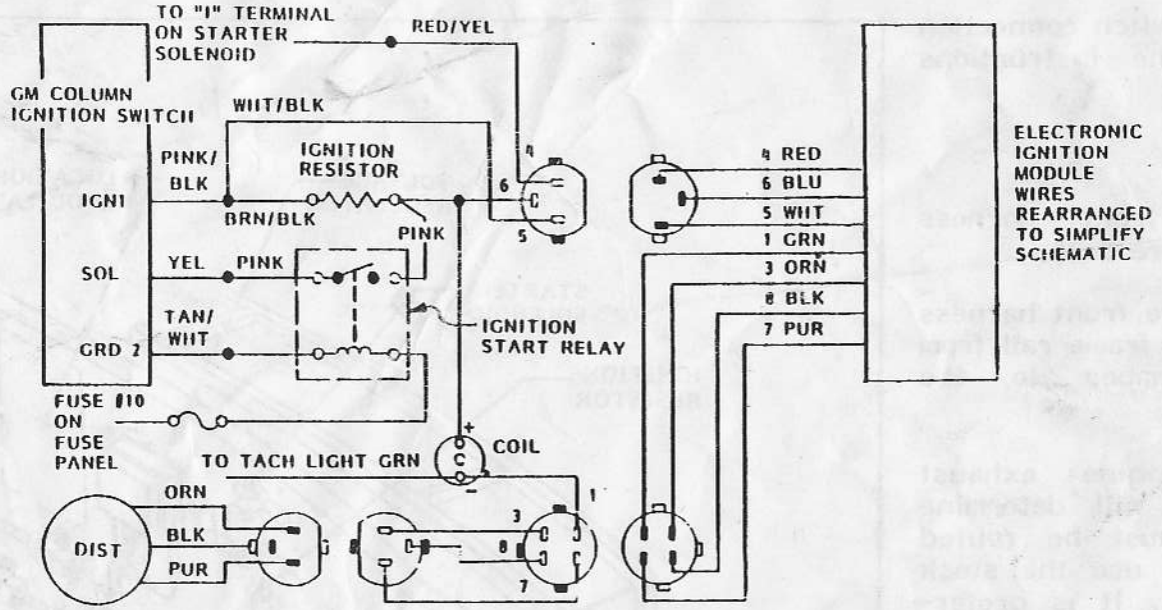
WARNING: The engine exhaust system you choose will determine how the harness must be routed in this area if you use the stock Mustant II manifolds. It is preferable to route the harness on top of the frame rail if you use the optional Classic Cobra headers. Route the harness along the inside edge of the frame rail and under the motor mount bracket.

Open a 3/4" hole for the harness in the triangular area of the passenger foot well near the frame rail. Run the harness through the hole and along the inside corner of the foot well, using No. 8-32 2 x 3/4" phillips machine screw, No. 8 flat washer, No. 8 lock washers, and No. 8-32 hex nuts. **See Figure 2-31.**

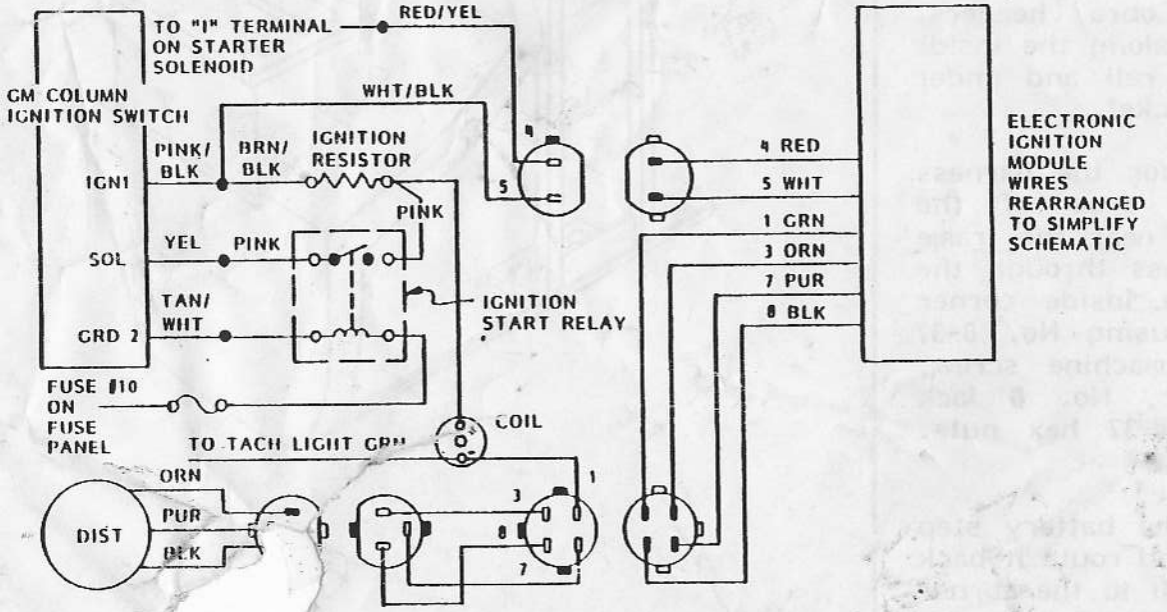
At the corner of the battery step clamp the harness and route it back along the tunnel wall to the corner of the tunnel and the lower edge of the fire wall. The lead for the engine, electrical and ignition



Figure



FORD ELECTRONIC IGNITION MODULE SCHEMATIC 1975



FORD E C IGNITION MODULE SCHEMATIC 1976 OR LATER

Figure 2-32

wiring will be here. Open a 3/4" hole to route the lead to the engine. Route this lead out of the foot well to the engine. Make sure that only the end of the harness remains inside the front cockpit liner.

The connections for the alternator, distributor, coil, voltage regulator, and ignition module are not included with the harness kit. If your small block Ford engine did not have these connector plugs, we recommend that you purchase them from your local Ford dealer or from an auto salvage yard.

Attach the plugs by soldering and using heat shrink to cover the solder joint.

Mark the center of the front fire wall and place the hood latch box there. Using a grease pencil, outline the location of the latch box on the inside and outside of the fire wall. Avoid installing any electrical component inside the outline of the latch box on either side of the fire wall.

STARTER SOLENOID RELAY

The first set of wires on the engine lead is for the starter solenoid relay. Attach the starter solenoid relay to the fire wall, using two 1/4 x 1" hex bolts, four 1/4" flat washers, two 1/4" lock washers and two 1/4" hex nuts.

NOTE: There are no set locations for the electric components on the fire wall. Therefore you may place them to suit your need and trim the wires to fit. **See Figure 2-31.**

The starter solenoid has two large studs, the one on the left is for the positive cable from the battery, the yellow 16 gauge wire and the 12 gauge fuse link connected to the red 12 gauge wire. The large stud on the right side connects to the cable for the starter. There are two small studs on the front. The left hand one is marked "S" and connects to the light blue/black wire. The right hand stud is marked "I" and connects to the red/yellow wire.

WARNING: The starter solenoid relay, the voltage regulator and electronic ignition module must be grounded. Additional ground wires should be run inside the fire wall to the steering column support.

BALLAST RESISTOR

The ballast resistor should be mounted below the starter solenoid relay, using a single 1/4 x 1 1/2" hex bolt, two 1/4" flat washers, a 1/4" lock washer and 1 1/4" hex nut.

Normally two wires connect to the ballast resistor, a brown/black wire and a pink wire. The pink wire is a loop. It must be cut and both ends stripped and installed into a connector. If both ends are not used, your Classic Cobra will not run. The early electronic ignition module's blue wire will also need to be installed in the same connector as the pink wires. **See Figure 2-32**

VOLTAGE REGULATOR

The second set of wires on the engine lead is for the voltage regulator. The voltage regulator should be installed with the connector at the bottom, so that the letters for the connectors are readable. Attach to the fire wall, using two 1/4 x 1" hex bolts, four 1/4" flat washers, two 1/4" lock washers and two 1/4" hex nuts.

NOTE: To suppress noise in the radio from the alternator most Ford cars have a suppressor connected to the A+ connector on the plug. The suppressor should be attached to the same mounting bolt as the additional ground wire inside the fire wall.

From left to right the voltage regulator terminals are marked "I" for indicator light, "A+" for alternator output, "S" for ignition switch, and "F" for field. A Ford connector plug should be used because it also has these marks on it, along with the connection for the suppressor and will lock onto the voltage regulator.

The wires on the connector should be spliced to the following wires on the harness: "I" green/red is not used; "A+" yellow/white dot to the harness yellow "S" is either green/red or white/black to the harness green/brown; and "F" orange/light blue to the harness orange black. These splices should be soldered and covered with heat shrink to provide a better connection.

NOTE: The voltage regulator connector comes two ways. Although the internal parts are the same, the wires are different. On a Ford with an indicator light, there are four wires: "I" green/red, "A+" yellow/white, "S" white/black and "F" orange/light blue. On a Ford with an ammeter "I" is not used so there are only three wires. "A+" yellow/white, "S" green/red, and "F" orange/light blue. Make sure that you know what was in the car you got the connector from because of the "A" connection's color code changes.

Position and clamp the wiring harness into place just above the edge of the fire wall and the tunnel. Place the engine lead on the rear of the manifold. The other lead is for the electronic ignition module.

IGNITION MODULE

Place the ignition module on the driver's side of the fire wall clear of the outline of the latch box. With the connector plugs facing the left, mark the location of the bolts onto the fire wall. Drill a 1/4" hole at each location and attach the ignition module to the fire wall, using three 1/4 x 1" hex bolts and three 1/4" flat washers. An additional ground wire must be connected to one of the bolts.

There are two basic types of ignition modules. They are identified by the type of connectors on them. The first type has two connectors, one with three pins, for a total of seven wires coming out of the ignition module. This type of ignition module was used until 1975. **See Figure 2-32.**

The second type of ignition module was introduced in 1976. This type also has two connectors, one with two pins and the other with four pins, for a total of six wires.

NOTE: There is a third type of ignition module that was manufactured in 1978. This type is equipped for either an altitude sensor or an economy modulator. No provisions have been made in the harness for the use of this ignition module, so if you live in an area where this module would help the performance of your classic Cobra, additional wiring and parts would be necessary to use it. This module is easily identified by the three connector plugs, instead of the two normally used. Refer to a Ford manual to assist you when installing the additional wiring required to use this module.

While both types of ignition modules can be used with the harness, the early module requires one additional wire to the ballast resistor. The harness connections are as follows: the three pin plug; red to the harness red/yellow, blue to the coil side of the ballast resistor (additional wire) and white to the harness white/black; the four pin plug, green to the harness light green, orange to the harness orange, purple to the harness purple, and black to the harness black/white.

The later ignition module connects to the harness in almost the same way, only it does not require a wire to be run to the ballast resistor. All the other connections remain the same.

When you are splicing the ignition module to the wiring harness, use the original style Ford connector plugs. This will allow you to replace the module without having to resplice the wires should the module fail. The harness splices should be soldered and covered with heat shrink.

Run the engine lead along the passenger side of the intake manifold. Clamp it into place using padded line clamps and the valve cover bolts.

Alternator; Connect the orange/black wire to the "F" (field) terminal and the red/black wire to the "B" (battery) terminal on

the alternator. Connect a ground wire to the "Gnd" (ground) terminal on the alternator. The "sta" (stator) terminal may be used to power the electric choke on the carburetor. (An additional wire will be required)

Distributor: The Ford electronic distributor has a male connector plug. The female connector plug should be soldered to the engine harness as follows: connect the harness orange to the Ford orange; connect the harness purple to the Ford purple; and connect the harness black/white to the Ford black.

NOTE: If you are not using the Ford electronic distributor, run the distributor wire to the negative side of the coil. You may need to eliminate the ballast resistor. If you are using an after-market distributor, refer to the installation instruction's wiring diagrams to adapt the engine harness to your needs.

Coil: Connect the pink wire to the positive terminal and the light green wire to the negative wire.

Sending units: Connect the red/green wire to the oil pressure sending unit and the red/white wire to the water temperature sending unit on the engine.

NOTE: Unless your Ford Engine originally had an oil pressure gauge, you will need to replace the oil light switch on the driver side of the engine with an oil pressure sender. The Ford Part Number for the oil pressure sender extension is D1UZ-9B339-A

WIRING INSTALLATION HINTS

All connections should be soldered and covered with head shrink or spliced with a butt connector and covered with tape.

Always allow some slack in the wiring harness. Don't cut your wires so short that they pull against a connection.

Use clamps. Not only do clamps make the wiring installation look professional, but they also prevent chafing.

Multi-pin connector plugs should be used to allow components to be removed without having to cut or disconnect individual wires.

When using heat shrink, it is best to use a hand held hair blow dryer. A match or a lighter may damage the wires insulation. Care should also be taken to avoid the plastic wire loom when using the dryer to shrink the heat shrink.

Planning is essential for a good installation. A well thought out installation will give you fewer headaches, better service, and look good too.

DASH HARNESS INSTALLATION

The second section of the wiring harness is the dash harness. This harness connects with the front and rear harness, the steering column, the fuse panel, all relays and flashers, gauges and switches. In order to complete the installation of this harness the dashboard will need to be installed.

DASHBOARD INSTALLATION

The dashboard will be bolted to the steering column support, instead of fiberglassed to the body. This will allow it to be easily removed for trouble shooting or repairs.

Position the dashboard into place with the two mounting tabs on the inside edges of the steering column support uprights. If you are using a tilt column you will notice that the steering column opening on the dashboard is right at the end of the fixed section of the tilt column.

Measure from the bottom of the dashboard face to the floor mount plates on the steering column support. Clamp the dashboard mounting tabs to the support and adjust the dashboard so that the measurement is 16 1/2" on each side. **See Figure 2-33.**

Measure from the rear face of the upright to the face of the dashboard and adjust the dashboard so both sides are at 1". Drill two 1/4" holes through each tab and

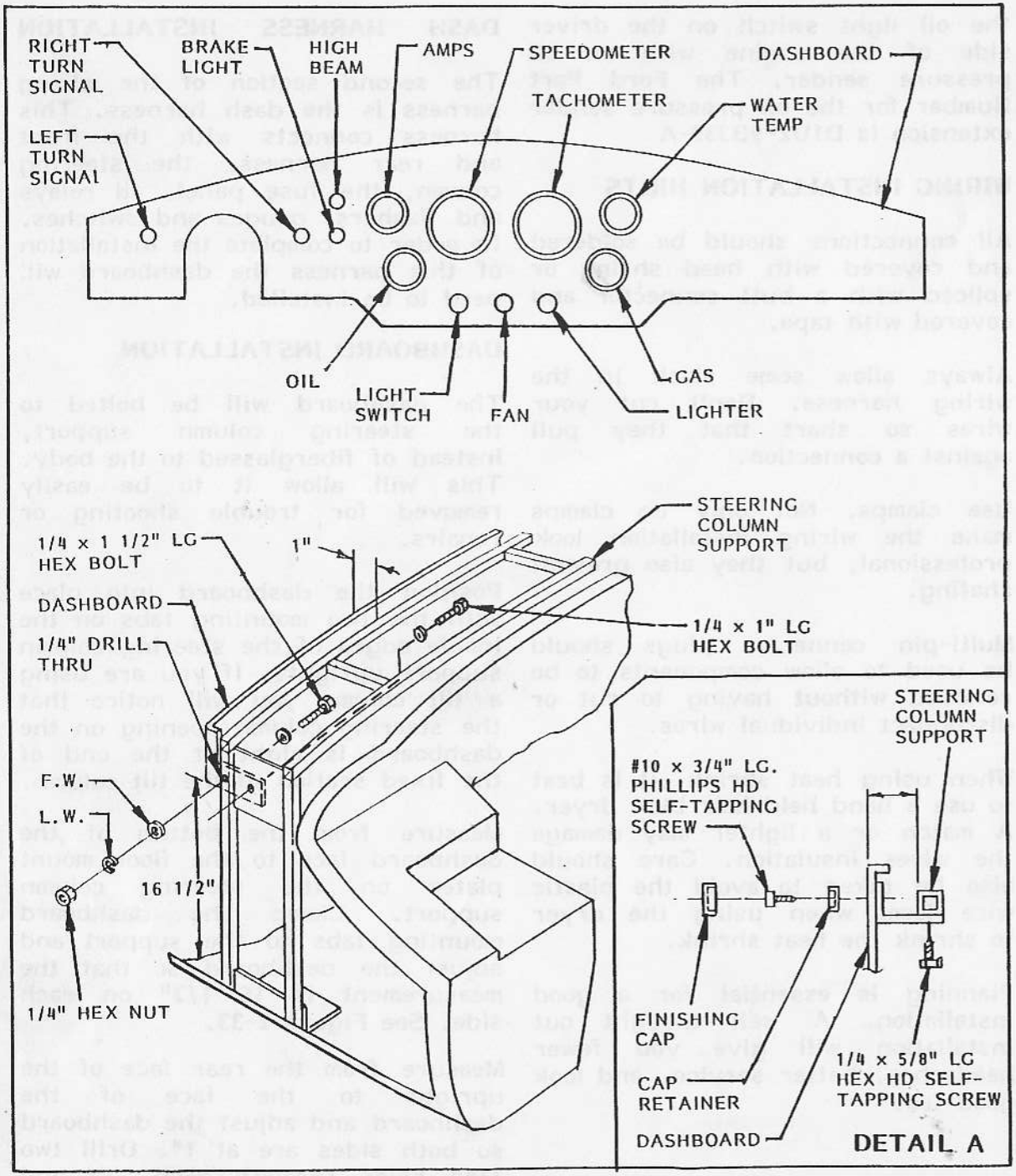


Figure 2-33

each upright. One hole through the tube and one hole through the windshield mount plate. Attach the dashboard to the steering column support, using two 1/4 x 1 1/2" hex bolts, two 1/4 x 1" hex bolts, eight 1/4" flat washers, four 1/4" lock washers and four 1/4" hex nuts.

Measure and mark the centers of the dashboard and the rear bow on the steering column support. Mark the rear bow 8 inches to the left and right of the center mark.

Position the two dashboard angle brackets on the bottom side of the rear bow at each eight inch mark. With the slotted leg of the bracket against the bottom of the bow, mark the slot onto the bow. Drill a 7/32" hole through the bottom side of the bow at each slot location and attach the angle bracket to the bow, using two 1/4 x 5/8" hex washer head self-tapping screws.

Loosen the screws and slide the brackets against the unfinished side of the dashboard. Tighten the screws and mark the position of the blank leg onto the gelcoat side of the dashboard. Measure 1 inch down from the upper edge of the dashboard and drill a 1/8" hole through the dashboard and each bracket. Loosen the bracket screws and move the bracket away from the dashboard. Enlarge the 1/8" pilot hole in the dashboard, using a 3/16" drill bit.

Slide the brackets back against the dashboard and secure the dashboard to the brackets, using two #10 x 3/4" phillips pan head self-tapping screws, two #10 plastic cap retainers, and two #10 plastic finishing caps.

Mark the position of the rear bow on the steering column support onto the dashboard. The position of the gauges and the indicator lights must be below the rear bow's location.

INSTRUMENT INSTALLATION

Remove the screws and bolts holding the dashboard to the steering column support. Do not remove the dashboard brackets from the rear bow. Place the dashboard on a padded surface.

The Classic Cobra dashboard is molded without any marks to designate the locations of the gauges and the switches. This was done to allow you to mount the gauges and switches in positions that work best for you.

The recommended positions for the gauges are shown in **Figure 2-33.** These position were chosen because they allow excellent visibility. The optional wiring harness is designed to fit this layout. It may, however, be modified to fit other layouts.

The following measurements are the hole sizes that must be drilled to mount the gauges in the dashboard: large gauges are 3 1/2"; small gauges are 2 1/8"; indicator lights are 1/2"; switches are 3/8" and the lighter is 3/4". Once you have marked the locations of the gauges, switches and indicator lights, drill the holes in the dashboard.

CAUTION: When using a hole saw to drill the openings for the instruments, the dashboard should be clamped down to a padded surface to prevent it from moving should the hole saw bind or stick. If it is not secure and the hole saw sticks, the drill will turn the dashboard, resulting in possible damage to the dashboard and to the person using the drill.

Once the holes have been drilled, test fit the instruments. It may be necessary to file the holes so that the gauges slide in and out easily. One hole that must be filed is the speedometer hole, because the speedometer case has an alignment key located on it. Install gauges using the "U" shaped clamps and nuts supplied with each gauge.

INSTRUMENT INSTALLATION HINT

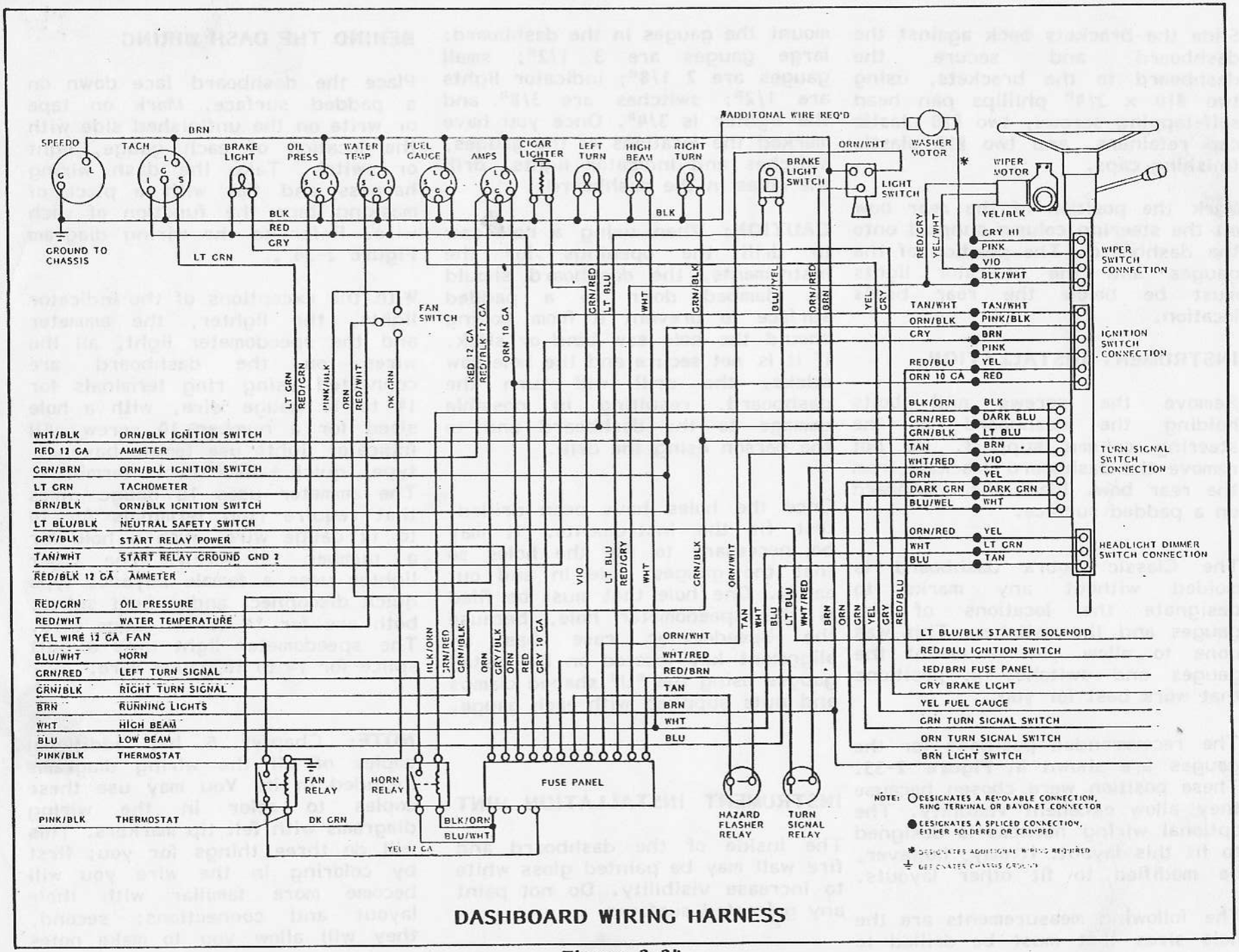
The inside of the dashboard and fire wall may be painted gloss white to increase visibility. Do not paint any gelcoated surfaces.

BEHIND THE DASH WIRING

Place the dashboard face down on a padded surface. Mark on tape or write on the unfinished side with the location of each gauge, light or switch. Take the dash wiring harness and flat with a piece of masking tape the function of each wire. Refer to the wiring diagram **Figure 2-34 .**

With the exceptions of the indicator lights, the lighter, the ammeter and the speedometer light, all the wires on the dashboard are connected using ring terminals for 14 to 16 gauge wire, with a hole sized for a number 10 screw. All indicator lights use female bayonet-type quick disconnect terminals. The ammeter uses 10 gauge wires that require ring terminals for 10 to 12 gauge wire, with a hole for a number 10 screw. The cigar lighter uses a female bayonet type quick disconnect and a butt splice; both are for 14 to 16 gauge wire. The speedometer light uses a butt splice for 14 to 16 gauge wire.

NOTE: Chapter 5 has additional copies of all the wiring diagrams included in it. You may use these copies to color in the wiring diagrams with felt tip markers. This will do three things for you; first by coloring in the wire you will become more familiar with their layout and connections; second, they will allow you to make notes



DASHBOARD WIRING HARNESS

Figure 2-34

if you do not want to mark in the manual, and finally, they can be kept with the car when completed, to be used as a trouble-shooting guide should you have any electrical problems on the road.

The first lead to the dash is for the left hand turn signal indicator. It connects a black wire and a green/red wire to the indicator light.

The next lead connects to the right hand turn signal indicator with a black wire and a green/black wire.

The hand brake light lead is next. The wires connect to the light are a red wire and a grey wire. The ground for this light is located in the rear harness on the hand brake switch.

The high beam light connects to the lead with the white wire and the black wire.

The oil pressure gauge lead has four wires on it. The red wire connects to the "I" (ignition) stud. The red/green wire connects to the "S" (sender) stud. The brown wire connects to the "L" (lights stud and the black wire connects to the "G" (ground) stud.

The ammeter lead is next. It has five wires on it. It is the only gauge that uses 12" gauge wires. Two wires are connected to the "S" (sender) stud. They are a 12 gauge red wire and a 12 gauge red/ black wire. The 10 gauge orange wire connects to the "I" (ignition) stud. The brown wire connects to the "L" (lights) stud and the black wire to the "G" (ground) stud.

WARNING: On the ammeter the "S" (sender) stud is connected to the wires for the alternator and the "I" stud is connected to the wire to the fuse panel. If these wires are reversed or installed incorrectly the ammeter will not work correctly. The "I" (ignition) stud should only have the 10 gauge orange connected to it. If you connect a 16 gauge red wire to it, as on the other gauges, it will power the other gauges until the battery is totally discharged.

The speedometer has two wires connected to it. The brown wire butt splices to the light wire and the black wire is attached to one of the mounting studs to ground the case.

NOTE: If you are using the electronic programmable speedometer additional wiring will be required for the sender and the speedometer. Refer to the installation instructions.

The light switch has a three wire lead connect to it; orange/white from the fuse panel for power brown, which goes to all the instrument lights, as well as the gear shift light, and all the running lights; and orange red, which goes to the dimmer switch.

on the steering column for the heac lights.

The tachometer lead is next. It has four wires, light green to the "S" (sender) stud; red to the "I" (ignition) stud; brown to the "L" (light) stud and black to the "G" (ground) stud.

The water temperature lead connects to the gauge in the following order: the red/white wire to the "S" (sender) stud, the red wire to the "I" (ignition) stud, the brown wire to the "L" (lights) stud and the black wire to the "G" ground) stud.

The lighter lead has five wires. The black wire connects to the case and the purple wire splices to the lead from the center contact of the lighter. The other three wires may be connected to the fan switch. The orange wire is power from the fuse panel. The dark green wire is to the fan relay. The pink/black wire goes to the thermostat.

The last lead goes to the fuel gauge. The yellow wire goes to the "S" (sender) stud, the red wire to the "I" (ignition) stud, the brown wire to the "L" (lights) stud, and the black wire to the "G" (ground) stud.

NOTE: If you are using any additional switches on the dash board, such as a fog light switch, they should be installed at this time and connected to the additional wiring added to the harness.

DASHBOARD WIRING INSTALLATION HINTS

Wires should be tagged or flagged with their function and the gauge they connect to. This can be done using self-adhesive file folder labels which can be used in a typewriter. Once the function has been typed on the label, it may be cut down to fit onto the wire.

To prevent screws and nuts on the gauges and switches from vibrating loose, use fingernail polish to paint a thin strip on the threads. The military and the airlines use this procedure. Fingernail polish works better than paint because it dries harder.

When attaching the wiring to the gauges, the wires should be laid out so that the gauges may be removed individually and so that the harness does not cover the back of any gauge.

Allow enough extra length on each lead so that a gauge may be removed through the dash with the wires still attached. This will allow you to replace a gauge without removing the dash.

CHECK: Before installing the dashboard and wiring into the car, check all the connections on the gauges and switches to make sure they are properly connected and that the terminals are properly crimped or soldered.

STEERING COLUMN WIRING

There are five connector plugs on the GM steering column. There are: two connector plugs on the ignition switch, one for the turn signal switch, one for the dimmer switch, and one for the wiper switch. Make sure that you have both sides of the connector plugs, as well as 12 inches of wiring to be spliced into the dashboard wiring harness. **See Figure 2-35.**

NOTE: If the color code on the wiring from the switches is different from the colors listed in this manual, refer to the GM manual for the type of car you got your steering column from and flag the wires with their function.

IGNITION SWITCH

There are two connector plugs on the ignition switch. The first plug has one clip on it and is held in place by the second lug. The second plug has two clips on it and must be removed first to remove the first plug.

There are four connections on the first connector plug. They are: solenoid, battery 2, ignition 1, and accessory. The solenoid connection has a yellow wiring coming out of the connector. This wire is spliced to the red/blue wire from the harness.

The ignition 1 connection has a pink/black wire and a pink wire coming out of the connector. These wires re spliced to the orange/black wire.

The battery 2 connection has a red wire coming out of the connector. The wire is spliced to the 10 gauge orange wire from the harness.

The accessory connection has a brown wire coming out of the connector. This wire is spliced to the 10 gauge grey wire from the harness.

It will be necessary to use the ground 2 connection on the second plug. This wire is colored tan/white and will be spliced to the ignition start relay tan/white wire. This provides a ground for the ignition start relay which bypasses the ignition resistor during start. This allows 12 volts directly to the coil for quicker starts.

WIRING HARNESS	COLUMN	FUNCTION
BLACK/ORANGE	BLACK	HORN BUTTON
GREEN/BLACK	LIGHT BLUE	LEFT FRONT TURN SIGNAL
GREEN/RED	DARK BLUE	RIGHT FRONT TURN SIGNAL
TAN	BROWN	HAZARD FLASHER
WHITE/RED	PURPLE	TURN SIGNAL FLASHER
ORANGE	YELLOW	LEFT REAR TURN SIGNAL/BRAKE LT.
DARK GREEN	DARK GREEN	RIGHT REAR TURN SIGNAL/BRAKE LT.
BLUE/YELLOW	WHITE	BRAKE LIGHT SWITCH

TURN SIGNAL SWITCH

ORANGE 10GA	RED	BATTERY 12
ORANGE/BLACK	PINK/BLACK	IGNITION 11
RED/BLUE	YELLOW	SOLENOID
GREY 10GA	BROWN	ACCESSORY
TO LIGHTER RELAY	TAN/WHITE	GROUND 12

IGNITION SWITCH

ORANGE/RED	YELLOW	HEADLIGHT SWITCH
WHITE	LIGHT GREEN	HIGH BEAM
BLUE	TAN	LOW BEAM

HEADLIGHT DIMMER SWITCH

NOT SUPPLIED	PINK	WASHER SWITCH
YELLOW/WHITE	GRAY	WIPER SWITCH LOW
YELLOW/BLACK	PURPLE	WIPER SWITCH HIGH
RED/GRAY	BLACK WHITE OR WHITE*	POWER

WIPER SWITCH

* GREEN NOT USED
* CAMERO COLUMN

Figure 2-35

TURN SIGNAL SWITCH

The turn signal switch connector is a flat in-line connector plug that mounts forward of the ignition switch. The first two wires on this connector are a light green wire and a tan wire. These wires are for the key alarm switch. No provisions have been made in the wiring harness to use these wires. They may be removed if you do not plan to use a key buzzer. Refer to the GM manual for more details on the function of these wires.

The horn connection has a black wire coming from the connector. This wire is spliced to the black/orange wire from the harness.

The left front turn signal connection has a light blue wire coming from the connector. This wire is spliced to the green/black wire from the harness.

The right front turn signal connection has a dark blue wire coming from the connector.The wire is spliced to the green/red wire from the harness.

The hazard flasher connection has a brown wire coming from the connector. This wire is spliced to the tan wire from the harness.

The turn signal flasher connection has a purple wire coming from the connector. This wire is spliced to the white/red wire from the harness.

The left turn signal/brake light connection has a yellow wire coming from the connector. This wire is spliced to the 16 gauge orange wire from the harness.

The right rear turn signal/brake light connection has a dark green wire coming from the connector. This wire is spliced to the dark green wire from the harness.

The brake light switch connection has a white wire coming from the connector. This wire is spliced to the blue/yellow wire from the harness.

DIMMER SWITCH

The dimmer switch is located on the left side of the column next to the ignition switch.

The light switch connection has a yellow wire coming from the connector. This wire is spliced to the orange/red wire from the harness.

The high beam connection has a light green wire coming from the connector. This wire is spliced to the white wire from the harness.

The low beam connection has a tan wire coming from the connector. This wire is spliced to the blue wire from the harness.

WIPER SWITCH

The windshield wiper washer switch connector is not attached to the column. The connector is in the middle of a lead that comes out the back of the steering column housing.

The power connection has a black/white wire from the connector. This wire is spliced to the red/gray wire from the harness. This wire will be white on the Camero column.

The wiper high speed connection has a purple wire from the connector. This wire is spliced to the yellow/black wire from the harness.

The wiper low speed connection has a gray wire from the connector. This wire is spliced to the yellow/white wire from the harness.

The washer switch connection has a pink wire from the connector. This wire is spliced to the power wire from the windshield washer motor. This wire is not part of the harness and must be added to the washer switch to work.

NOTE: The green wire on the Camero column will not be used on the Classic Cobra.

BRAKE LIGHT SWITCH

On the same lead as the column wires, there are three other wires separate from the rest. The first two are the brake light switch wires. They are colored blue and blue/yellow. These wires are connected to the brake light switch attached to brake pedal.

These wires may be spliced to the Ford connector plug or attached using female quick disconnect terminals. It does not matter which wire connects to which connection on the switch.

The third wire on the column lead is a black ground wire. It is very important that this wire is grounded to steering column support. Remove the paint from the area where the wire will be attached to the frame. Crimp a ring terminal for a #10 stud to the wire. Drill a 9/64" hole through the area where you removed the paint and attach, using #10 x 3/4" hex head self-tapping screw.

NOTE: Because the Classic Cobra is a figerglass car, the importance of ground wires cannot be stressed enough. Any electrical part that is not grounded properly will not work! Additional ground wires may be installed to ensure that your electrical parts work correctly.

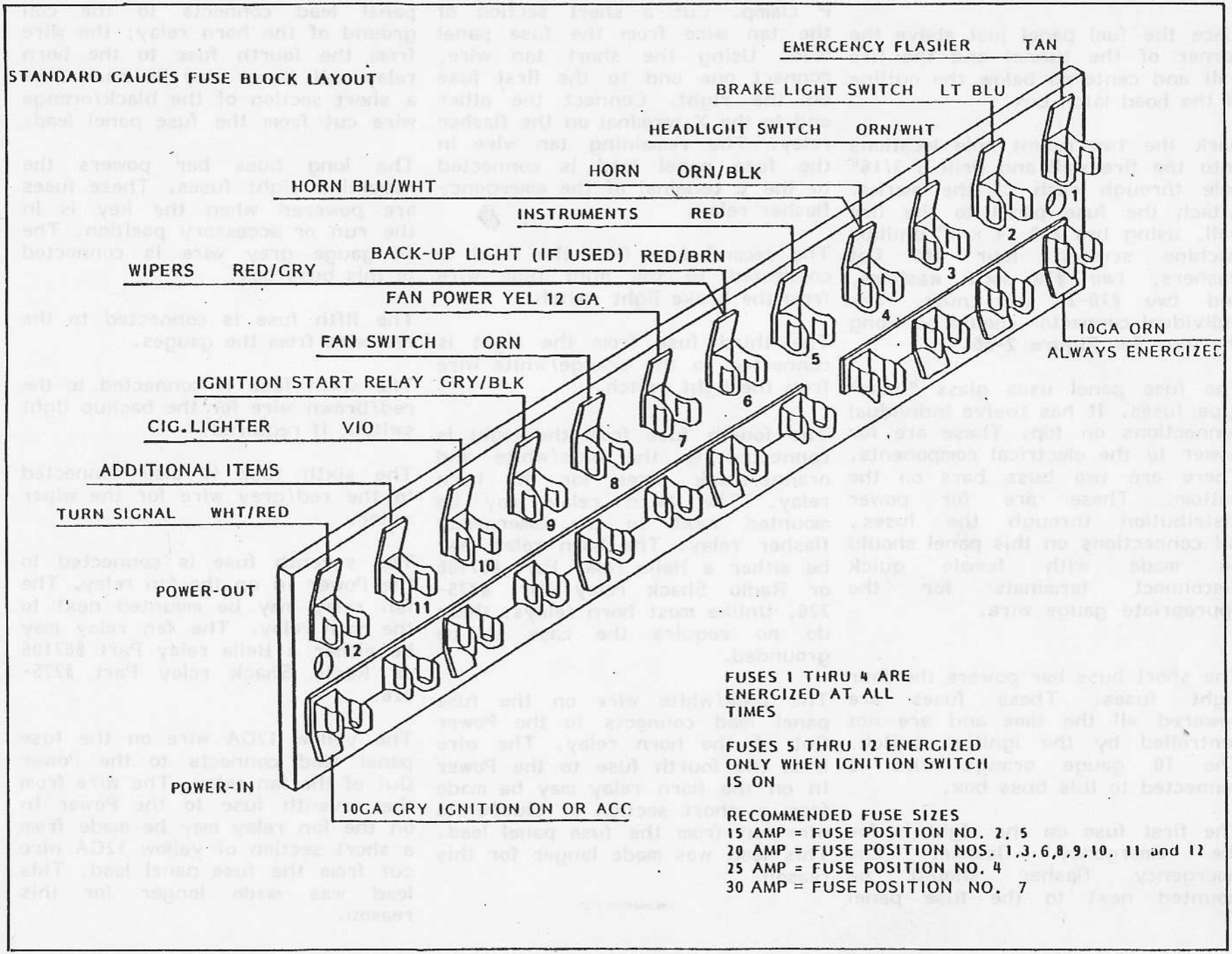

STANDARD GAUGES FUSE BLOCK LAYOUT
EMERGENCY FLASHER TAN
BRAKE LIGHT SWITCH LT BLU
HEADLIGHT SWITCH ORN/WHT
HORN ORN/BLK
HORN BLU/WHT
INSTRUMENTS RED
BACK-UP LIGHT (IF USED) RED/BRN
WIPERS RED/GRY
FAN POWER YEL 12 GA
FAN SWITCH ORN
IGNITION START RELAY GRY/BLK
CIG.LIGHTER VIO
ADDITIONAL ITEMS
TURN SIGNAL WHT/RED
POWER-OUT
POWER-IN
10GA GRY IGNITION ON OR ACC
10GA ORN
ALWAYS ENERGIZED
1
2
3
4
5
6
7
8
9
10
11
12
FUSES 1 THRU 4 ARE ENERGIZED AT ALL TIMES
FUSES 5 THRU 12 ENERGIZED ONLY WHEN IGNITION SWITCH IS ON
RECOMMENDED FUSE SIZES
15 AMP = FUSE POSITION NO. 2, 5
20 AMP = FUSE POSITION NOS. 1,3,6,8,9,10, 11 and 12
25 AMP = FUSE POSITION NO. 4
30 AMP = FUSE POSITION NO. 7

Figure 2-36

FUSE PANEL WIRING

Place the fuel panel just above the corner of the tunnel and the fire wall and centered below the outline of the hood latch box.

Mark the two mount hole locations onto the fire wall and drill a 3/16" hole through each of the marks. Attach the fuse panel to the fire wall, using two #10-24 x 1" phillips machine screws, four #10 flat washers, two #10 lock washers, and two #10-24 hex nuts. The individual connector should be along the top. **See Figure 2-36.**

The fuse panel uses glass "buss" type fuses. It has twelve individual connections on top. These are for power to the electrical components. There are two buss bars on the bottom. These are for power distribution through the fuses. All connections on this panel should be made with female quick disconnect terminals for the appropriate gauge wire.

The short buss bar powers the four right fuses. These fuses are powered all the time and are not controlled by the ignition switch. The 10 gauge orange wire is connected to this buss box.

The first fuse on the right is for the emergency flasher. The emergency flasher should be mounted next to the fuse panel using a 1 1/8" plastic or aluminum P clamp. Cut a short section of the tan wire from the fuse panel lead. Using the short tan wire, connect one end to the first fuse on the right. Connect the other end to the X terminal on the flasher relay. The remaining tan wire in the fuse panel lead is connected to the L terminal of the emergency flasher relay.

The second fuse from the right is connected to the light blue wire from the brake light switch.

The third fuse from the right is connected to the orange/white wire from the light switch.

The fourth fuse from the right is connected to the blue/white and orange/black wires for the horn relay. The horn relay may be mounted next to the emergency flasher relay. The horn relay may be either a Hella relay Part #87106 or Radio Shack relay Part #275-226. Unlike most horn relays, these do no require the case to be grounded.

The blue/white wire on the fuse panel lead connects to the Power Out of the horn relay. The wire from the fourth fuse to the Power In on the horn relay may be made from a short section of blue/white wire cut from the fuse panel lead. This lead was made longer for this reason.

The black/orange wire on the fuse panel lead connects to the coil ground of the horn relay; the wire from the fourth fuse to the horn relay coil power may be made from a short section of the black/orange wire cut from the fuse panel lead.

The long buss bar powers the remaining eight fuses. These fuses are powered when the key is in the run or accessory position. The 10 gauge grey wire is connected to this buss box.

The fifth fuse is connected to the red wire from the gauges.

The sixth fuse is connected to the red/brown wire for the backup light switch, if required.

The sixth fuse is also connected to the red/grey wire for the wiper motor.

The seventh fuse is connected to the Power In on the fan relay. The fan relay may be mounted next to the horn relay. The fan relay may be either a Hella relay Part #87106 or Radio Shack relay Part #275-226.

The yellow 12GA wire on the fuse panel lead connects to the Power Out of the fan relay. The wire from the seventh fuse to the Power In on the fan relay may be made from a short section of yellow 12GA wire cut from the fuse panel lead. This lead was made longer for this reason.

The eighth fuse is connected to the orange wire that goes to the fan switch. (See fan wiring.)

The ninth fuse connects to the gray/black wire for the ignition start relay.

The tenth fuse from the right is connected to the purple wire from the cigar lighter.

The eleventh fuse is used for additional items such as a radio.

The twelfth fuse is connected to the turn signal flasher relay. This relay should be installed to the left side of the fuse panel the same way as the emergency flasher relay. Connect a short section of the white/red wire to the fuse and the turn signal relay "X" terminal. The remaining white/red wire from the fuse panel lead connects to the turn signal relay "L" terminal.

WIRING INSTALLATION TIPS

Take your time and plan out the layout of the wiring. Make sure it won't interfere with anything inside the fire wall.

Use clamps or tie-wrap to route the wires.

Always leave some slack in the wiring. This is commonly called a stress release.

When connecting the wiring to the fuse panel, start at the right side and work toward the left. Bend the wire bundle toward the left. Bend the wire bundle 90 degrees to the left every time you connect a wire.Bend that wire 90 degrees so that it goes straight down to the fuse panel. On the fuse panel, the 10 gauge orange and grey wire should continue down from the 90 degree bend and then to the left below the bottom of the panel before making their own 90 degree bend to the left. The wire bundle should be tie-wrapped before each wire is bent toward the fuse panel.

IGNITION START RELAY

If you are using the Ford electronic ignition module with your engine, an ignition start relay should be used to bypass the ballast resistor while starting the car. This relay can be either a Hella relay Part #87106 or a Radio Shack relay Part #275-226 and should be mounted next to the horn relay on the fire wall.

The relay coil ground connects to the tan/white wire from the ground 2 connection on the ignition switch. The coil power connects to the gray/black wire from the ninth fuse.

The power in contacts on the relay connects to the light blue/black wire, and the power out connects to the pink wire that goes to the coil side of the ballast resistor

ELECTRIC FAN RELAY INSTALLATION

Because of the power required to run an electric fan, it is recommended that you use a relay to supply power to the fan motor.

The optional fan for the Classic Cobra comes with the same type relay as you used for the horn relay and the ignition start relay. Attach this relay along with the other two. Connect the yellow 12GA wire to the power out connector on the relay. Connect the yellow 12 GA wire from the seventh fuse to the power in connector on the relay. The fuse for the fan motor must be rated at 30 amps.

If you do not intend using a thermostat override switch on the dashboard, connect the relay coil power to the orange wire from the eight fuse. Connect one of the pink/black wires from the thermostat to the relay coil ground. The other pink/black wire from the thermostat should then be grounded to the frame. This will allow the relay coil to be energized when the thermostat contact reaches 170˚ F.

If you prefer to use an override switch to manually activate the fan, install the switch on the dash. Connect the orange wire from the eighth fuse to the center contact on the switch. Connect the dark green wire to the upper contact

on the switch and to the relay coil power connection, but do not make the connection yet. Connect one of the pink/black wires from the thermostat to the bottom contact on the switch. The other pink/black wire from the thermostat and the dark green wire from the upper contact on the switch will be spliced together an connected to the relay coil power. Run a ground wire from the chassis to the relay coil ground.

WARNING: The switch has three positions; up for manual operation; down for automatic (thermostat) operation and centered for off. Always have the fan switch in either the manual or automatic positions whenever the engine is running to ensure that the fan is on

A fan tell tale light may be used to indicate when the fan is on. This can be done by installing an additional indicator light in the dashboard above the fan switch. Connect two wires to the light, one to a chassis ground and the other to the relay power out.

WIRING HARNESS CONNECTIONS

The only connections of the dash harness left to be connected are the leads to the front harness, the rear harness, and the wiper motor lead. The wiper motor lead will be connected upon completion of the wiper installation.

Multi-pin-quick-disconnect plugs have been included with the optional wiring harness to connect the front and rear harness to the dash harness. This type of connection is much neater than having a large bundle of splices where the wiring harnesses join together. This also allows you to isolate the front and rear harnesses from the dash harness during troubleshooting, so that a fault may be found quicker.

FRONT HARNESS TO DASH HARNESS CONNECTIONS

Snap together the two halves of the quick disconnect connector. You will notice that the pins for the connector are already crimped on the ends of each harness; male on one harness and female on the other.

The first pin inserted into the connector plug has two wires on it. White/black and brown/black on the harness side. Insert it into the connector until it locks in place. Insert the orange/black wire on the dash harness to the same pin connection as the white/black and brown/black pin connection.

Connect the green/brown on the front harness to the other orange/black on the dash harness.

Connect red 12GA front harness to red 12GA dash harness.

Connect light green front harness to light green dash harness.

Connect light blue/black front harness to light blue/black dash harness.

Connect the pink/black front harness to pink/black dash harness.

Connect the other pink/black front harness to the pink/black dash harness.

Connect the yellow 12GA front harness to yellow 12GA dash harness.

Connect red/green front harness to red/green dash harness.

Connect red/black 12GA front harness to red/black 12GA dash harness.

Connect red/wht front harness to red/wht dash harness.

Connect blue/white front harness to blue/white dash harness.

Connect green/red front harness to green/red dash harness.

Connect green//black front harness to green/black dash harness.

Connect brown front harness to brown dash harness.

Connect white front harness to white dash harness.

Connect blue front harness to blue dash harness.

REAR HARNESS TO DASH HARNESS CONNECTIONS

Snap together the two halves of the quick disconnect connector. You will see that the pins for the connector are already crimped on the ends of each harness; male on one harness and female on the other.

Connect light blue/black on the dash harness to light blue/black on the rear harness.

Connect red/blue on the dash harness to red/blue on the rear harness.

Connect red/brown on the dash harness to red/brown on the rear harness.

Connect gray on the dash harness to gray on the rear harness.

Connect yellow on the dash harness to yellow on the rear harness.

Connect green on the dash harness to green on the rear harness.

Connect orange on the dash harness to orange on the rear harness.

Connect brown on the dash harness to brown on the rear harness.

WARNING: The battery should not be connected until all connections have been made. It is connected earlier, the possibility of electrical shorts or fire exists.

REAR WIRING

See Figure 2-37 for schematic.

Because the rear harness is run through the trunk liner and the rear cockpit liner it should not be clamped into place until after the body has been installed.

FORD TRANSMISSION WIRING

The Ford neutral safety switch is located on the left side of the transmission. On the C4 an C6 transmission it is attached to the gear selector shaft. On the AOD transmission there is a connector plug above the selector shaft for the neutral safety switch.

Drill a 3/8" hole above the corner of the tunnel and the floor, at the location of neutral safety switch. Run the lead through the hole to the switch.

For the C4 and C6, connect light blue/black wire to Ford blue/red and red/blue to Ford red/blue for neutral safety switch. For backup lights,connect red/brown to purple/blue and pink to Ford purple/white.

For the AOD transmission, connect light blue/black to Ford red/light blue and red/blue to the other Ford red/light blue for the neutral safety switch. For backup light switch, connect red/brown to Ford white/purple and pink to Ford black/pink.

Both the T-5 and RAD manual transmissions have only a back-up light switch. Splice the red/blue wire to the light blue/black wire to complete the circuit for the starter solenoid.

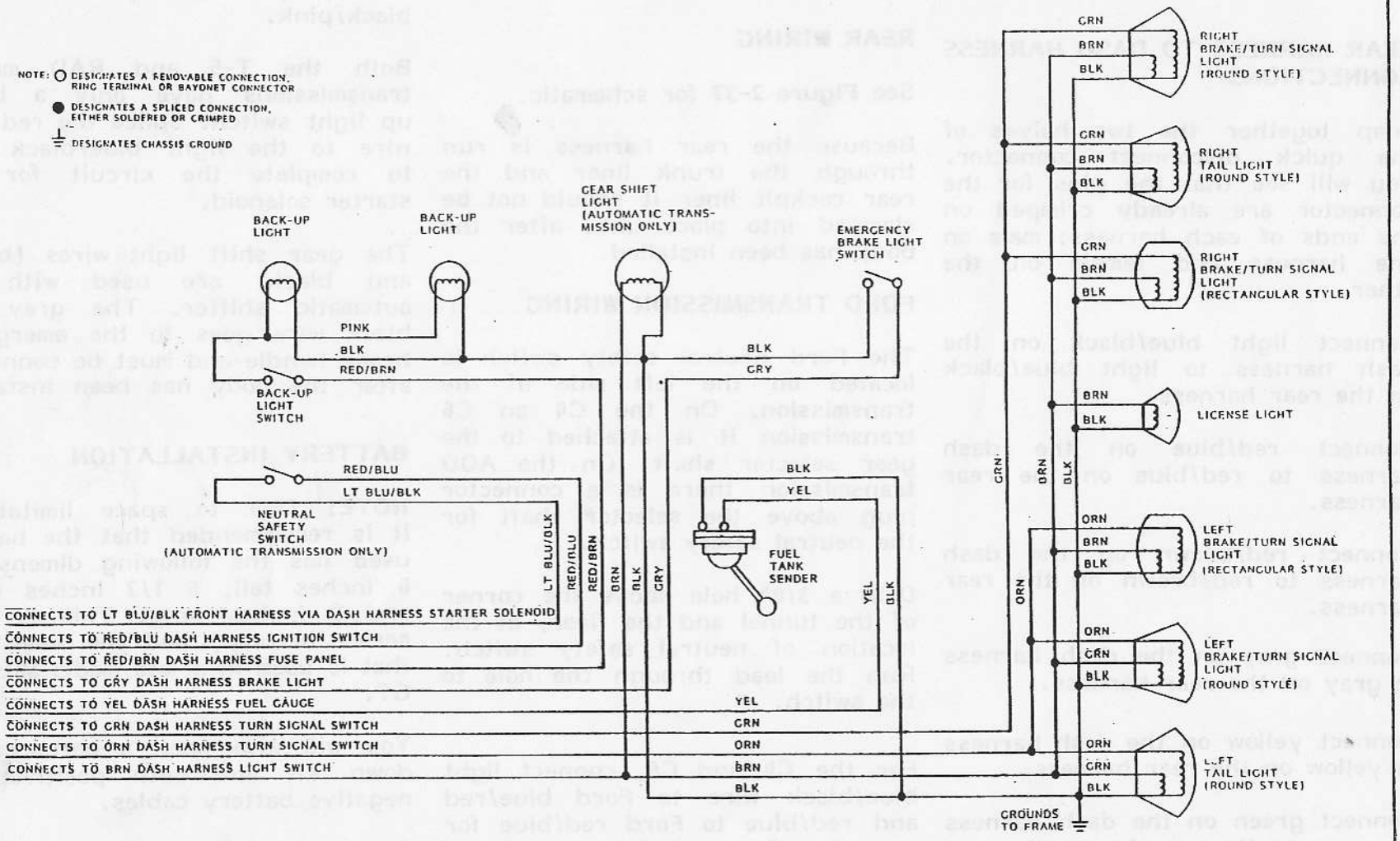
The gear shift light wires (brown and black) are used with the automatic shifter. The grey and black wire goes to the emergency brake handle and must be connected after the body has been installed.

BATTERY INSTALLATION

NOTE: Due to space limitations, it is recommended that the battery used has the following dimensions: 6 inches tall, 6 1/2 inches wide, and 9 inches long. This is a 58 series battery, and the same type that is used in a late model Mustang GT.

You will also need a battery hold down kit and both positive and negative battery cables.

Place the battery onto the shelf on top of the passenger's foot well. Clamp the battery into place using a NAPA universal cross bar Part No. 730-2403 or 730-2406 and two NAPA battery hold down bolt Part No. 730-2382.



REAR WIRING HARNESS

Figure 2-37

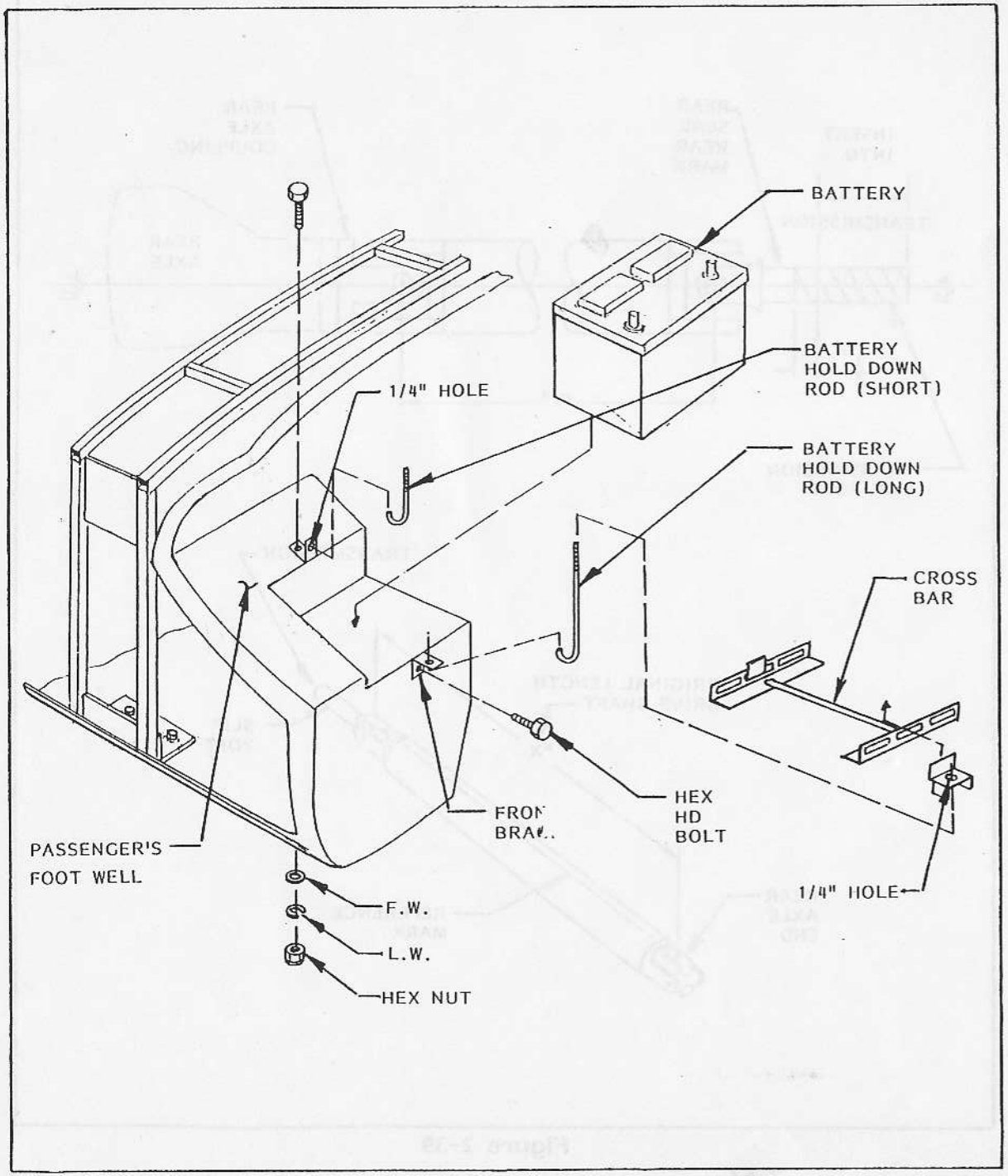


Figure 2-38

NOTE: To attach the bolts to the foot well, use two pieces of flat steel, 1/8" thick, 1" wide, 3" long. Drill a 5/16" hole 1/4" from each end and bend in half, 90°. Attach to the foot well, as shown in **Figure 2-38.**

Route and attach both battery wires. Attach the ground wire to the frame. A ground wire should also be run from the engine to the frame. T he engine ground wire must be the same gauge wire as a battery ground wire. Once the wires to the battery have been routed and attached to the frame, the battery cable clamp should be disconnected.

WARNING: The battery must be disconnected during all electric installations.

SECTION K DRIVESHAFT INSTALLATION

A late model Ford drive shaft is recommended.

Measure the original drive shaft from the center of the U joint yoke at the transmission end of the drive shaft to the U joint yoke at the rear axle end. **See Figure 2-39.** Call this measurement "X".

After the engine is installed position the rear axle so that it is in line with the end of the transmission.

NOTE: It will be necessary to remove the springs during this step in order to get an exact measurement.

Insert the transmission yoke into the transmission until the wear mark from the rear seal is 3/8" from the rear seal.

Measure from the center of the transmission U joint yoke to the center of the differential coupling on the rear end. Call this measurement "Y". Subtract "Y" measurement from "X" measurement and you will have the length that your drive shaft should be shortened. Scribe a reference mark along the drive shaft so that the U joint yoke can be reinstalled at the same relative position. This will assist you in having your drive shaft balanced. Take the shaft to a professional drive shaft shop or a machine shop, equipped to do the work. They will shorten, reweld and balance the finished shaft.

DRIVESHAFT SHORTENING

Insert the transmission yoke of the drive shaft into the transmission tail section. Using the original factory bolts, secure the rear axle flange of the drive shaft to the flange on the differential. Tighten and torque to factory specifications.

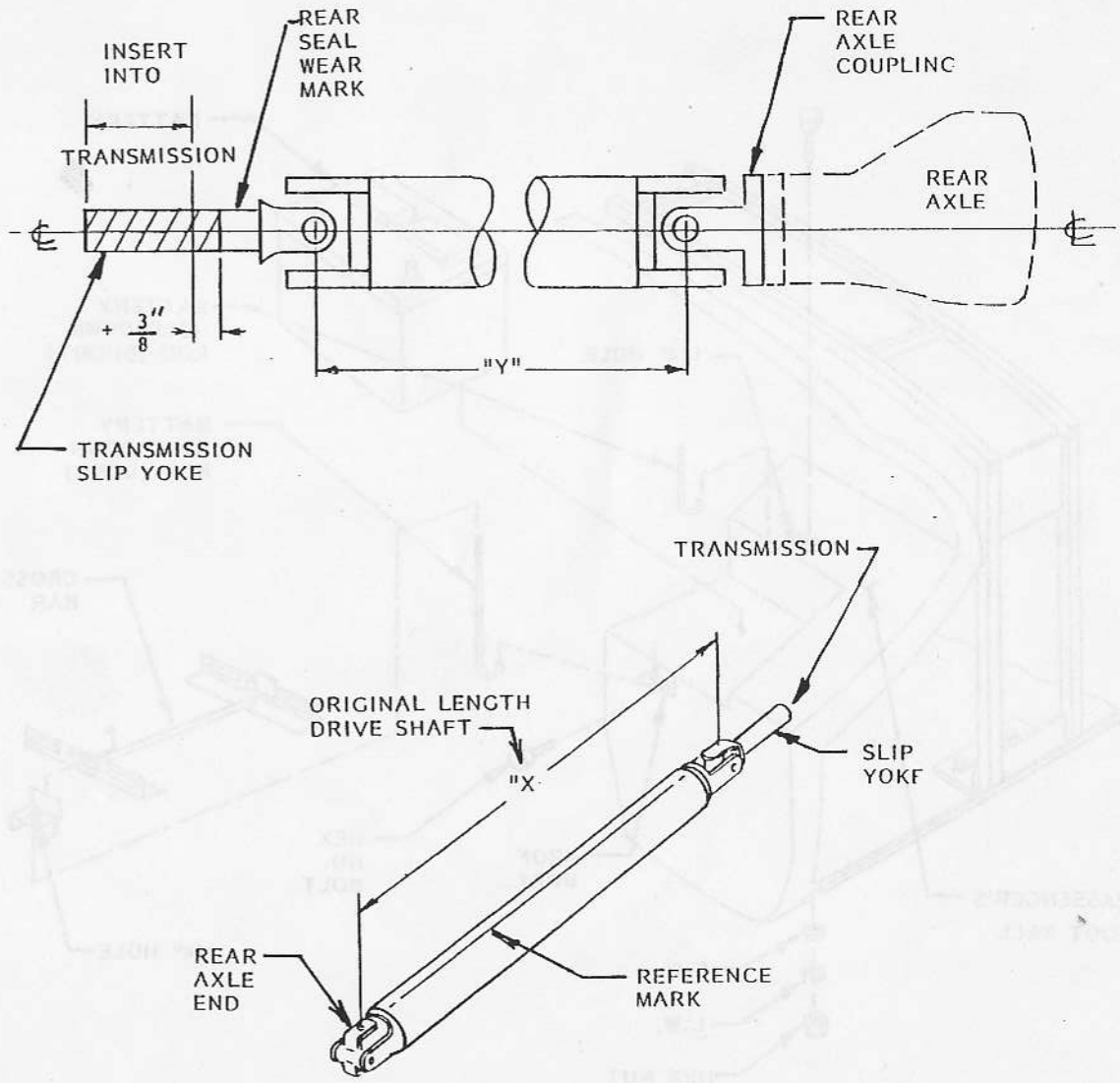


Figure 2-39

GAS TANK STRAPS

Although not required, gas tank straps may be installed for added security. **Figure 2-40** shows how they may be installed on the frame.

If you wish to fabricate these straps you will need two pieces of flat steel, 1/8" thick, 1" wide and 36" long, two 5/16 x 3" all thread carriage bolts, two 1/4 x 4 5/8" hex washer head self-tapping screws, four 5 /16" flat washers, two 5/16" lock washers, two 5/16" hex nuts, two 5/16" lock nuts and a piece of rubber, 1" wide by 40" long.

Bend the straps, as shown in **Figure 2-40** and drill a 5/16" hole on each end of the strap.

Mark the center of the 1" frame tube in front of the gas tank and the center of the 2 x 4" frame tube behind the gas tank. Mark 9" over to the left and right of the center mark on each frame tube. Drill a 5/16" hole through the mark on the 1" frame tube and a 7/32" hole through the bottom of the rear frame tube.

Glue the 1" rubber strip to the portion of the strap that contacts the tank.

Attach the carriage bolts to the 1" frame tube, using a 5/16" flat washer, 5/16" lock washer and a 5/16" hex nut.

Attach the strap to the rear frame tube, using a 1/4 x 5/8" hex washer head self-tapping screw.

Place the strap onto the carriage bolt and attach it into place, using a 5/16" flat washer and a 5/16" lock nut. Do not over tighten the strap; tighten only until the strap is snug against the tank and the nut is locked.

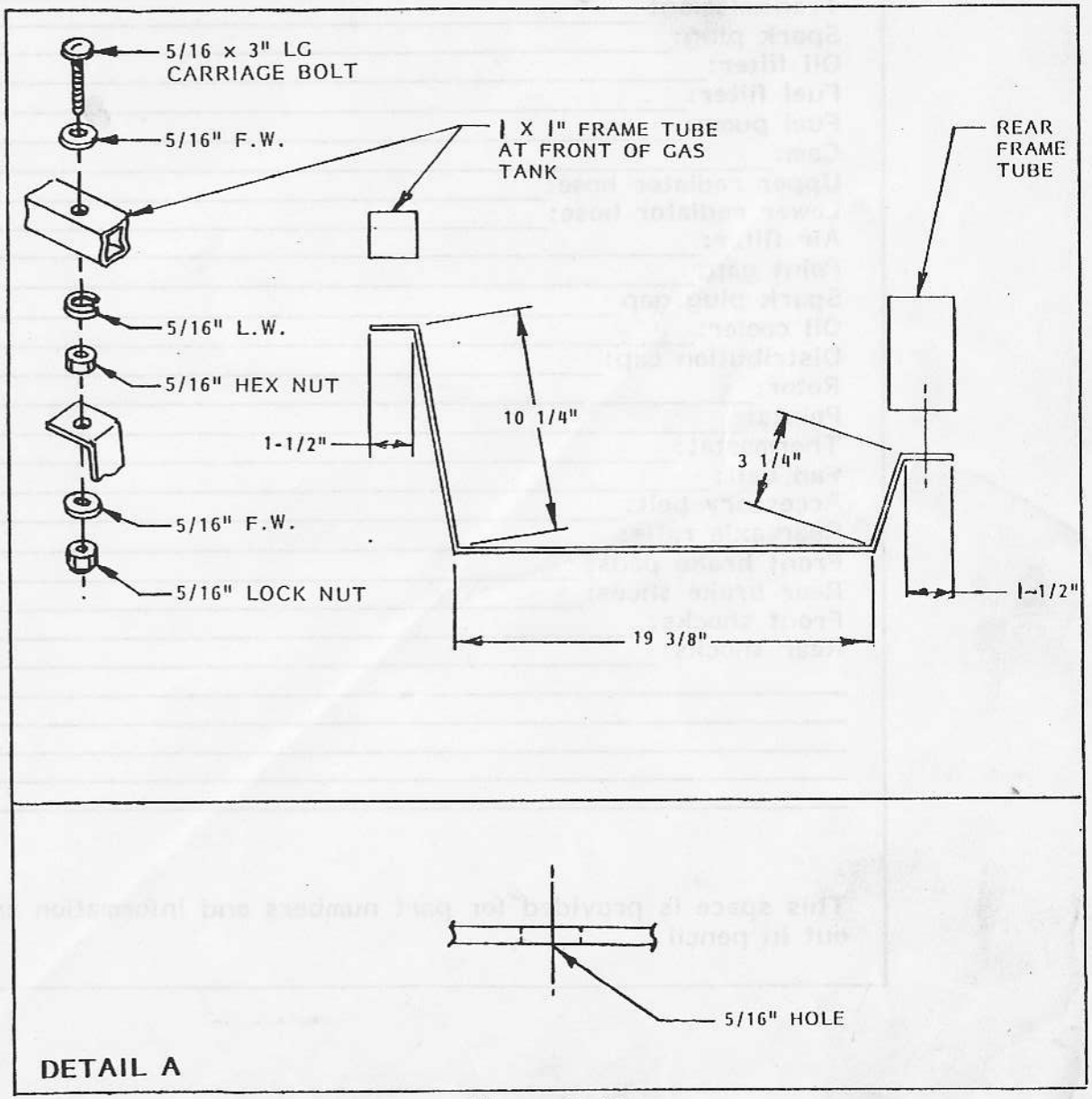


Figure 2-40

CHASSIS NOTES

Engine: Size _____ Year _____
Carburetor: _____
Timing: _____
Transmission: _____
Spark plug: _____
Oil filter: _____
Fuel filter: _____
Fuel pump: _____
Cam: _____
Upper radiator hose: _____
Lower radiator hose: _____
Air filter: _____
Point gap: _____
Spark plug gap _____
Oil cooler: _____
Distribution cap: _____
Rotor: _____
Points: _____
Thermostat: _____
Fan belt: _____
Accessory belt: _____
Rear axle ratio: _____
Front brake pads: _____
Rear brake shoes: _____
Front shocks: _____
Rear shocks: _____

This space is provided for part numbers and information and should be filled out in pencil.

CHAPTER 3 BODY ASSEMBLY
SECTION A

HOOD SUPPORT BAR

Place the support bar on top of the front bumper support tubes.

Measure from the front face of the crossmember 9 3/4" forward to the back face of the hood support bar on each side. **See Figure 3-1.**

Mark the center of the slots of the mounting plates onto the bumper support tubes. Remove the hood support bar and drill the four holes, using a 3/8" drill bit drill through the front bumper support tubes.

Reposition and attach the hood support bar, using four 3/8 x 3" hex head bolts, eight flat washers and four lock nuts.

FRONT SWAY BAR

NOTE: Because of the various types of sway bars used on the Mustang II it may be necessary to drill and tap the front bumper support tube in order to mount the hood support bar to it.

Attach the front sway bar to the lower control arms, using the original hardware. Lift the sway bar until the mounts are directly under the front bumper support tubes, mark the mounting hole locations on the bumper support, lower the sway bar and drill four 3/8" holes through the bumper support tubes.

Reposition the sway bar and attach, using four 3/8 x 3" hex head bolts, eight flat washers and four 3/8" lock nuts. **See Figure 3-2.**

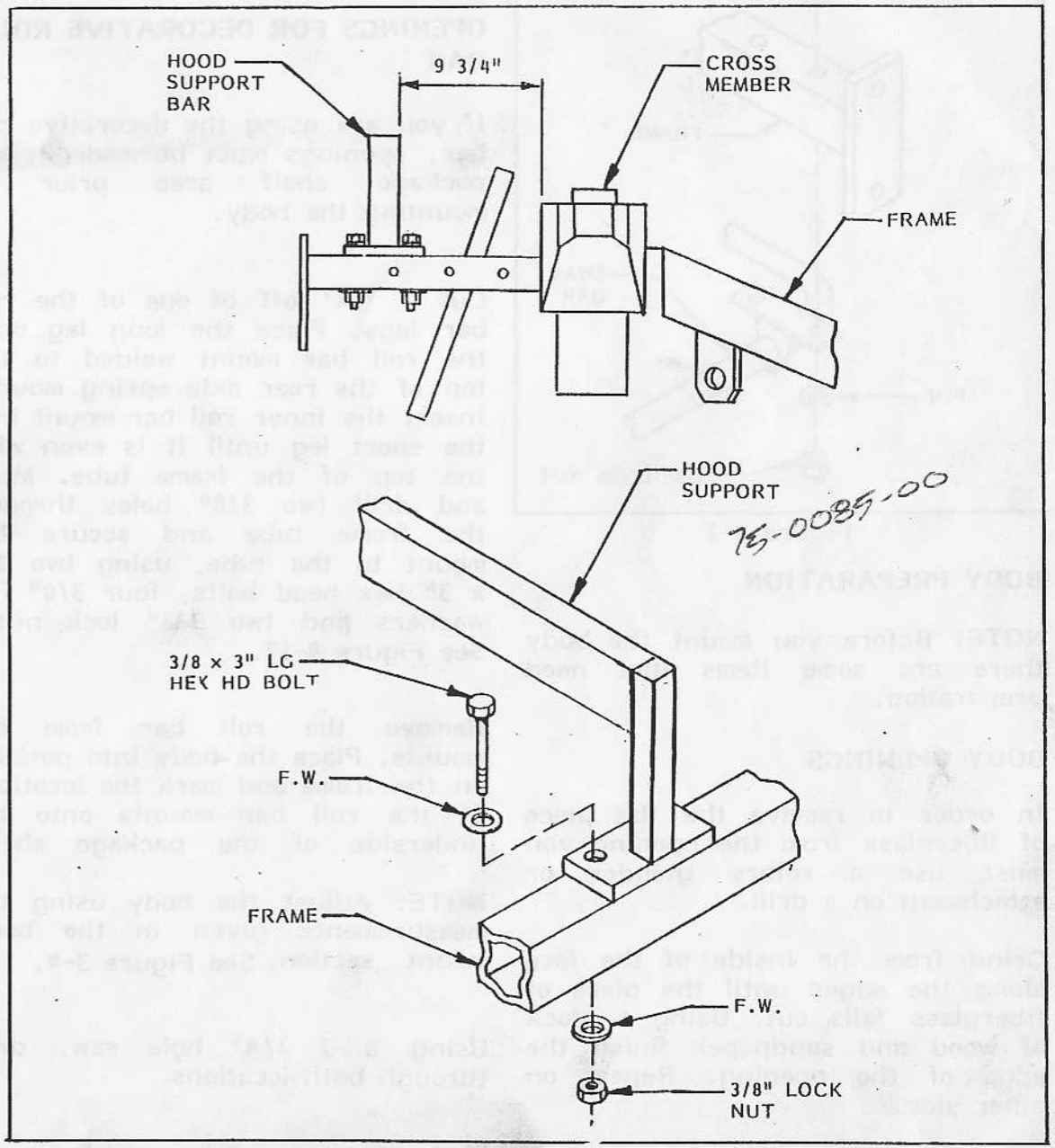


Figure 3-1

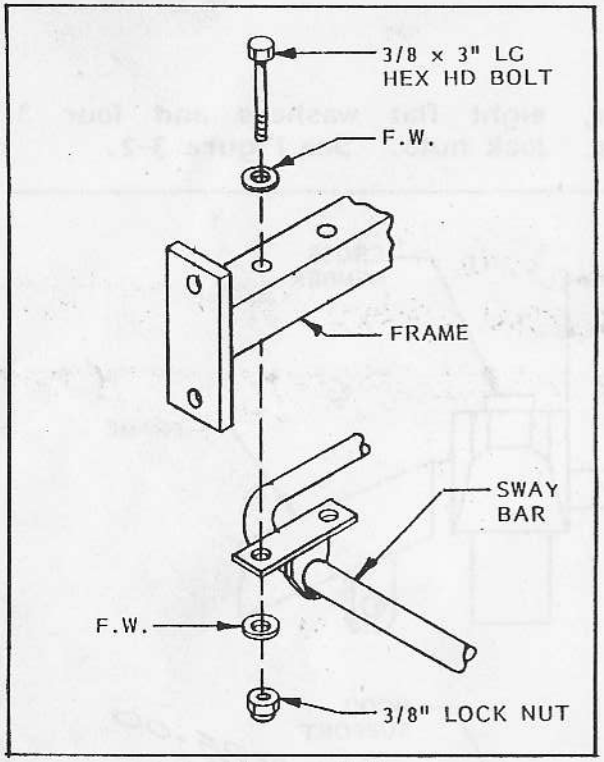


Figure 3-2

BODY PREPARATION

NOTE: Before you mount the body there are some items that need preparation.

BODY OPENINGS

In order to remove the flat piece of fiberglass from the opening you must use a rotary grinder or attachment on a drill.

Grind from the inside of the face along the edges until the piece of fiberglass falls out. Using a block of wood and sandpaper finish the edge of the opening. Repeat on other side.

Using the same method remove the grille opening, lower grille, the two brake vents and the openings for the side exhaust pipes. **See Figure 3-3.**

OPENINGS FOR DECORATIVE ROLL BAR

If you are using the decorative roll bar, openings must be made in the package shelf area prior to mounting the body.

Cut 2 1/4" off of one of the roll bar legs. Place the long leg onto the roll bar mount welded to the top of the rear axle spring mount. Insert the inner roll bar mount into the short leg until it is even with the top of the frame tube. Mark and drill two 3/8" holes through the frame tube and secure the mount to the tube, using two 3/8 x 3" hex head bolts, four 3/8" flat washers and two 3/8" lock nuts. **See Figure 4-12.**

Remove the roll bar from the mounts. Place the body into position on the frame and mark the locations of the roll bar mounts onto the underside of the package shelf.

NOTE: Adjust the body using the measurements given in the body mount section. **See Figure 3-4.**

Using a 2 1/4" hole saw, drill through both locations.

NOTE: If you are installing a passenger decorative roll bar, repeat the process on the passenger side.

FUEL FILLER OPENING

On the right hand side of the trunk, measure back 3 1/4" from the forward trunk wall; measure 3 1/2 over from the right wheel well wall. Drill a 2 1/4" hole at this location.

BODY MOUNT

NOTE: To install the body you will need three to four people to assist in the positioning of the body to the chassis.

Just prior to mounting the body apply urethane sealant to the flange on the upper portion of the forward floor liner. This will seal and bond this flange to the body. Because of the slow cure time of the urethane you will be able to adjust the body to the correct measurements.

Lift the body over the chassis and lower it into position. **See Figure 3**

After you have set the body down it is time to check some measurements.

Measure forward from the firewall to the edge of the hood opening 1 1/4". **See Figure 3-4, Detail A.**

Measure horizontally from the outside of the bumper support tube to the outside edge of the front wheel opening, 15 7/8". Repeat on other side.

Measure vertically from the center of the front spring tower to the lower edge of the hood opening, 9 3/4".

After you have located the body, drill five 3/16" holes through the flanges of the floor liner and the rear cockpit liner. Repeat on other side. **See Figure 3-4, Detail C.**

Install ten 3/16" pop rivets in the holes you have drilled.

Drill eight 3/16" holes in the mounting surfaces in the trunk area and install eight 3/16" pop rivets. **See Figure 3-4, Detail D.**

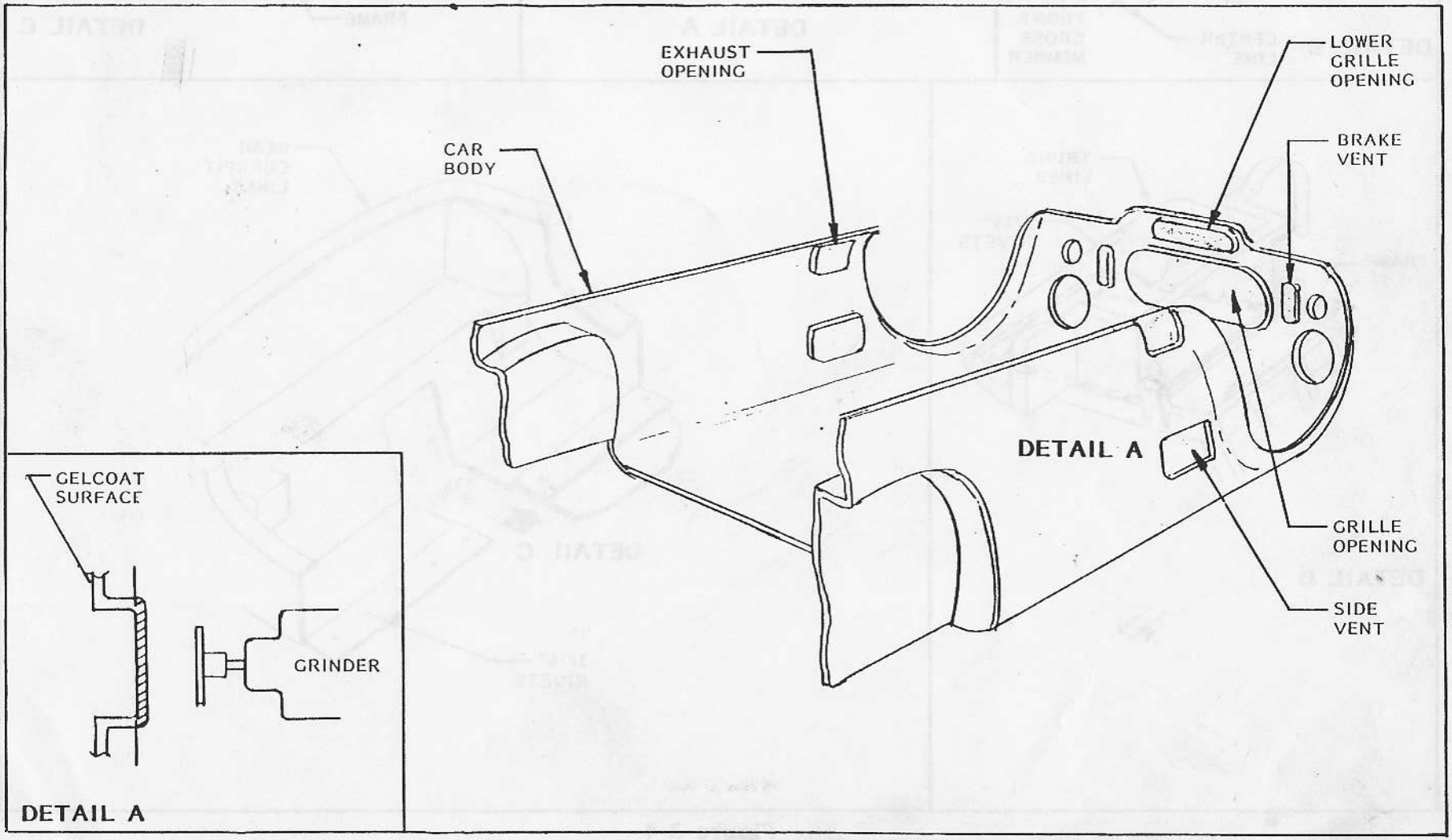


Figure 3-3

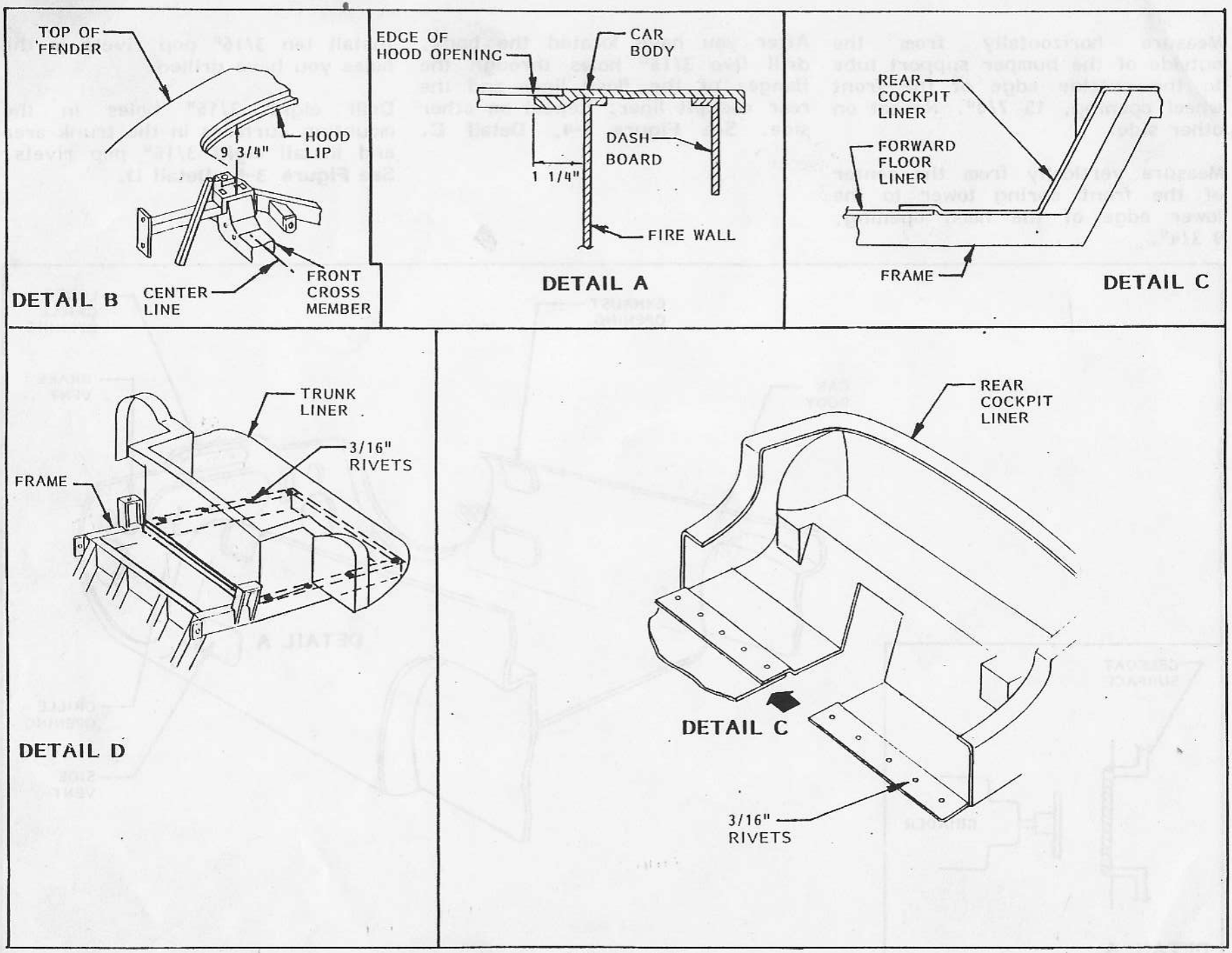

TOP OF FENDER
HOOD LIP
9 3/4"
CENTER LINE
FRONT CROSS MEMBER
DETAIL B
EDGE OF HOOD OPENING
CAR BODY
DASH BOARD
1 1/4"
FIRE WALL
DETAIL A
REAR COCKPIT LINER
FORWARD FLOOR LINER
FRAME
DETAIL C
TRUNK LINER
3/16" RIVETS
FRAME
DETAIL D
REAR COCKPIT LINER
DETAIL C
3/16" RIVETS

Figure 3-4

SECTION B
WHEEL WELL INSTALLATION

Position the rear section of the front wheel well liner and mark the flange location on the inside of the front fender. Clamp the rear into place. Place the front section between the brake vent and grille opening so that the front section and rear section overlap. Mark and trim the forward edge of the front section so that it fits flush against the inside of the body; then mark the flange locations onto the inside of the body. Clamp the front section into place. Repeat on other side. **See Figure 3-5.**

CHECK: Insure that the body has not moved by verifying your original measurements.

Drill 3/16" holes and attach with 3/16" steel pop rivets.

NOTE: Both the front wheel wells and the cockpit liners to body should be done at the same time and left undisturbed for a period of 12 hours. Refer to the warning on the use of fiberglass in Chapter 1.

After you have secured the body it is time to remove the fiberglass at the door opening. **See Figure 3-6.**

In order to remove the fiberglass in the door openings follow the same procedure as the removal of the side vents.

LINERS TO BODY FIBERGLASSING

CHECK: Before fiberglassing the body to the liners make sure that the inside of the body is touching the edges or flanges of the liner. You may have to pull the body in by using a cargo tie down, so that it fits properly. **See Figure 3-7.**

NOTE: For greater access, it is recommended the dash board should be removed. Do not reinstall the dash board until after the installation of the hood release cable. **See Section F.** You should do as much of the fiberglassing at one time as possible and let stand for a period of 12 hours.

WARNING: Always mix the resin and catalyst according to the manufacturer's directions, **Do not over-catalyze.**

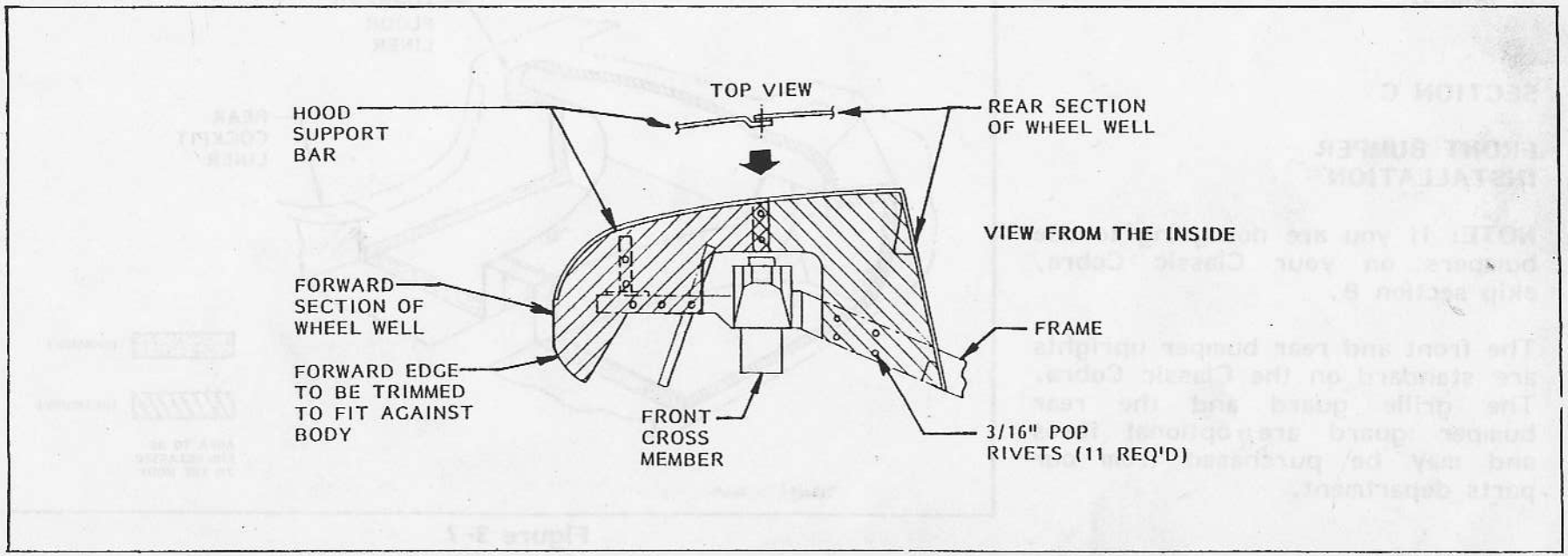


Figure 3-5

Using a coarse sandpaper, sand an area about five inches on either side of the matting surfaces. This will aid in providing a good bonding surface.

Cut the fiberglass mat into 4 x 8' strips, making sure that you cut enough strips to overlap 1" of each strip. All edges of the mat should be frayed. This can be done by pulling at the edges with your fingers till a small piece is pulled and leaving an uneven edge.

Mix one quart of resin and catalyst and soak each strip prior to installation. You may use a paint brush to soak the fiberglass mat.

Apply each strip to the liner and inside of the body where they meet.

Repeat this procedure for all body to liners.

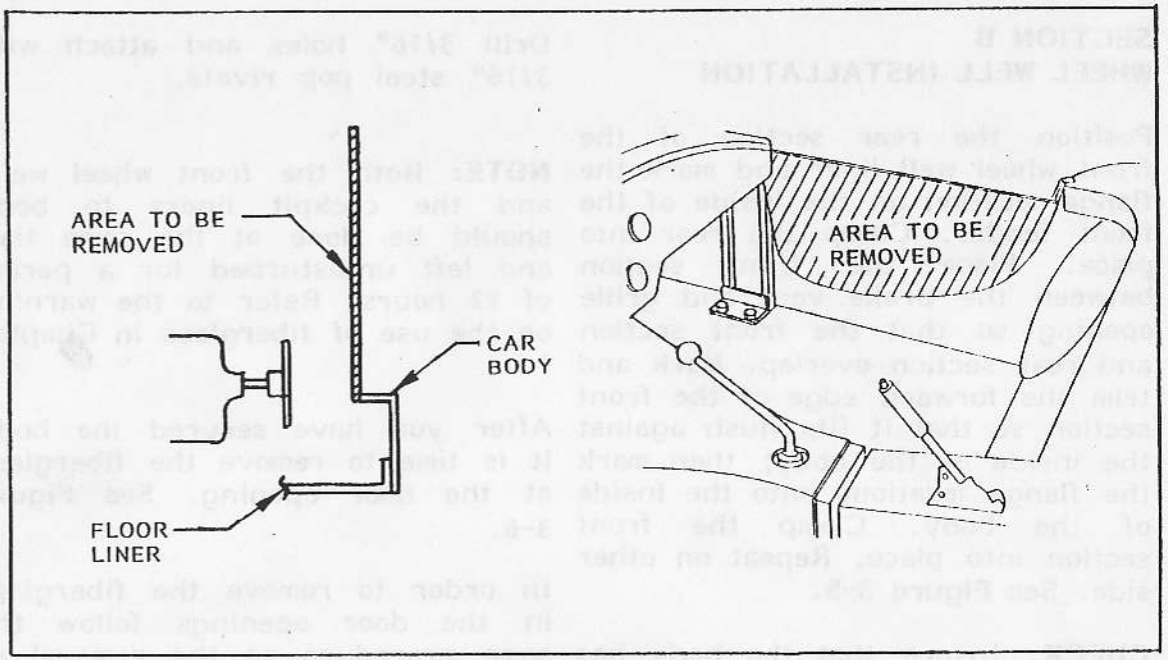


Figure 3-6

SECTION C

FRONT BUMPER INSTALLATION

NOTE: If you are not going to use bumpers on your Classic Cobra, skip section B.

The front and rear bumper uprights are standard on the Classic Cobra. The grille guard and the rear bumper guard are optional items and may be purchased from our parts department.

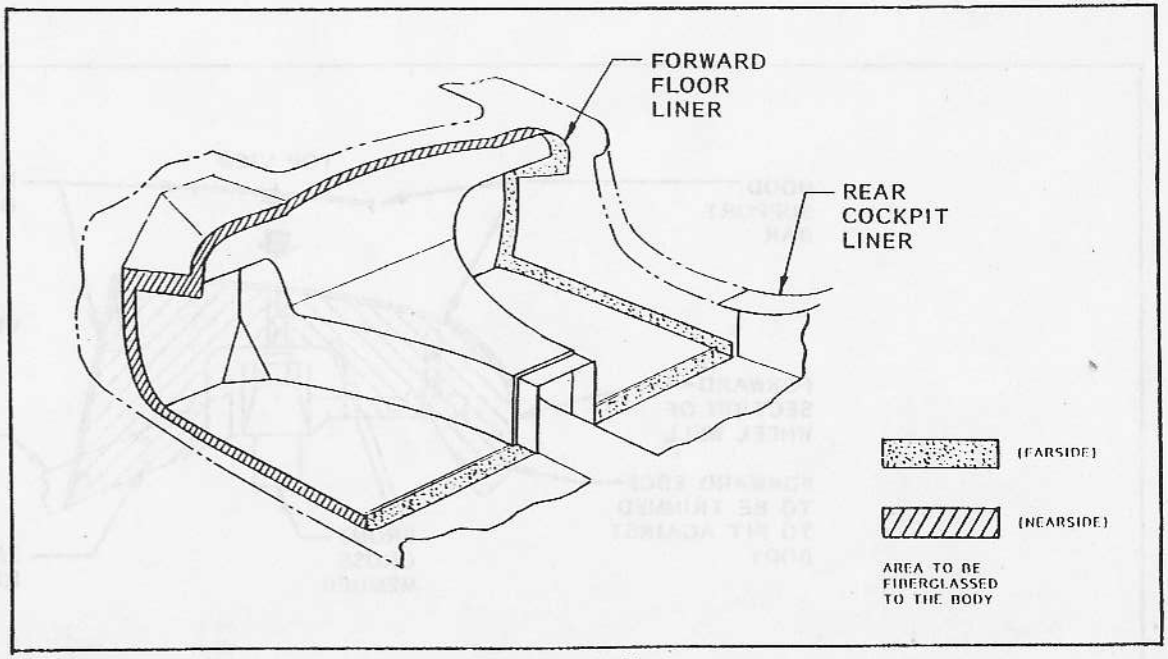


Figure 3-7

FRONT BUMPER

Draw a vertical line 2" from the brake vent openings. **See Figure 3-8.** Using the lower edge of the grille opening as a guide tape a level to this edge. Make sure that the level is long enough so that it extends to the area between the brake vent and the grille opening. **See Figure 3-8, Detail A.**

Measure up from the level, 3 1/2" along the mark you already drew. Place another mark 2 1/4" up from this mark. Drill a 1/4" pilot hole in these two marks and repeat on the other side.

Using a 1 1/4" hole saw carefully drill out the four pilot holes.

Using the tubing supplied with your kit cut the following lengths for your bumper tubes: four front bumper tubes, 7 1/8" long; two upper rear, without bumper guard, 5" long; two lower rear without bumper guards, 4 7/8" long.

If you are using the rear bumper guard cut the tubes to these lengths: two rear upper tubes, 3" long; two rear lower tubes, 2 1/2" long.

Attach the front bumper brackets to the bumper bracket mounting plates, using two 7/16 x 1 1/2" hex head bolts, four 7/16" flat washers and two 7/16" lock nuts. Repeat on the other side.

Insert the bumper tubes through the bumper holes and hold them so that they are evenly spaced in the hole. Have your assistant mark the outline of the bumper tube onto the bracket. Remove the bracket, mark the center of the outline and drill a 1/2" hole through the center of each location.

Install the two 7/16 x 8" hex head bolts so that the hex head is on the mounting plate side. Reattach the bracket to the mounting plate, using the same hardware as before. Slide the bumper tubes in location. Attach the bumper uprights to the bumper bolts with two 1/2" washers and two 1/2" lock nuts.

CHECK: Insure that the front bumper uprights are perpendicular to the ground and are not angled in any direction.

OPTIONAL GRILLE GUARD INSTALLATION

The grille guard has a peak along the top tube, the lower tube is straight along the center of the tube. **See Figure 3-8.**

Position the grille guard so that it is aligned with the grille opening, and 3/4" from the body.

NOTE: The mounting tabs for the grille guard must be adjusted to conform to the shape of the bumper upright.

Mark the mounting holes on the bumper uprights and drill a 3/6" hole through each mark. Attach by using four 1/4 x 5/8" hex washer head self-tapping screws.

REAR BUMPER INSTALLATION

The rear bumper for the Classic Cobra may be installed with or without the rear bumper guard.

Mark the center of the body on the trunk lip. Measure outward from the center line and draw two vertical lines 16" from the center line. **See Figure 3-9.**

Locate the center of the tail light mounting surface and draw a horizontal line across your vertical line. Measure down along this line 3 1/4" and 5 1/2". Drill a 1/4" pilot hole through the center of each mark.

Insert a phillips screw driver through each hole and mark center lines onto the top surface of the trunk liner and the bottom of the chassis rail.

Draw a line down the center of each fiberglass bumper bracket cover. Place the cover inside the trunk along the center lines and flush with the inside of the body; draw a line around the outside of the cover. Remove the cover and mark the inside edge of the cover flange onto the trunk floor.

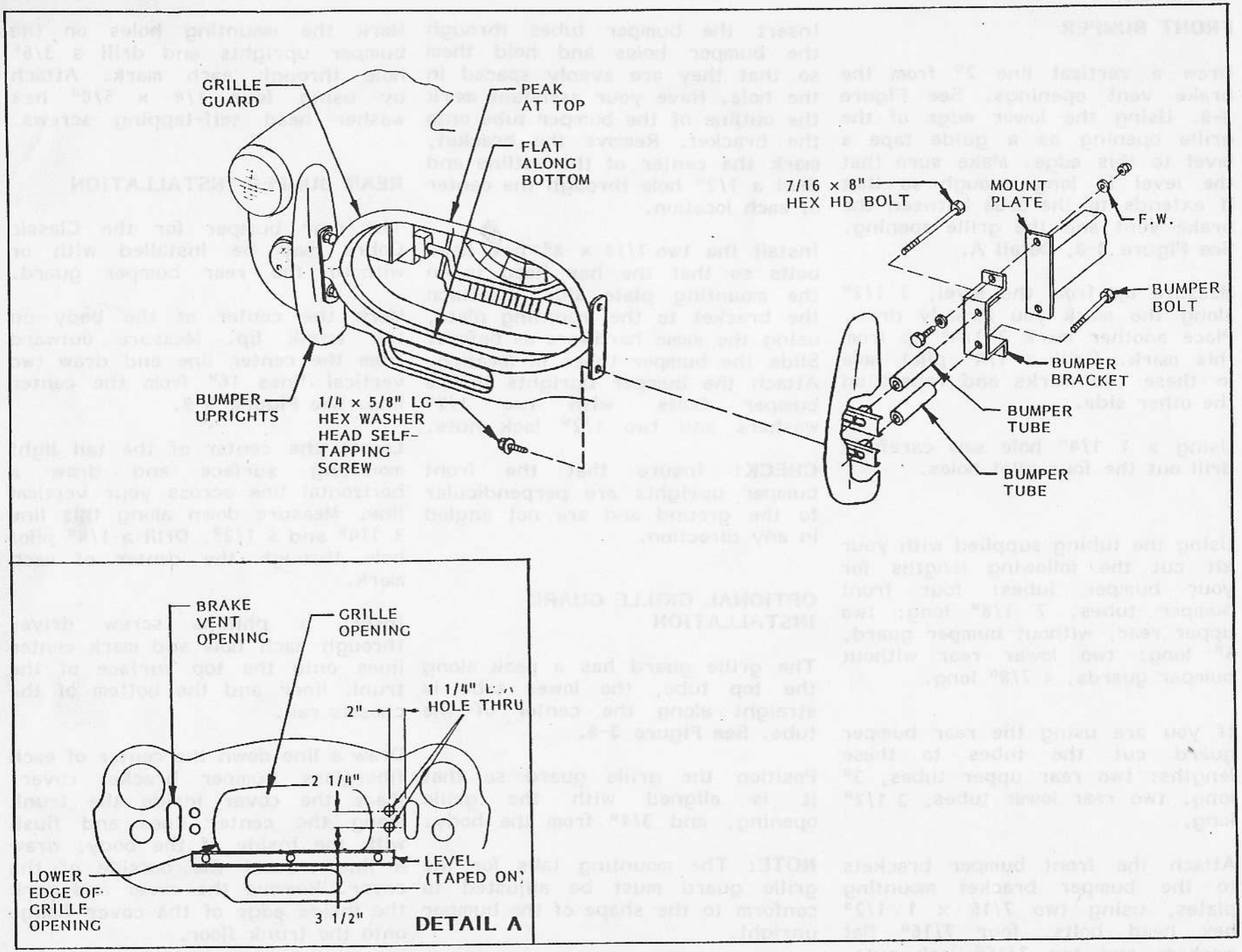
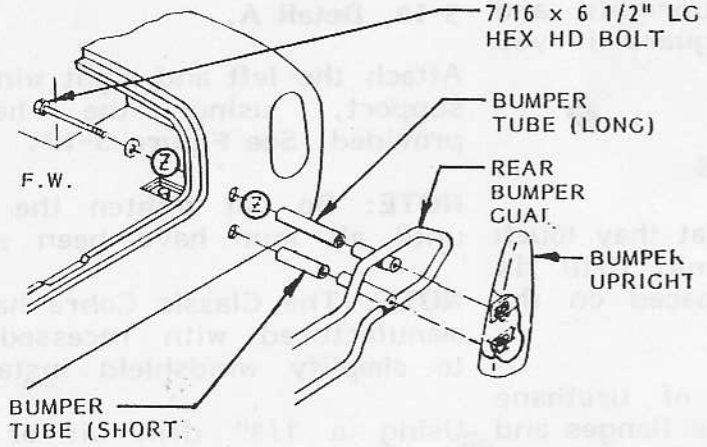
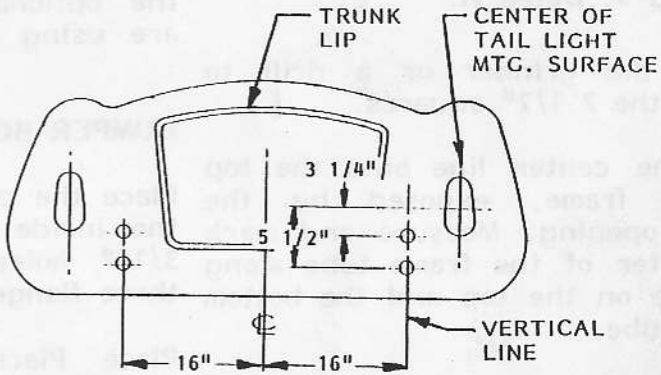
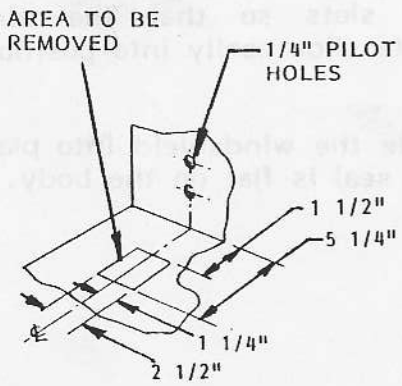

GRILLE GUARD
PEAK AT TOP
FLAT ALONG BOTTOM
7/16 x 8" HEX HD BOLT
MOUNT PLATE
F.W.
BUMPER BOLT
BUMPER BRACKET
BUMPER TUBE
BUMPER TUBE
BUMPER UPRIGHTS
1/4 x 5/8" LG HEX WASHER HEAD SELF-TAPPING SCREW
BRAKE VENT OPENING
GRILLE OPENING
2"
2 1/4"
LEVEL (TAPED ON)
LOWER EDGE OF GRILLE OPENING
3 1/2"
DETAIL A

Figure 3-8

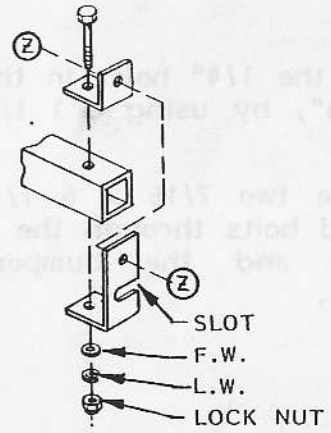




REAR VIEW



DETAIL A



DETAIL B

Figure 3-9

From the inside of the body measure back along the center line 1 1/2" and 5 1/4". Draw a line across each of these marks. From the center line measure 1 1/4" to the left and 1 1/4" to the right and draw two parallel lines; this gives you a 2 1/2" square. **See Figure 3-9, Detail A.**

Use a die grinder or a drill to remove the 2 1/2" squares.

Mark the center line onto the top of the frame, exposed by the square opening. Measure and mark the center of the frame tube along this line on the top and the bottom of the tube.

Drill a pilot hole through each mark on the top and bottom of the frame and enlarge to 1/2".

Attach the upper and lower bumper brackets into place, using two 1/2 x 5 1/2" hex head bolts, four 1/2" flat washers and two 1/2" lock nuts.

Enlarge the 1/4" holes in the body to 1 1/4", by using a 1 1/4" hole saw.

Slide the two 7/16 x 6 1/2" long hex head bolts through the bumper brackets and the bumper tube openings.

NOTE: The lower bumper bolt requires two 1/2" flat washers in order to sandwich the bumper bracket slot. **See Figure 3-9, Detail B.**

Slide the bumper tubes into place. Attach the bumper uprights and the optional bumper guard if you are using it.

BUMPER BOLT COVERS

Place the covers so that they touch the inside of the trunk. Drill six 3/16" holes evenly spaced on the three flanges.

Place Place a bead of urethane along the bottom of the flanges and install, using six 3/16" steel pop rivets, then finish by putting a bead of urethane where the bracket meets the back of the trunk.

SECTION D

WINDSHIELD ASSEMBLY

On the bottom section of the windshield there are two circular openings on the slot for the windshield rubber seal. Before installing the windshield seal, lubricate the slot on the lower windshield frame, as well as the rubber seal.

Insert the flange on the seal into the circular openings and pull the seal through the slot. **See Figure 3-10, Detail A.**

Attach the left and right windshield support, using the hardware provided. **See Figure 3-10.**

NOTE: Do not tighten the screws until all four have been started.

NOTE: The Classic Cobra has been manufactured with recessed areas to simplify windshield installation.

Using a 1/4" drill bit or a die grinder, remove the recessed area that the windshield posts slide into. **See Figure 3-10, Detail B.**

NOTE: Do not remove the groove for the windshield seal.

Using a rectangular file enlarge the slots so that the windshield posts slide easily into position.

Slide the windshield into place until the seal is flat on the body.

Lightly clamp the windshield posts to the plates provided on the steering column support.

Measure from the top rear edge of the door opening to the center of the top windshield post screw. Adjust the windshield back until the measurement is 26", on each side. **See Figure 3-10, Detail C.**

Now tighten the clamps on the steering column support plates.

Drill four 3/4" holes through the windshield posts and the windshield mounting plates on the steering column supports.

Remove the windshield. Place the surround plates for the windshield posts over the windshield post slots, with the screw hole to the outside edge of the slot. Mark the location of the groove for the windshield seal onto the groove for the windshield seal onto the surround plates. Using a fine tooth hacksaw blade, remove the marked area from the windshield post surround plate.

Slide the surround plates onto the windshield posts. Place windshield back into position and fasten the posts to the steering column supports, using four 3/8 x 1 1/2" hex head bolts, eight 3/8" flat washers and four 3/8" locknuts.

CHECK: Insure that the windshield is properly positioned by repeating your original measurements.

Drill a 9/64" hole through the hole on each surround plate and attach the plates to the body, using a #8 x 5/8" round head phillips self-tapping screw.

Seal around the windshield posts under the body, using urethane sealant.

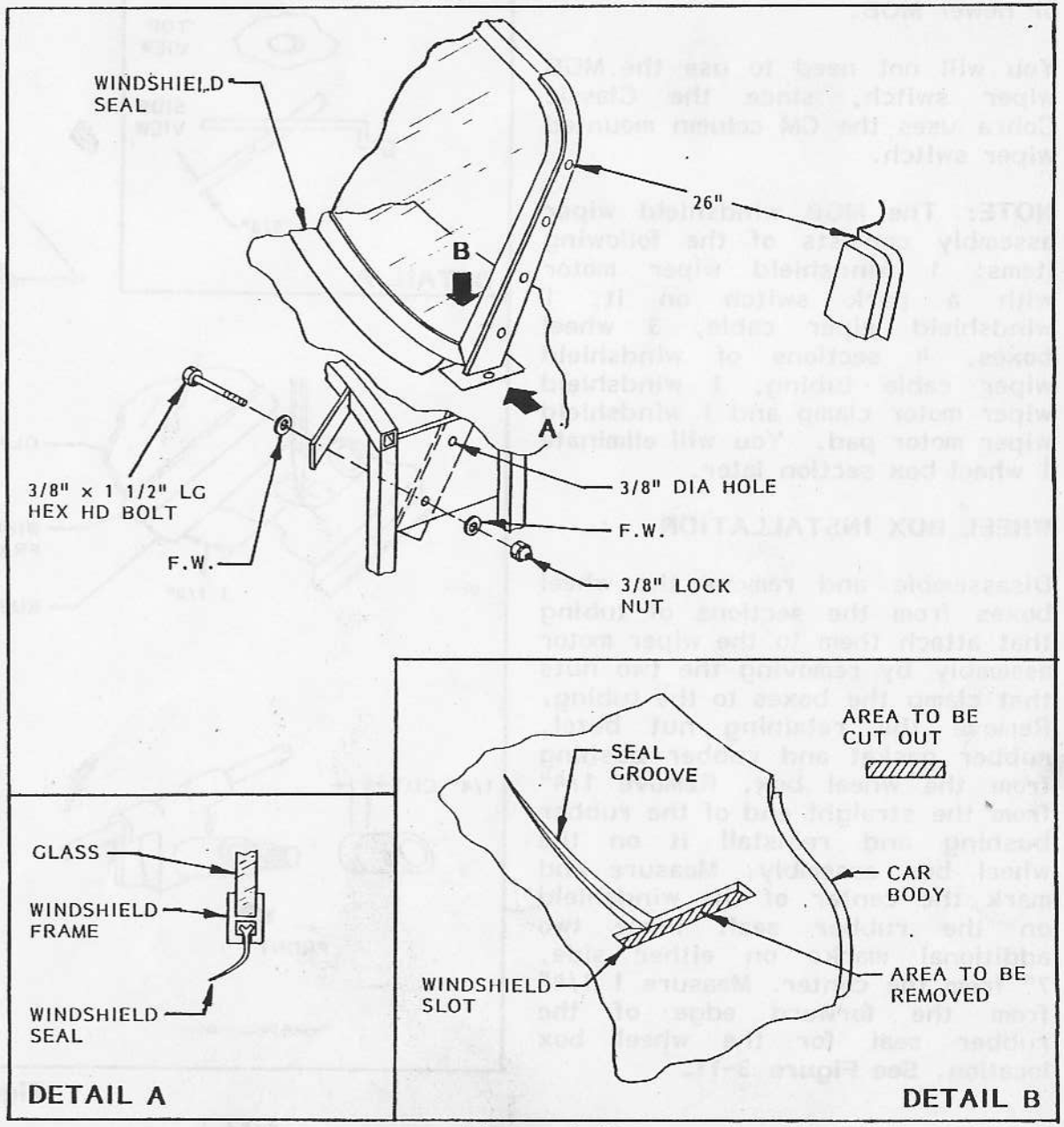


Figure 3-10

SECTION E

WINDSHIELD WIPER INSTALLATION

The windshield wiper system used on the Classic Cobra is from a 1969 or newer MGB.

You will not need to use the MGB wiper switch, since the Classic Cobra uses the GM column mounted wiper switch.

NOTE: The MGB windshield wiper assembly consists of the following items: 1 windshield wiper motor with a park switch on it, 1 windshield wiper cable, 3 wheel boxes, 4 sections of windshield wiper cable tubing, 1 windshield wiper motor clamp and 1 windshield wiper motor pad. You will eliminate 1 wheel box section later.

WHEEL BOX INSTALLATION

Disassemble and remove the wheel boxes from the sections of tubing that attach them to the wiper motor assembly by removing the two nuts that clamp the boxes to the tubing. Remove the retaining nut bezel, rubber gasket and rubber bushing from the wheel box. Remove 1/4" from the straight end of the rubber bushing and reinstall it on the wheel box assembly. Measure and mark the center of the windshield on the rubber seal. Place two additional marks on either side, 7" from the center. Measure 1 1/4" from the forward edge of the rubber seal for the wheel box location. **See Figure 3-11.** Place the rubber gasket from the wheel box centered on this mark. Mark the inside outline onto the body; then remove this center area with a drill bit or die grinder. Place the wheel boxes into position from the inside of the body and install, as shown in **Figure 3-11, Detail A.**

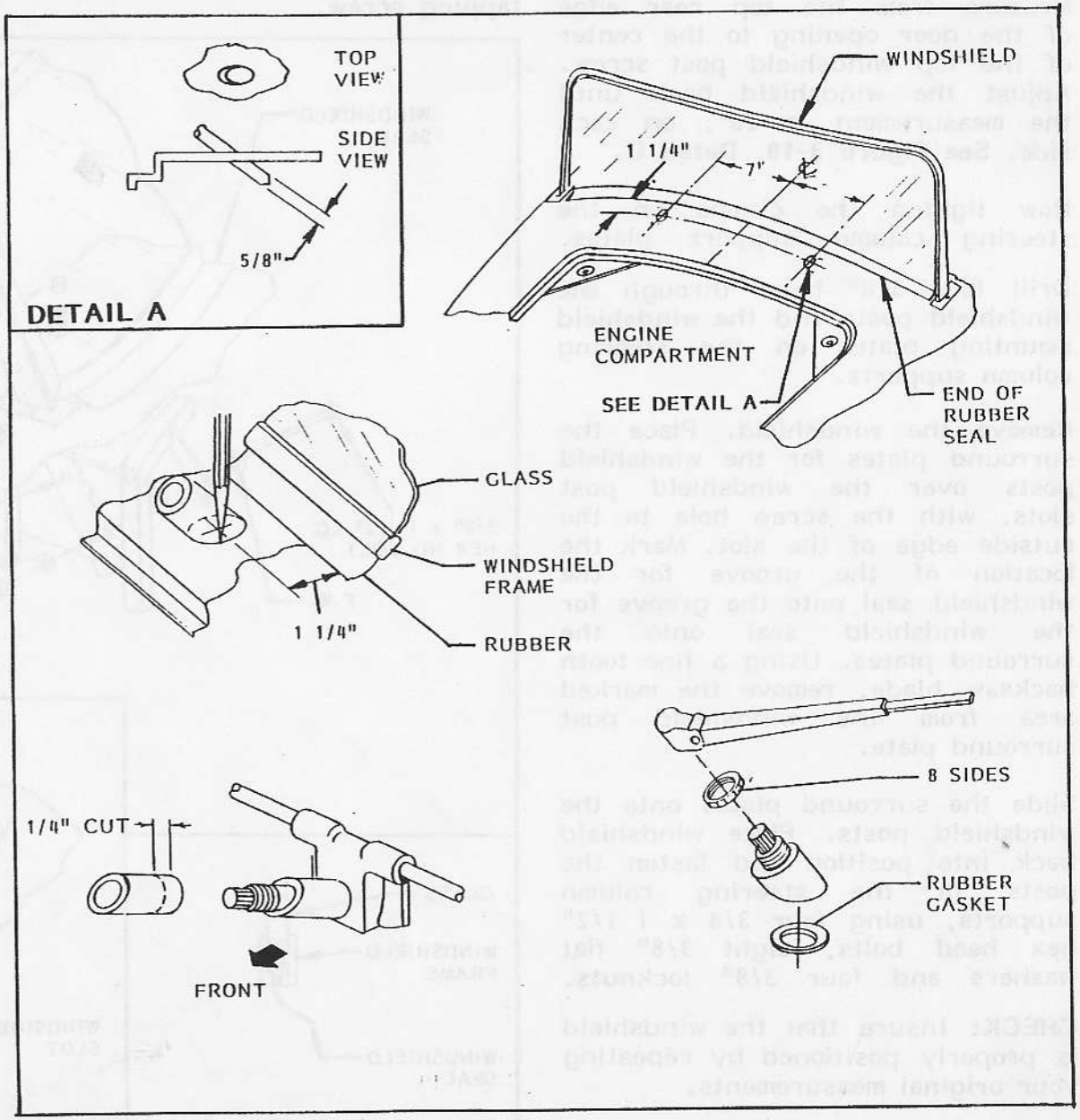


Figure 3-11.

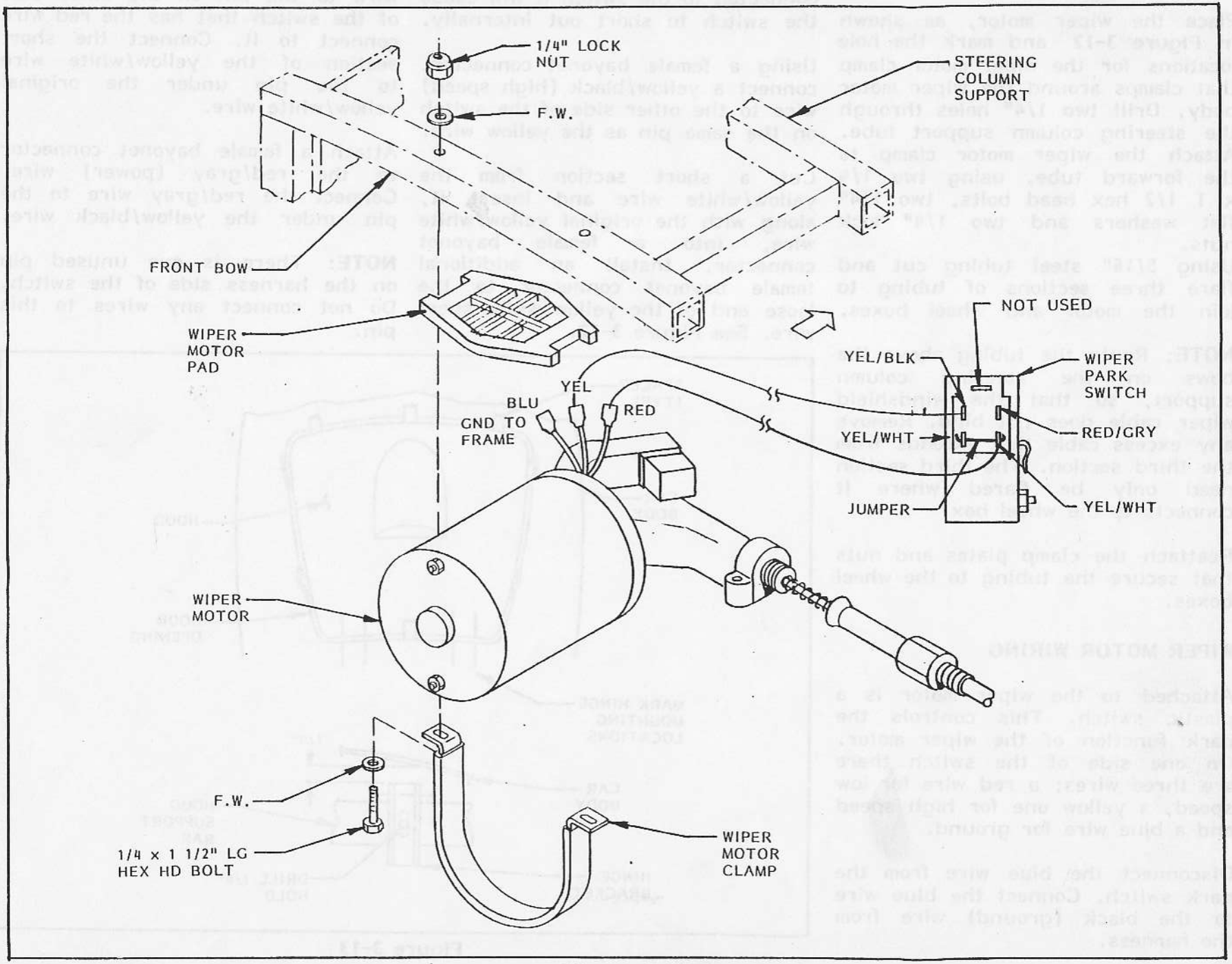

1/4" LOCK NUT
F.W.
STEERING COLUMN SUPPORT
FRONT BOW
WIPER MOTOR PAD
NOT USED
YEL/BLK
WIPER PARK SWITCH
YEL
BLU
RED
GND TO FRAME
YEL/WHT
RED/GRY
JUMPER
YEL/WHT
WIPER MOTOR
F.W.
1/4 x 1 1/2" LG HEX HD BOLT
WIPER MOTOR CLAMP

Figure 3-12

WIPER MOTOR INSTALLATION

Place the wiper motor, as shown in **Figure 3-12** and mark the hole locations for the wiper motor clamp that clamps around the wiper motor body. Drill two 1/4" holes through the steering column support tube. Attach the wiper motor clamp to the forward tube, using two 1/4 x 1 1/2 hex head bolts, two 1/4" flat washers and two 1/4" lock nuts.
Using 5/16" steel tubing cut and flare three sections of tubing to join the motor and wheel boxes.

NOTE: Route the tubing above the bows on the steering column support, so that the windshield wiper cable does not bind. Remove any excess cable that extends from the third section. The third section need only be flared where it connects to the wheel box.

Reattach the clamp plates and nuts that secure the tubing to the wheel boxes.

WIPER MOTOR WIRING

Attached to the wiper motor is a plastic switch. This controls the park function of the wiper motor. On one side of the switch there are three wires; a red wire for low speed, a yellow one for high speed and a blue wire for ground.

Disconnect the blue wire from the park switch. Connect the blue wire to the black (ground) wire from the harness.

WARNING: If the black wire is connected to the switch it will cause the switch to short out internally.

Using a female bayonet connector, connect a yellow/black (high speed) wire to the other side of the switch on the same pin as the yellow wire.

Cut a short section from the yellow/white wire and insert it, along with the original yellow/white wire, into a female bayonet connector. Install an additional female bayonet connector to the loose end of the yellow/white short wire. **See Figure 3-12.**

Attach the original yellow/white wire to the pin on the other side of the switch that has the red wire connect to it. Connect the short section of the yellow/white wire to the pin under the original yellow/white wire.

Attach a female bayonet connector to the red/gray (power) wire. Connect the red/gray wire to the pin under the yellow/black wire.

NOTE: There is one unused pin on the harness side of the switch. Do not connect any wires to this pin.

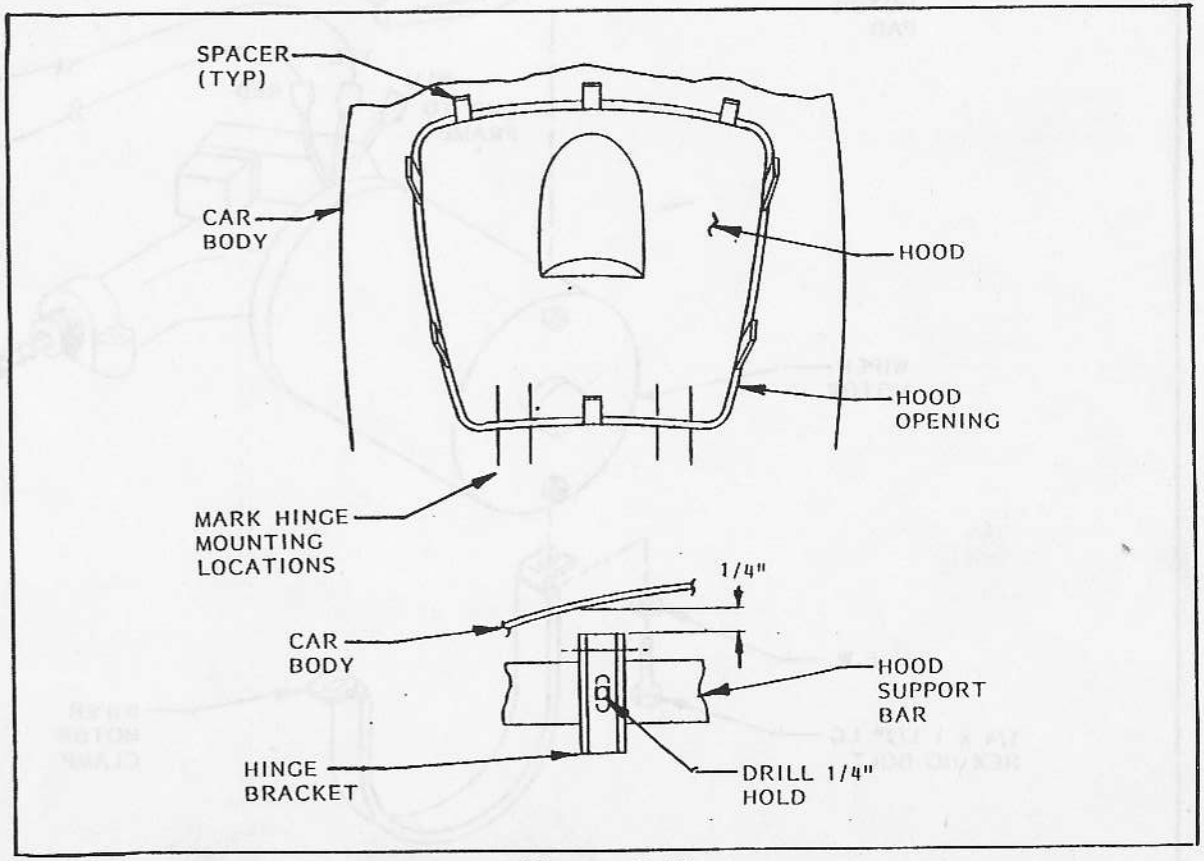


Figure 3-13

SECTION F

HOOD HINGE INSTALLATION

Molded on the inner hood there are two mounting surfaces for the hood hinges. Mark these two locations onto the outer skin of the hood by using a grease pencil. Place the hood onto the hood opening. Using spacers made from paint sticks, evenly space the hood in the opening. Mark the hinge mounting location onto the body. **See Figure 3-13** . After you mark the body remove the hood.

Assemble the hood hinges and hinge brackets using two 3/8 x 1 3/4" hex head bolts, four flat washers and two 3/8" locknuts. Tighten the lock nut so that the hinge arm swings freely and the nut is locked.

Lightly clamp the hood hinges to the hood support bar. Adjust the hood hinges so that each hinge is between the marks on the body and the hinge bracket no closer than 1/4" from the inside of the body.

Drill a 1/4" hole through the hinge bracket and the center of the hood support bar.

NOTE: It may be necessary to remove the radiator during this step.

Remove the hinge bracket and drill interlocking 1/4" hole above and below your original hole to form a slot. File the sides flat so that the hinge bracket will be adjustable.

Attach the hinge bracket to the hood support bar, using two 1/4 x 1/2" hex head bolts, four 1/4" flat washers and two 1/4" lock nuts. Adjust the hinge bracket so that it is no closer than 1/4" from the inside of the body.

Place the hood back into position, using the spacers as before.

NOTE: During the next procedure have an assistant hold the hood to prevent it from moving.

From under the car, place the hinge against its mounting surface. Mark the outline and the slots of the hinge plate onto the surface. Remove the hood and place upside down on a padded surface.

WARNING: When drilling or tapping holes on the inside of the hood, you must be careful to prevent going through the outside of the hood. Tape around the drill bit to prevent it from going through. Allow the drill bit and the tap to go in only 3/4".

Mark the center of each slot; then drill a 1/8" pilot hole; enlarge by using a 27/64" drill bit. Using a 1/4-20" tap run the tap through each hole.

WARNING: The tap must be lubricated to prevent it from braking. Run the tap in slowly, back it out occasionally to clean out the shavings.

Remove the hinge arms from the hinge brackets and attach the hinge arms to the hood, using four 1/4 x 1" hex head bolts, four flat washers and 4 lockwashers.

HOOD SCOOP

Prior to the mounting of the hood, the hood scoop opening must be cut out.

WARNING: To prevent damage to the finished surface of the hood, mask off the area directly in front of the hood scoop and along the upper edges of the scoop.

Mark the area of the scoop to be opened. The lower edge of the scoop opening will be flush with the hood. The upper edge of the hood scoop opening is 1/4" along the top and sides. This will be done using a key hole saw.

Drill a hole near the corner of the scoop opening that is larger than the key hole saw blade. Cut along the line for the scoop opening. **Refer to Figure 3-14.**

Once the opening has been removed, finish the rough edges, as shown in **Detail A**, by using a flat file or a block or wood with sandpaper.

HOOD MOUNT

Place the hood back in position, then reinstall hinge arms to the hinge brackets. **See Figure 3-15.**

If your hood is out of adjustment, first check the hinge pivot points to ensure they are both in the same spot relative to the body. If they are not, determine which one is out.

EXAMPLE: The left hinge point is lower than the right and because it is lower, the hood is lower on the left. If this is the case, the hinge point should be raised until the hood is even.

EXAMPLE: Both your hinge points are located correctly, but the hood is cocked to the right side. Loosen the right side hood bolts and then slide the hood towards the left until both sides are evenly spaced; then tighten the bolts.

CHECK: Always make small adjustments to the hood. Once you have made an adjustment close the hood and check to see what effect the adjustment has made.

WARNING: An improper adjustment may cause the hood to contact the body. Care should be taken while opening and closing the hood to prevent damage to both the hood and the body.

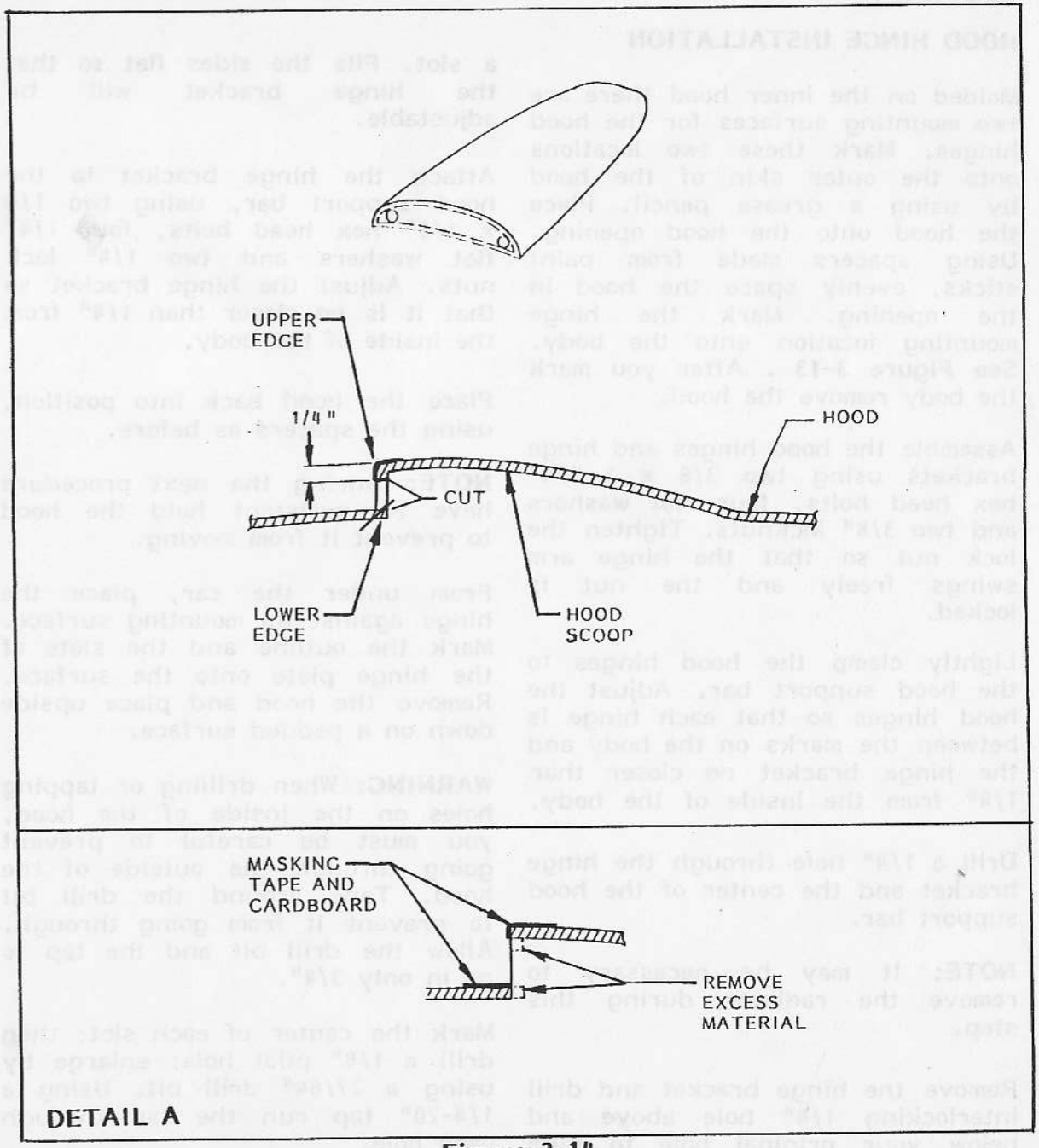


Figure 3-14

HOOD LATCH INSTALLATION

This may be done at the same time as the hinge mounting on the hood.

Place the hood striker onto its mounting surface at the rear of the hood. Mark the square holes onto the mounting surface. **See Figure 3-16.**

Mark the center of each square hole. Drill a 1/8" pilot hole and then enlarge it by using a 27/64" drill bit. Using a 1/4-20 tap, run the tap through each hole.

Attach the hood striker by using two 1/4-20 x 1" hex head bolts and two 1/4 x 1" fender washers and two 1/4" lock washers.

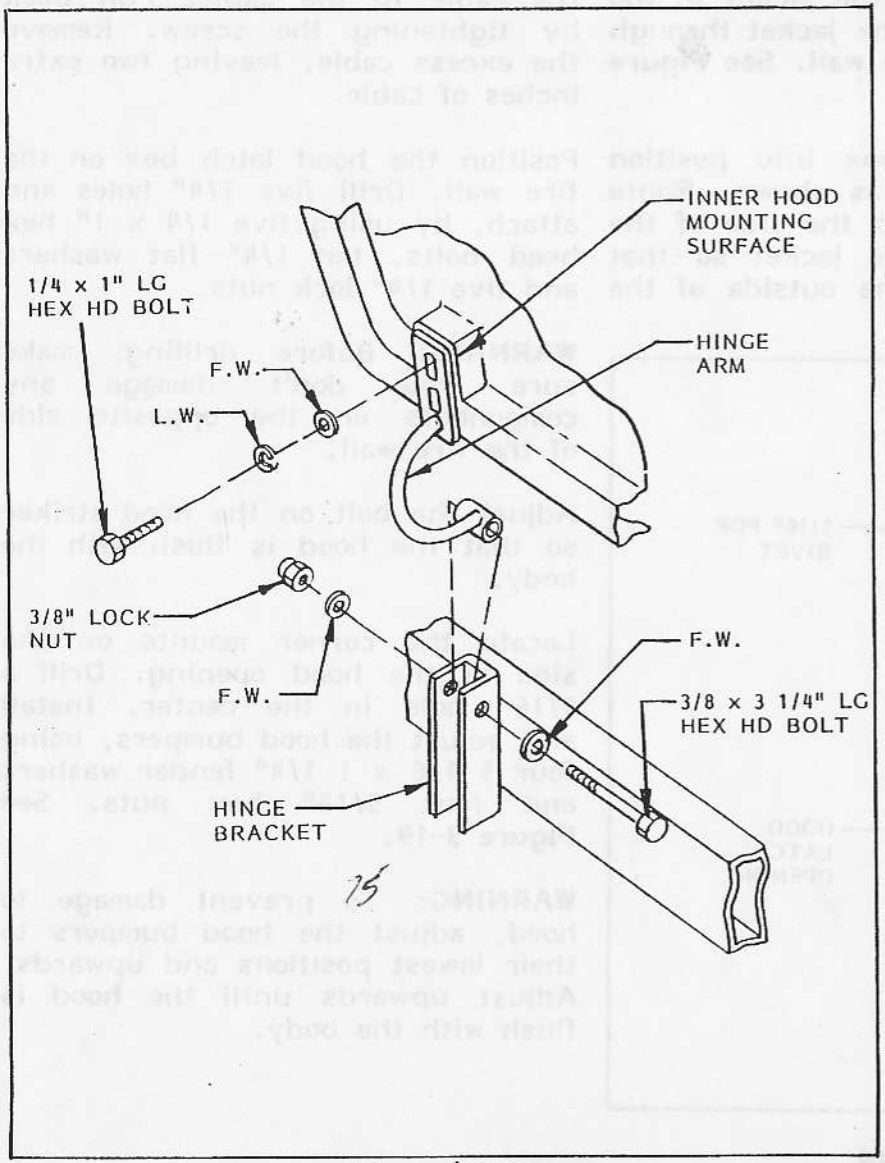


Figure 3-15

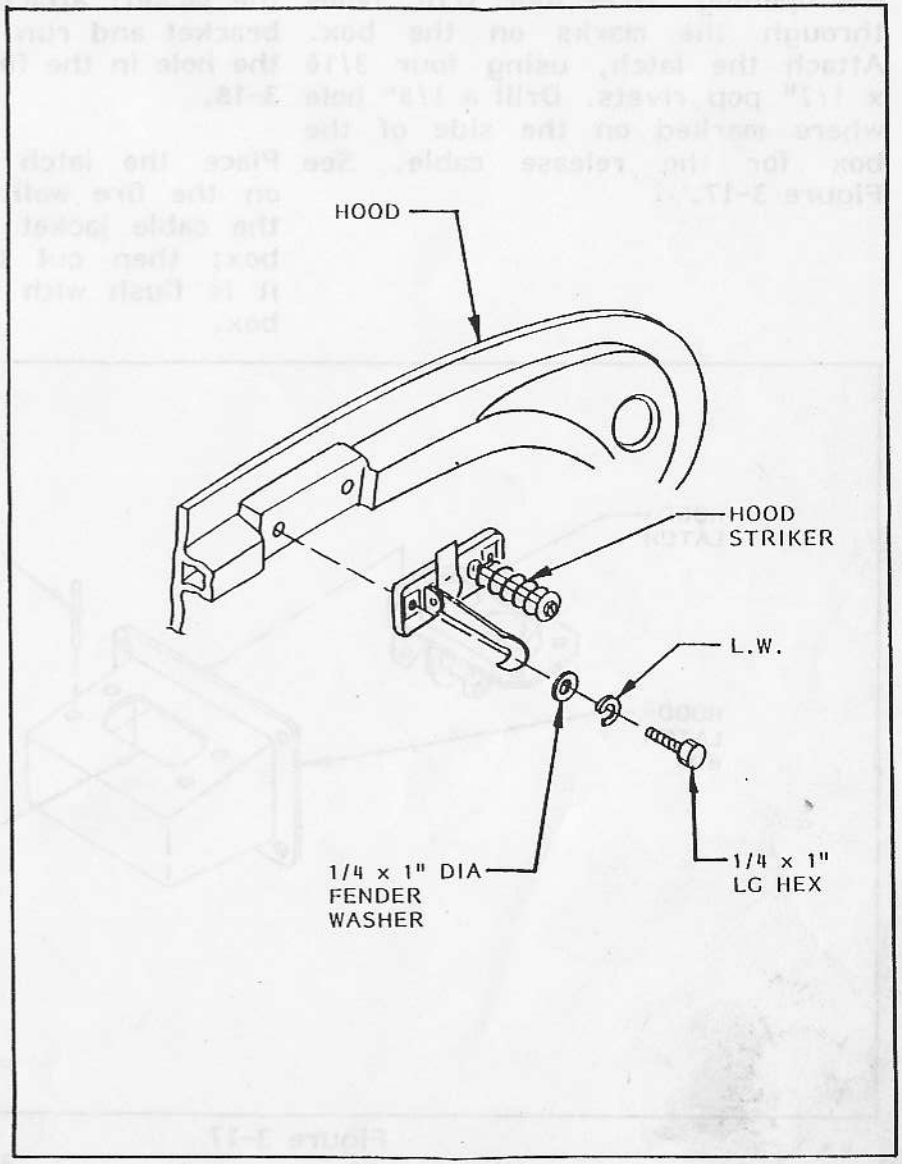


Figure 3-16

HOOD LATCH

Drill a hole, larger than a saber saw blade, inside the scribed line for the hood latch. Insert the saber saw blade into the hole and cut along the inside of the scribed line. Using a flat file and a round file, trim the hole so that the latch fits the opening. Drill four 3/16" holes through the marks on the box. Attach the latch, using four 3/16 x 1/2" pop rivets. Drill a 1/8" hole where marked on the side of the box for the release cable. **See Figure 3-17.**

HOOD RELEASE CABLE INSTALLATION

Attach the hood release cable bracket to the rear bow of the steering column support. Drill a hole in the fire wall the size of the cable jacket, forward of the cable bracket. Remove the cable from the jacket; attach the jacket to the bracket and run the jacket through the hole in the fire wall. **See Figure 3-18.**

Place the latch box into position on the fire wall, as shown. Route the cable jacket to the side of the box; then cut the jacket so that it is flush with the outside of the box.

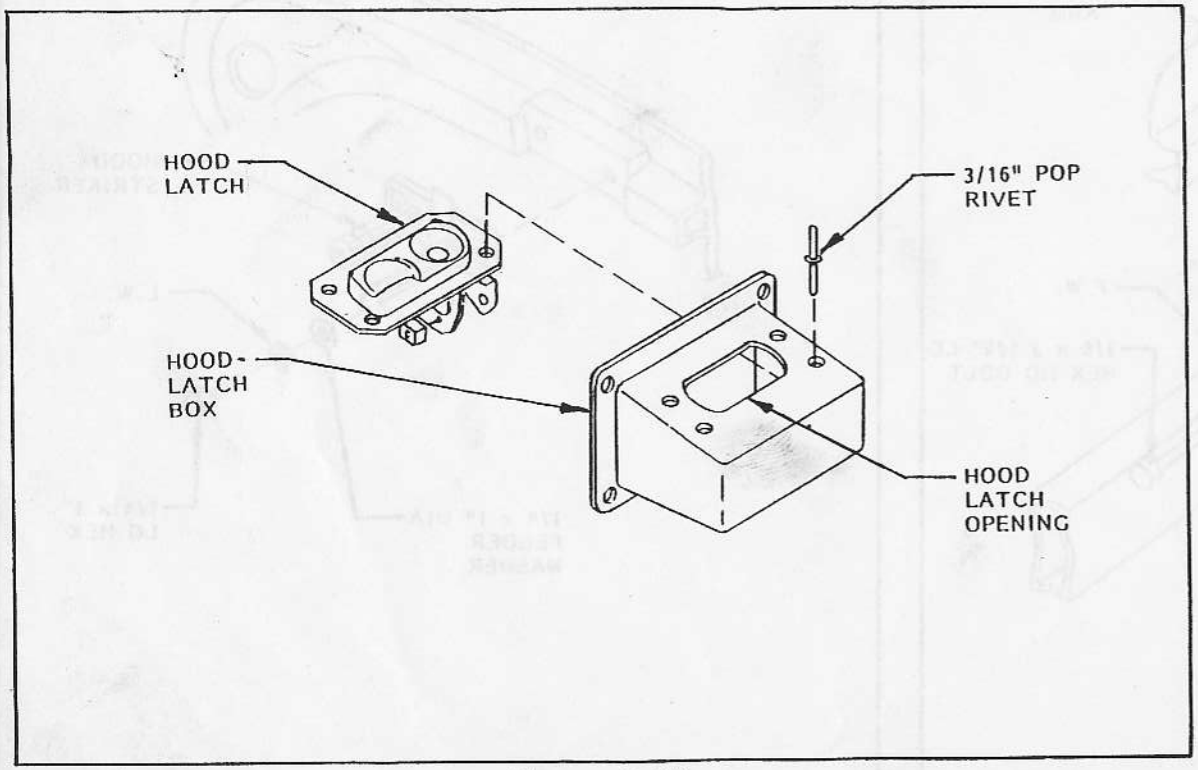


Figure 3-17

NOTE: To allow the cable to move freely through the jacket, do not place any sharp bends on the jacket.

Insert the cable into the jacket until the knob is flush against the face plate. Insert the cable through the opening on the box and attach the cable to the cable. Pull back by tightening the screw. Remove the excess cable, leaving two extra inches of cable.

Position the hood latch box on the fire wall. Drill five 1/4" holes and attach, by using five 1/4 x 1" hex head bolts, ten 1/4" flat washers and five 1/4" lock nuts.

WARNING: Before drilling, make sure you don't damage any components on the opposite side of the fire wall.

Adjust the bolt on the hood striker so that the hood is flush with the body.

Locate the corner mounts on the side of the hood opening. Drill a 5/16" hole in the center. Install and adjust the hood bumpers, using four 5 1/6 x 1 1/4" fender washers and four 5/16" hex nuts. **See Figure 3-19.**

WARNING: To prevent damage to hood, adjust the hood bumpers to their lowest positions and upwards. Adjust upwards until the hood is flush with the body.

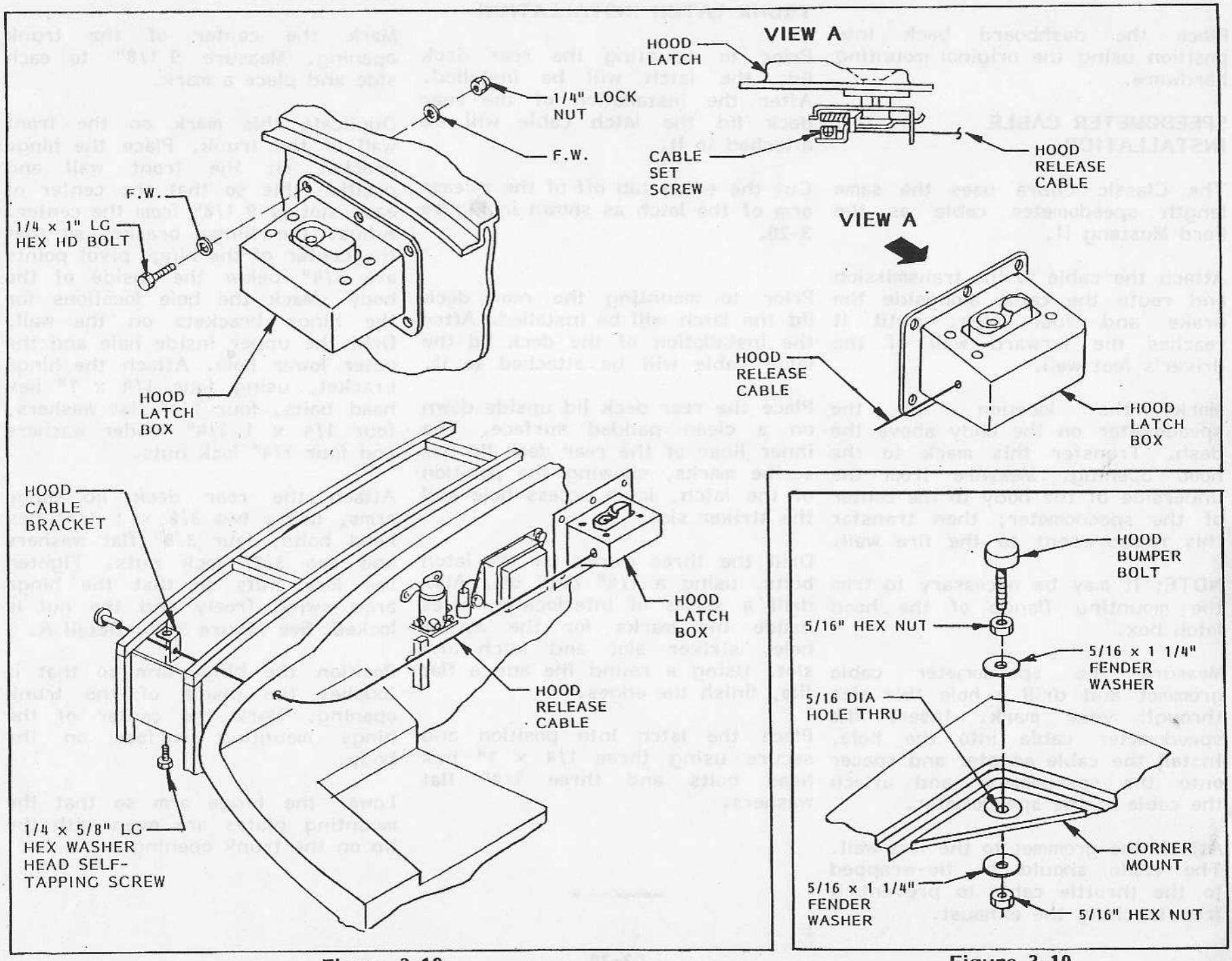


Figure 3-18

Figure 3-19

DASHBOARD REINSTALLATION

Place the dashboard back into position using the original mounting hardware.

SPEEDOMETER CABLE INSTALLATION

The Classic Cobra uses the same length speedometer cable as the Ford Mustang II.

Attach the cable to the transmission and route the cable alongside the brake and fuel lines, until it reaches the forward wall of the driver's foot well.

Mark the location of the speedometer on the body above the dash. Transfer this mark to the hood opening. Measure from the underside of the body to the center of the speedometer; then transfer this measurement to the fire wall.

NOTE: It may be necessary to trim the mounting flange of the hood latch box.

Measure the speedometer cable grommet and drill a hole this size through your mark. Insert the speedometer cable into the hole. Install the cable adapter and spacer onto the speedometer and attach the cable to the speedometer.

Attach the grommet to the fire wall. The cable should be tie-wrapped to the throttle cable to prevent it from touching the exhaust.

SECTION G

TRUNK LATCH INSTALLATION

Prior to mounting the rear deck lid, the latch will be installed. After the installation of the rear deck lid the latch cable will be attached to it.

Cut the extra tab off of the release arm of the latch as shown in **Figure 3-20.**

Prior to mounting the rear deck lid the latch will be installed. After the installation of the deck lid the latch cable will be attached to it.

Place the rear deck lid upside down on a clean padded surface. The inner liner of the rear deck lid has scribe marks, showing the position of the latch, latch access hole and the striker slot.

Drill the three marks for the latch bolts, using a 1/4" drill bit. Also drill a series of interlocking holes inside the marks for the access hole, striker slot and latch arm slot. Using a round file and a flat file, finish the edges.

Place the latch into position and secure using three 1/4 x 1" hex head bolts and three 1/4" flat washers.

REAR DECK LID HINGE INSTALLATION

Mark the center of the trunk opening. Measure 9 1/8" to each side and place a mark.

Duplicate this mark on the front wall of the trunk. Place the hinge bracket on the front wall and position this so that the center of each slot is 9 1/8" from the center. Adjust the hinge bracket so that the center of the hinge pivot points are 3/4" below the inside of the body. Mark the hole locations for the hinge brackets on the wall. Drill the upper inside hole and the outer lower hole. Attach the hinge bracket, using four 1/4 x 1" hex head bolts, four 1/4" flat washers, four 1/4 x 1 1/4" fender washers and four 1/4" lock nuts.

Attach the rear deck lid hinge arms, using two 3/8 x 1 1/4" hex head bolts, four 3/8" flat washers and two 3/8" lock nuts. Tighten the lock nuts so that the hinge arms swing freely and the nut is locked. **See Figure 3-20, Detail A.**

Position the hinge arm so that it touches the inside of the trunk opening. Mark the center of the hinge mounting surface on the body.

Lower the hinge arm so that the mounting plates are even with the lip on the trunk opening.

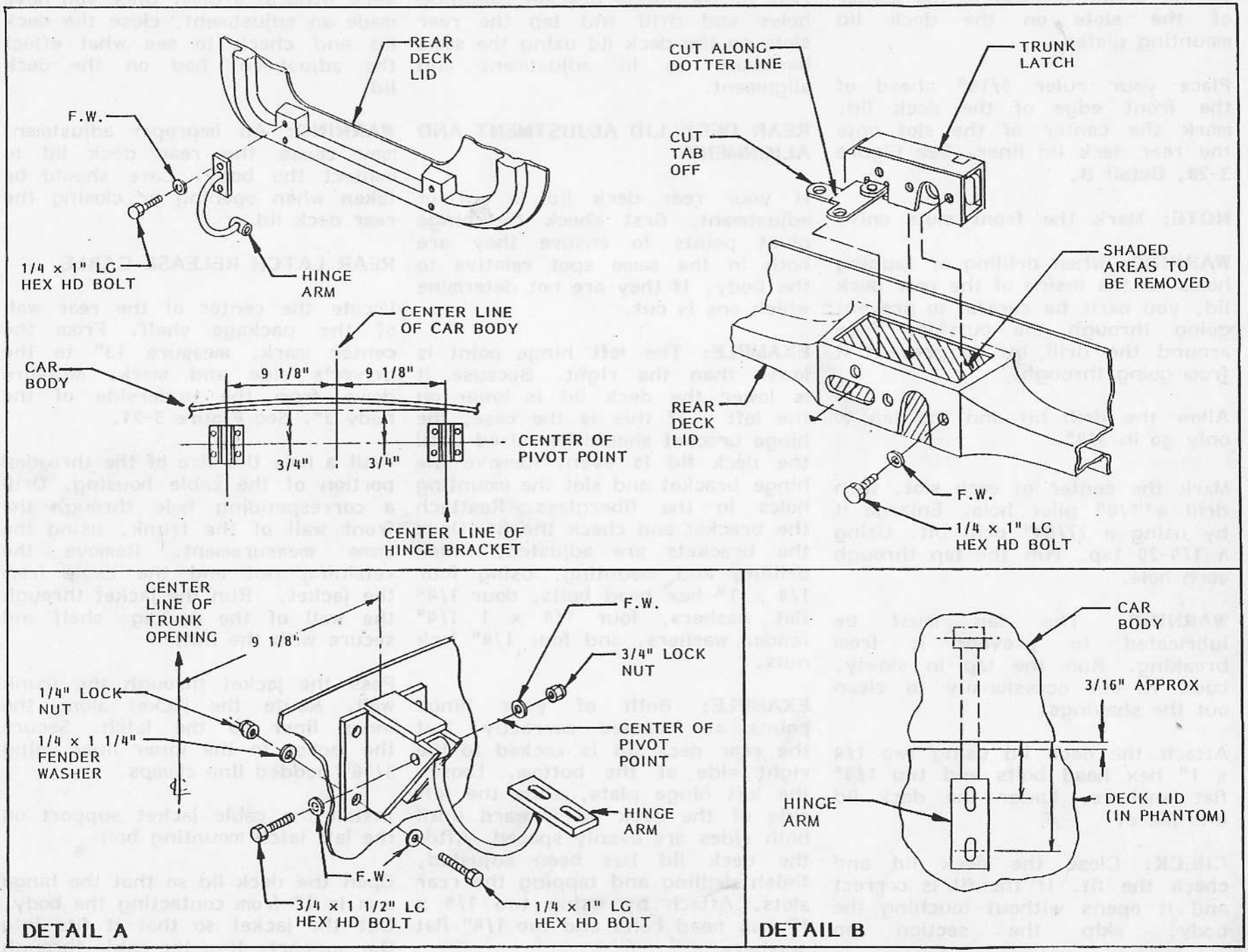

REAR DECK LID
F.W.
1/4 x 1" LG HEX HD BOLT
HINGE ARM
CENTER LINE OF CAR BODY
CAR BODY
9 1/8"
9 1/8"
3/4"
3/4"
CENTER OF PIVOT POINT
CENTER LINE OF HINGE BRACKET
CUT ALONG DOTTER LINE
TRUNK LATCH
CUT TAB OFF
SHADED AREAS TO BE REMOVED
REAR DECK LID
F.W.
1/4 x 1" LG HEX HD BOLT
CENTER LINE OF TRUNK OPENING
9 1/8"
F.W.
3/4" LOCK NUT
1/4" LOCK NUT
1/4 x 1 1/4" FENDER WASHER
CENTER OF PIVOT POINT
HINGE ARM
F.W.
3/4 x 1 1/2" LG HEX HD BOLT
1/4 x 1" LG HEX HD BOLT
DETAIL A
CAR BODY
3/16" APPROX
HINGE ARM
DECK LID (IN PHANTOM)
DETAIL B

Figure 3-20

Measure the distance from the edge of the trunk opening to the center of the slots on the deck lid mounting plates.

Place your ruler 3/16" ahead of the front edge of the deck lid, mark the center of the slot onto the rear deck lid liner. **See Figure 3-20, Detail B.**

NOTE: Mark the front slots only.

WARNING: When drilling or tapping holes on the inside of the rear deck lid, you must be careful to prevent going through the outside. Tape around the drill bit to prevent it from going through.

Allow the drill bit and the tap to only go in 3/4".

Mark the center of each slot, then drill a 1/8" pilot hole. Enlarge it by using a 27/64" drill bit. Using a 1/4-20 tap, run the tap through each hole.

WARNING: The tap must be lubricated to prevent it from breaking. Run the tap in slowly, back it out occasionally to clean out the shavings.

Attach the deck lid using two 1/4 x 1" hex head bolts and two 1/4" flat washers. Lower the deck lid into place.

CHECK: Close the deck lid and check the fit. If the fit is correct and it opens without touching the body, skip the section on adjustment and alignment. Drill the rest of the hinge bracket mounting holes and drill and tap the rear slots on the deck lid using the same hardware as in adjustment and alignment.

REAR DECK LID ADJUSTMENT AND ALIGNMENT

If your rear deck lid is out of adjustment, first check the hinge pivot points to ensure they are both in the same spot relative to the body. If they are not determine which one is out.

EXAMPLE: The left hinge point is lower than the right. Because it is lower the deck lid is lower on the left . If this is the case, the hinge bracket should be raised until the deck lid is even. Remove the hinge bracket and slot the mounting holes in the fiberglass. Reattach the bracket and check the fit. Once the brackets are adjusted, finish drilling and mounting, using four 1/4 x 1" hex head bolts, dour 1/4" flat washers, four 1/4 x 1 1/4" fender washers, and four 1/4" lock nuts.

EXAMPLE: Both of your hinge points are located correctly, but the rear deck lid is cocked to the right side at the bottom. Loosen the left hinge plate, slide the left side of the deck lid forward until both sides are evenly spaced. After the deck lid has been adjusted, finish drilling and tapping the rear slots. Attach by using two 1/4 x 1" hex head bolts and two 1/4" flat washers.

CHECK: Always move the deck lid very little at a time. Once you have made an adjustment, close the deck lid and check to see what effect the adjustment had on the deck lid.

WARNING: An improper adjustment may cause the rear deck lid to contact the body. Care should be taken when opening or closing the rear deck lid.

REAR LATCH RELEASE CABLE

Locate the center of the rear wall of the package shelf. From the center mark, measure 13" to the driver's side and mark. Measure down from the underside of the body 3". **See Figure 3-21.**

Drill a hole the size of the threaded portion of the cable housing. Drill a corresponding hole through the front wall of the trunk, using the same measurement. Remove the retaining nut and the cable from the jacket. Run the jacket through the wall of the package shelf and secure with the nut.

Pass the jacket through the trunk wall. Route the jacket along the inner liner to the latch. Secure the jacket to the inner liner using 3/16" padded line clamps.

Install the cable jacket support on the left latch mounting bolt.

Open the deck lid so that the hinge arm is 1" from contacting the body. Cut the jacket so that it fits into the support. Run the cable through

the jacket. Attach the cable to the latch with a throttle cable stop available at most auto parts stores.

CHECK: Ensure the operation of the latch release cables before proceeding.

STRIKER INSTALLATION

Snap striker pin into the deck latch, lower the deck lid and mark the center of the pin onto the trunk liner. Drill a pilot hole in the center of the mark. Open the hole using a 27/64" drill bit; then tap the hole using a 1/2-13 tap. Install deck lid striker pin with a lock nut from underneath. **See Figure 3-22.**

Adjust the height of the pin so that the deck lid opens and closes properly.

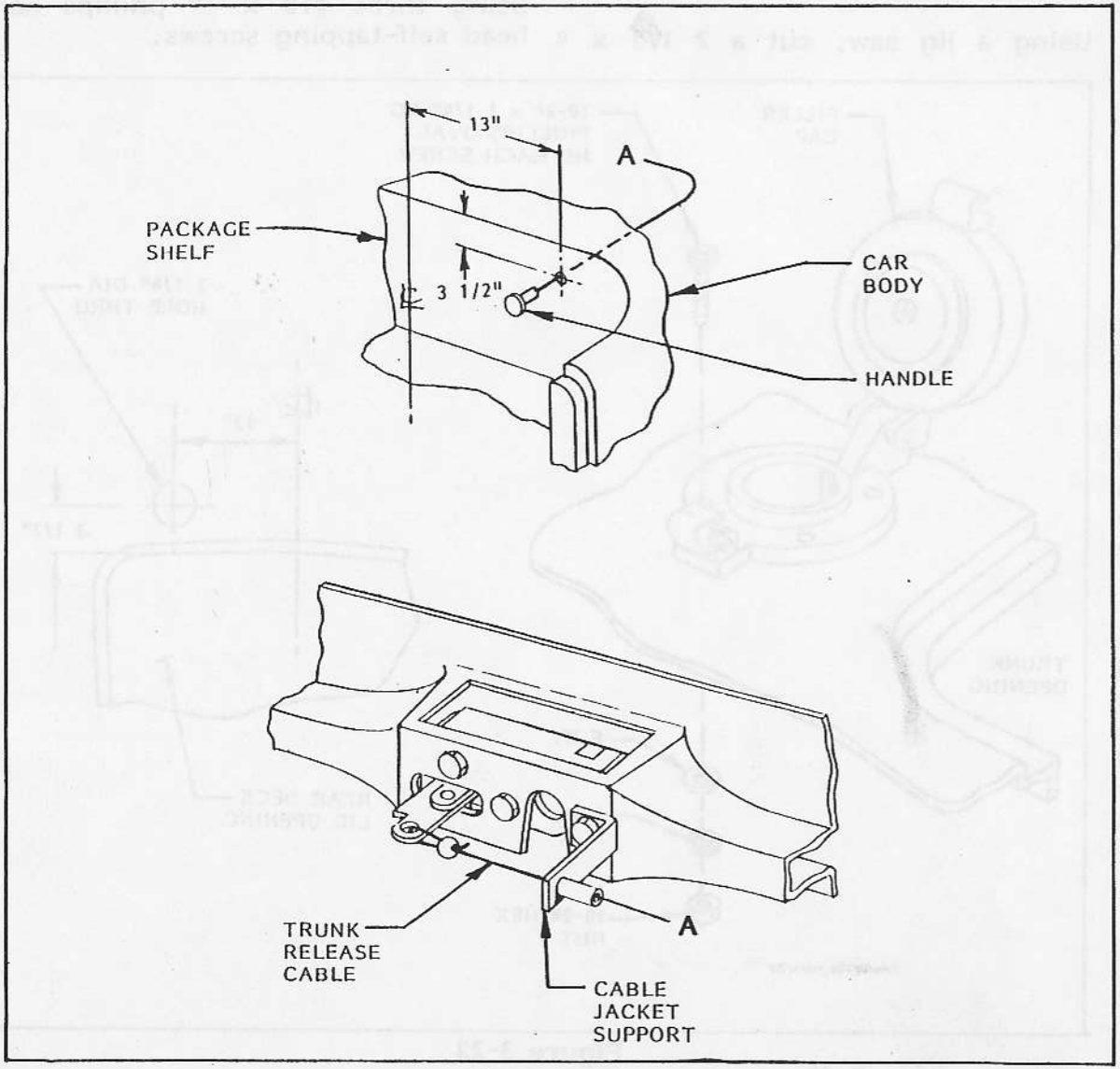


Figure 3-21

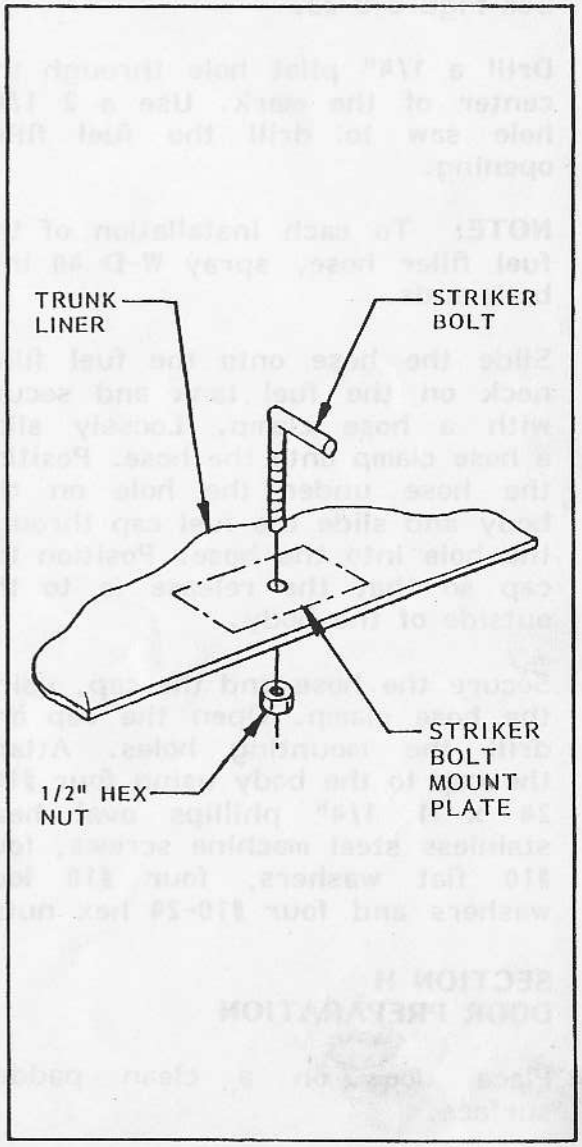


Figure 3-22

FUEL FILLER CAP

Locate center line on the surface of the body between the cockpit and the trunk opening.

Measure 13" towards the right side and mark. Measure 3 1/2" from the deck lid opening and mark location. **See Figure 3-23.**

Drill a 1/4" pilot hole through the center of the mark. Use a 2 1/4" hole saw to drill the fuel filler opening.

NOTE: To each installation of the fuel filler hose, spray W-D 40 into both ends.

Slide the hose onto the fuel filler neck on the fuel tank and secure with a hose clamp. Loosely slide a hose clamp onto the hose. Position the hose under the hole on the body and slide the fuel cap through the hole into the hose. Position the cap so that the release is to the outside of the body.

Secure the hose and the cap, using the hose clamp. Open the cap and drill the mounting holes. Attach the cap to the body using four #10-24 x 1 1/4" phillips oval head stainless steel machine screws, four #10 flat washers, four #10 lock washers and four #10-24 hex nuts.

SECTION H
DOOR PREPARATION

Place door on a clean padded surface.

The door inner liner has scribe marks showing the location of the striker slot. Remove by drilling interlocking holes and finish, using a file.

Using a 3 1/2" hole saw, cut an access hole for mounting the latch. **See Figure 3-24.**

Using a jig saw, cut a 2 1/2 x 4 1/2" hole in the center of the indentation for the door release.

Install the latch, using three 1/4 x 1" hex head bolts and three 1/4" flat washers.

Attach the door release to the door by drilling three 9/64" holes and using three #10 x 1" phillips pan head self-tapping screws.

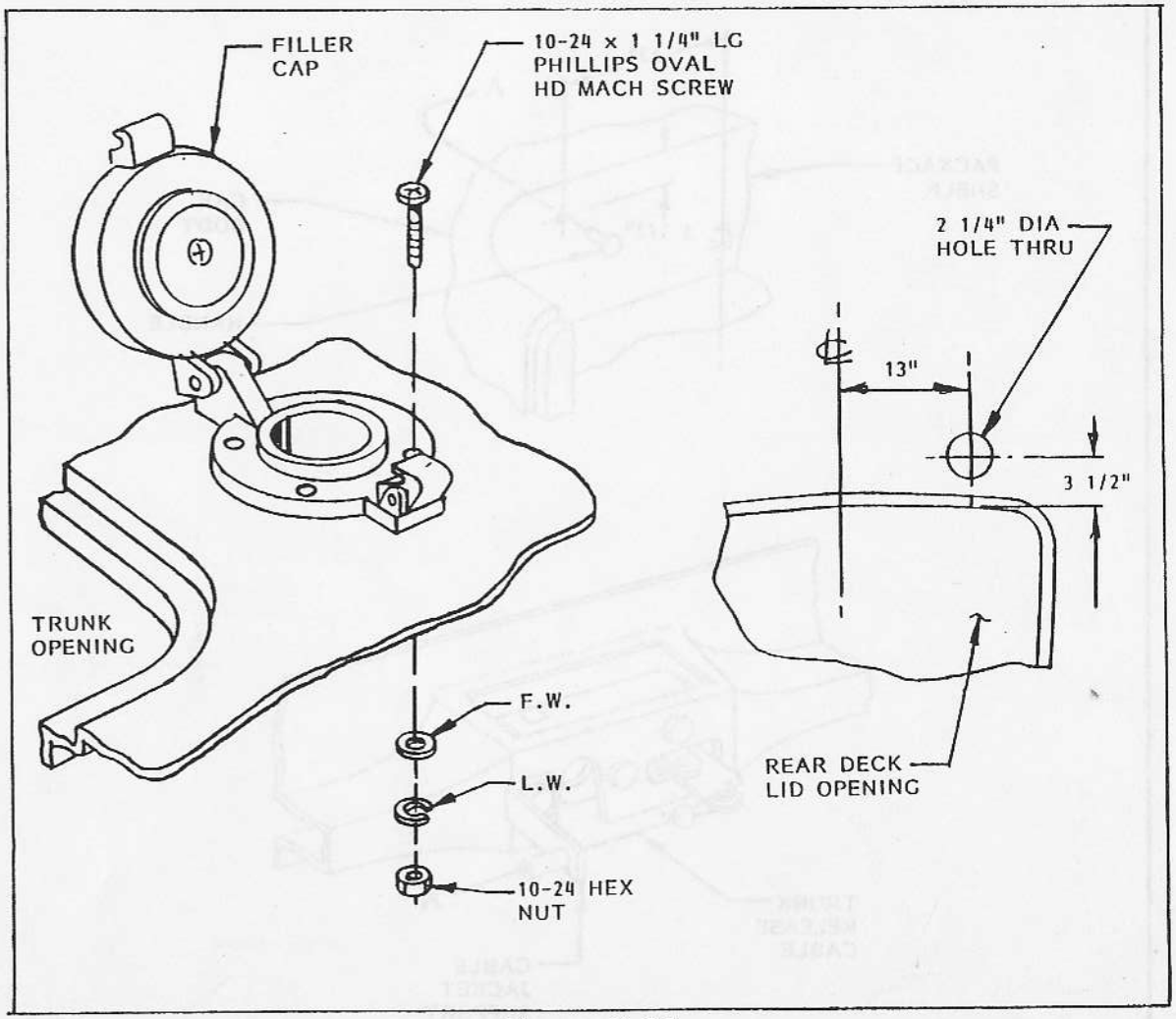


Figure 3-23

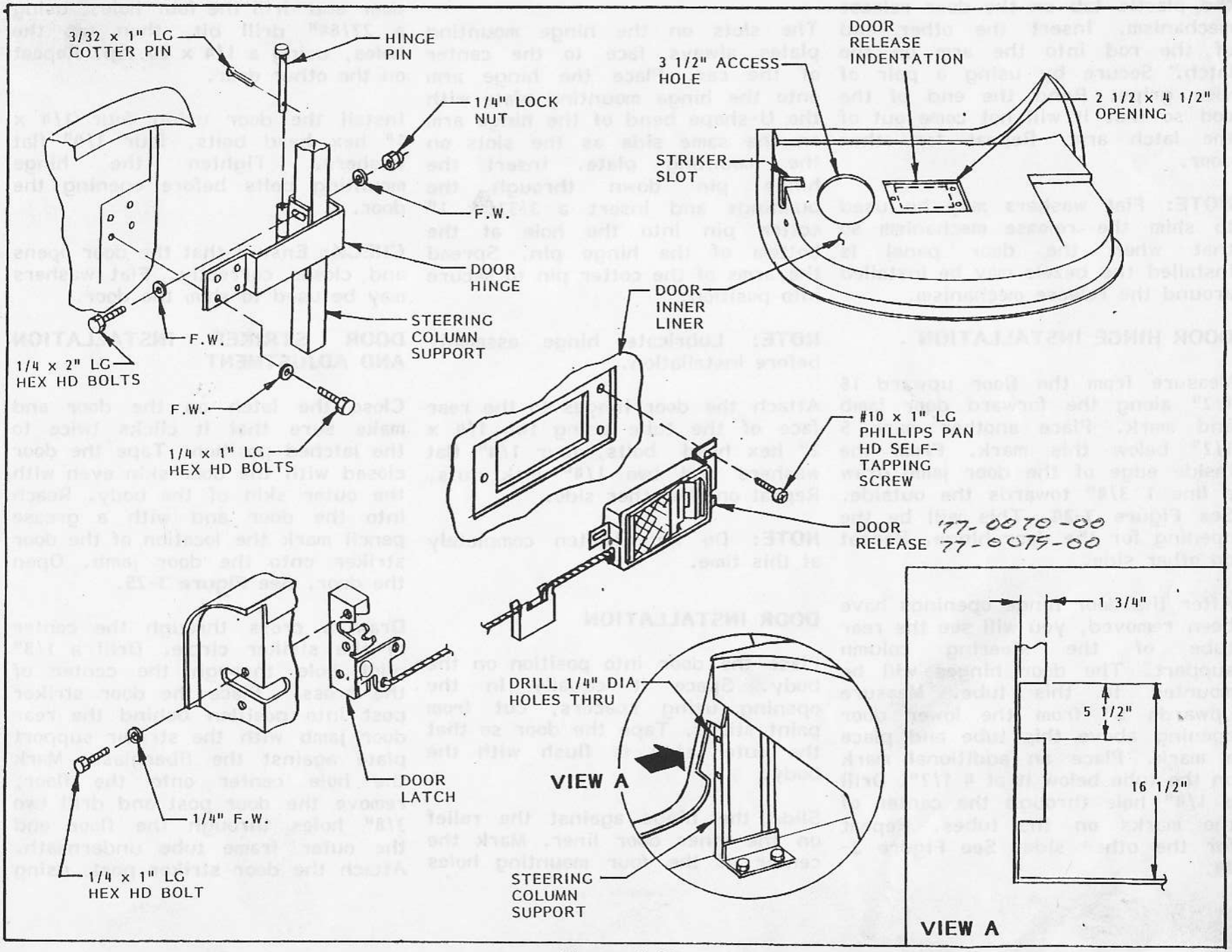

3/32 x 1" LG COTTER PIN
HINGE PIN
1/4" LOCK NUT
F.W.
DOOR HINGE
STEERING COLUMN SUPPORT
F.W.
1/4 x 2" LG HEX HD BOLTS
F.W.
1/4 x 1" LG HEX HD BOLTS
DOOR RELEASE INDENTATION
3 1/2" ACCESS HOLE
2 1/2 x 4 1/2" OPENING
STRIKER SLOT
DOOR INNER LINER
#10 x 1" LG PHILLIPS PAN HD SELF-TAPPING SCREW
DOOR RELEASE
77-0070-00
77-0075-00
DRILL 1/4" DIA HOLES THRU
VIEW A
STEERING COLUMN SUPPORT
DOOR LATCH
1/4" F.W.
1/4 x 1" LG HEX HD BOLT
1 3/4"
5 1/2"
16 1/2"
VIEW A

Figure 3-24

Insert the door release rod into the plastic tab on the door release mechanism. Insert the other end of the rod into the arm on the latch. Secure by using a pair of vise grips. Bend the end of the rod so that it will not come out of the latch arm. Repeat for other door.

NOTE: Flat washers may be used to shim the release mechanism so that when the door panel is installed the bezels may be installed around the release mechanism.

DOOR HINGE INSTALLATION

Measure from the floor upward 16 1/2" along the forward door jamb and mark. Place another mark 5 1/2" below this mark. From the inside edge of the door jamb draw a line 1 3/4" towards the outside. **See Figure 3-24.** This will be the opening for the door hinge. Repeat on other side.

After the door hinge openings have been removed, you will see the rear tube of the steering column support. The door hinges will be mounted to this tube. Measure upwards 5" from the lower door opening above this tube and place a mark. Place an additional mark on the tube below it at 4 1/2". Drill a 1/4" hole through the center of the marks on the tubes. Repeat for the other side. **See Figure 3-24.**

HINGE ASSEMBLY

The slots on the hinge mounting plates always face to the center of the car. Place the hinge arm onto the hinge mounting plate with the U-shape bend of the hinge arm on the same side as the slots on the mounting plate. Insert the hinge pin down through the bushings and insert a 3/32 x 1" cotter pin into the hole at the bottom of the hinge pin. Spread the arms of the cotter pin to secure into position.

NOTE: Lubricate hinge assembly before installation.

Attach the door hinges to the rear face of the tube using two 1/4 x 2" hex head bolts, four 1/4" flat washers and two 1/4" lock nuts. Repeat on the other side.

NOTE: Do not tighten completely at this time.

DOOR INSTALLATION

Place the door into position on the body. Space it equally in the opening using spacers, cut from paint sticks. Tape the door so that the outer skin is flush with the body.

Slide the hinge against the relief on the inner door liner. Mark the center of the four mounting holes onto the door liner. Remove the door and drill the four holes, using a 27/64" drill bit, then tap the holes, using a 1/4 x 20 tap. Repeat on the other door.

Install the door using four 1/4 x 1" hex head bolts, four 1/4" flat washers. Tighten the hinge mounting bolts before opening the door.

CHECK: Ensure that the door opens and closes correctly. Flat washers may be used to shim the door.

DOOR STRIKER INSTALLATION AND ADJUSTMENT

Close the latch on the door and make sure that it clicks twice to the latched position. Tape the door closed with the door skin even with the outer skin of the body. Reach into the door and with a grease pencil mark the location of the door striker onto the door jamb. Open the door. **See Figure 3-25.**

Draw a cross through the center of the striker circle. Drill a 1/8" pilot hole through the center of the cross. Place the door striker post into position behind the rear door jamb with the striker support plate against the fiberglass. Mark the hole center onto the floor, remove the door post and drill two 3/8" holes through the floor and the outer frame tube underneath. Attach the door striker post, using

two 3/8 x 3" hex head bolts, four 3/8" flat washers and two 3/8" lock nuts. Repeat for the other side.

Drill a 1/8" hole through the striker plate; then enlarge the hole to 3/8". Install the striker bolt to the door jamb.

NOTE: The striker sleeve and the hardened steel washer must be between the head of the striker bolt and the door jamb. Attach, using a 3/8 x 1 1/2" fender washer and a 3/8" lock nut.

CHECK: Open the door latch and close the door. The latch should click twice and the door skin should be even with the skin of the body.

Adjustment may be made by slotting the striker hole to move the location of the striker bolt.

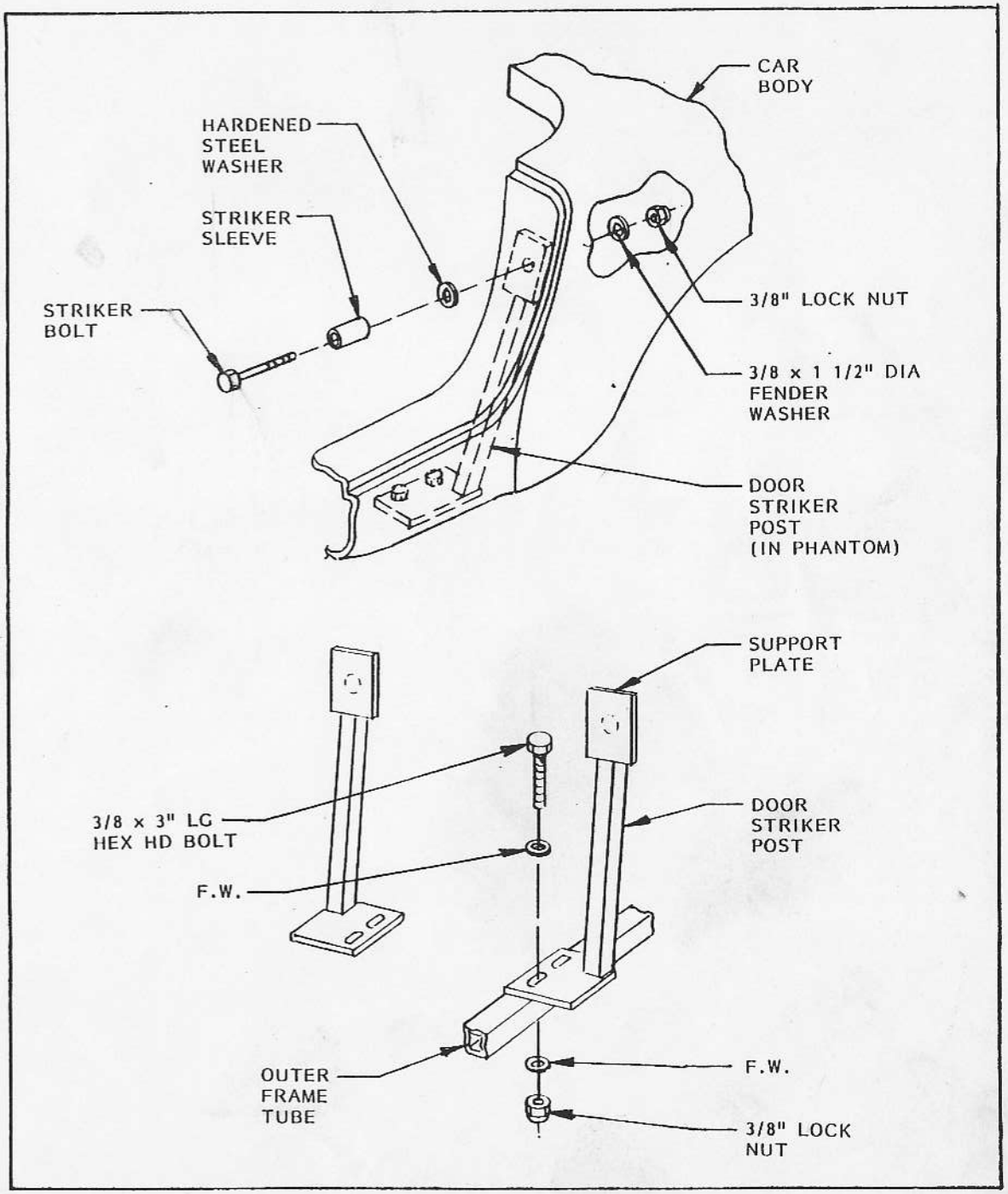


Figure 3-25

CHAPTER 4 SECTION A
FINAL ASSEMBLY
SECTION A LIGHT INSTALLATION

HEADLIGHT INSTALLATION

Remove the tie wraps from the light and horn leads that were rolled up for protection in the beginning of Chapter 2. Route the leads along the top of the front bumper support tube and clamp into position, using 3/8" padded line clamps and #10 x 5/8 hex washer head self-tapping screws.

Drill a 1/2" hole through the forward section of the front fender liner, just behind the front bumper mount plate and level with the top of the support tube.

Route the leads through these holes and up and along the top of the bumper tube step. Clamp the lead to the forward section, using 3/8" padded clamps and #10-24 x 1" phillips machine screws, #10 flat washer, #10 lock washer, and #10 -24 hex nuts.

Using the template provided in Chapter 5, Page 5-18, mark the headlight location with the outline of the area to be removed. **See Figure 4-1.**

CHECK: Find and mark the center of the headlight location so that the template may be centered.

The headlight opening may be removed, using a jigsaw, a drill or a die grinder. After the area has been removed, test fit the

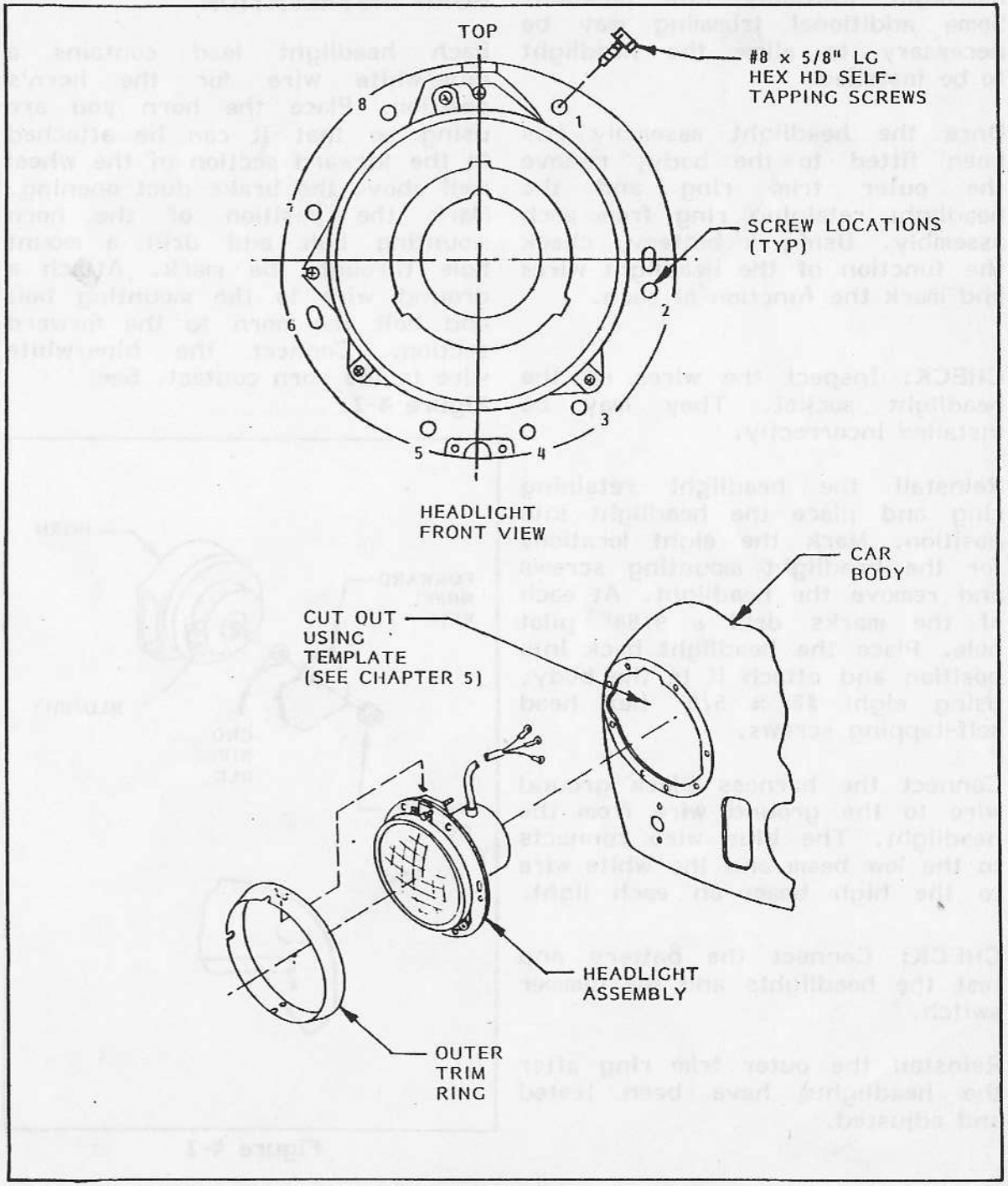


Figure 4-1

headlight assembly into position. Some additional trimming may be necessary to allow the headlight to be installed.

Once the headlight assembly has been fitted to the body, remove the outer trim ring and the headlight retaining ring from each assembly. Using a battery, check the function of the headlight wires and mark the function of each.

CHECK: Inspect the wires on the headlight socket. They may be installed incorrectly.

Reinstall the headlight retaining ring and place the headlight into position. Mark the eight locations for the headlight mounting screws and remove the headlight. At each of the marks drill a 9/64" pilot hole. Place the headlight back into position and attach it to the body, using eight #8 x 5/8" hex head self-tapping screws.

Connect the harness black ground wire to the ground wire from the headlight. The blue wire connects to the low beam and the white wire to the high beam on each light.

CHECK: Connect the battery and test the headlights and the dimmer switch.

Reinstall the outer trim ring after the headlights have been tested and adjusted.

HORN INSTALLATION

Each headlight lead contains a blue/white wire for the horn's position. Place the horn you are using so that it can be attached to the forward section of the wheel well above the brake duct opening. Mark the position of the horn mounting bolt and drill a mount hole through the mark. Attach a ground wire to the mounting bolt and bolt the horn to the forward section. Connect the blue/white wire to the horn contact. **See Figure 4-2.**

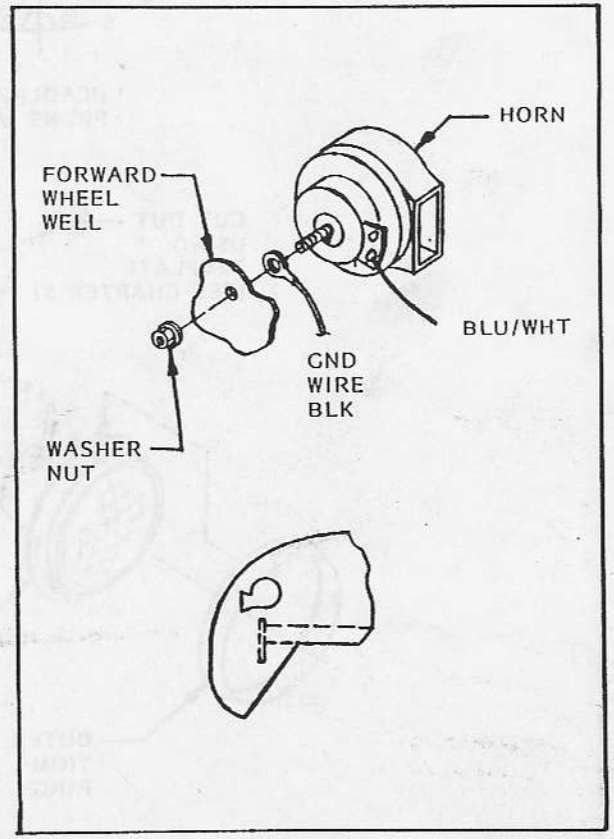


Figure 4-2

FRONT TURN SIGNAL INSTALLATION

Measure and mark the center of each front turn signal boss on the body. Using a 3/4" hole saw, drill through the center mark. **See Figure 4-3.**

Assemble the turn signal and twist the lens until it is locked into position. Place the assembly into position, until the tabs on the lens are straight up or down and straight left to right. Hold the rear of the assembly in position and remove the lens. Mark the locations of the two mounting holes and remove the turn signals.

Using a 5/32 drill bit, drill the mounting holes. Attach the turn signals to the body, using four #8-32 x 3/4" phillips machine screws, eight #8 flat washers, four #8 lock washers and four #8-32 hex nuts

Install a #1157NA turn signal bulb into each socket.

CHECK: Using a battery, the light wires, the turn signal, mark the function of each wire.

Connect the black (ground) wire to one of the mounting screws on each light. Connect the brown wire to the parking light (Dim) wire. The turn signal (bright) connects to the green/red on the left turn signal wire and green/black to the right.

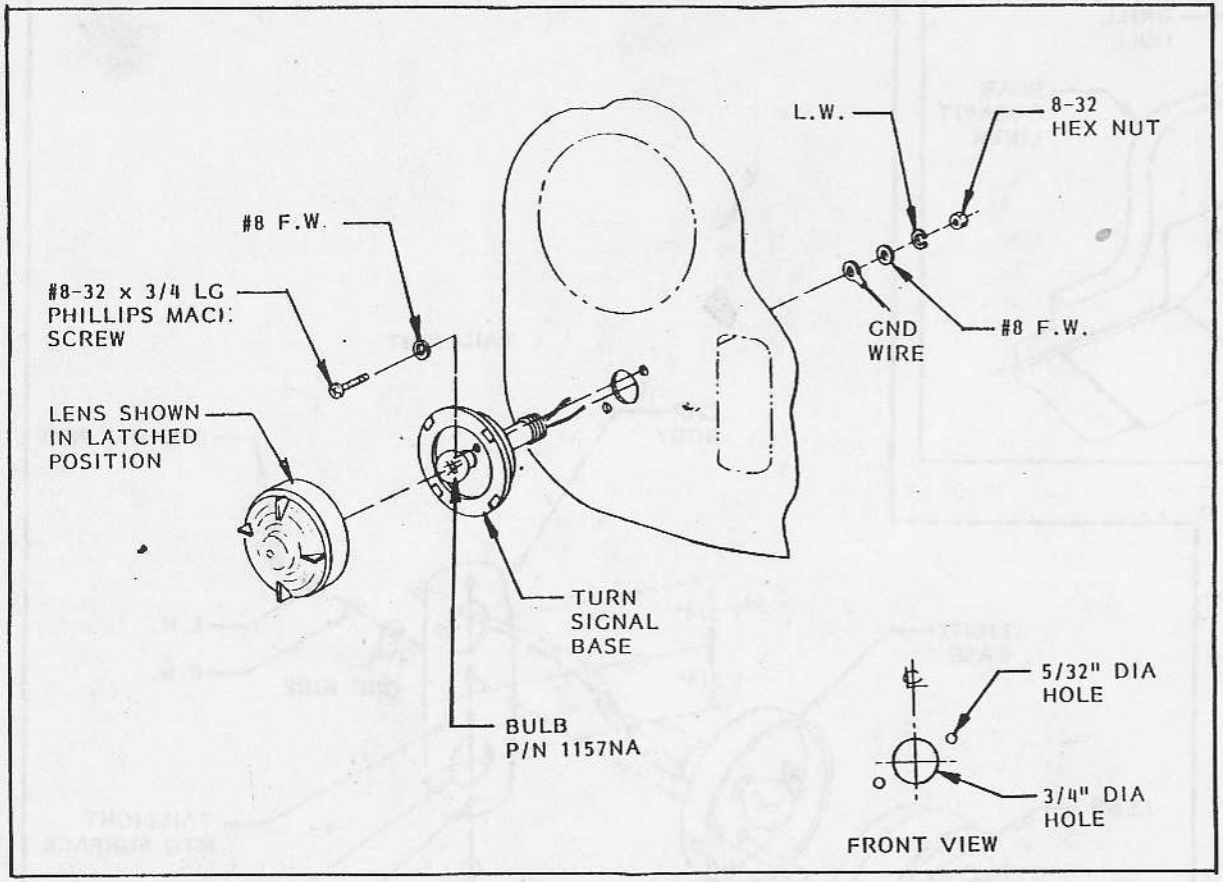


Figure 4-3

REAR WIRING ROUTING

Run the rear wiring harness along the inside of the right rear wheel well to the package shelf on the rear cockpit. Drill a hole at the back corner of the package shelf floor and the wheel well. This hole should be only large enough to allow the harness through it. **See Figure 4-4.**

Drill two holes through the front wall of the trunk, one at the lower right hand corner and the other above it, near the body. Run the tail light lead through the lower hole, and the license light lead through the upper one.

Clamp the harness to the frame, so that it passes inside of the shock mount.

FUEL SENDER WIRING

Tie wrap, or clamp, the fuel sender lead to the frame tube in front of the fuel tank. Connect the yellow wire to the stud on the fuel tank sender. Attach the black (ground) wire to one of the sender mounting screws.

TAIL LIGHT WIRING

Route the tail light lead to the right tail light location, then over to the left tail light location, passing under the lower trunk opening. Clamp the lead to the trunk floor, using 3/8" padded line clamps.

Mark the center of each of the tail light mounting surfaces. Draw a vertical line through the center mark. Measure 1 3/4" above and below the center and mark each location. **See Figure 4-5.**

Using a 1 1/4" hole saw, drill through each location. Remove the tail light lenses from the tail light assemblies and place an assembly into each of the four holes. Position the assembly so that the key way for the lens is always at the bottom and mark the positions of the mounting holes onto the body.

Once each location has been marked, drill two 5 3/2" holes for the mounting screws. Attach the

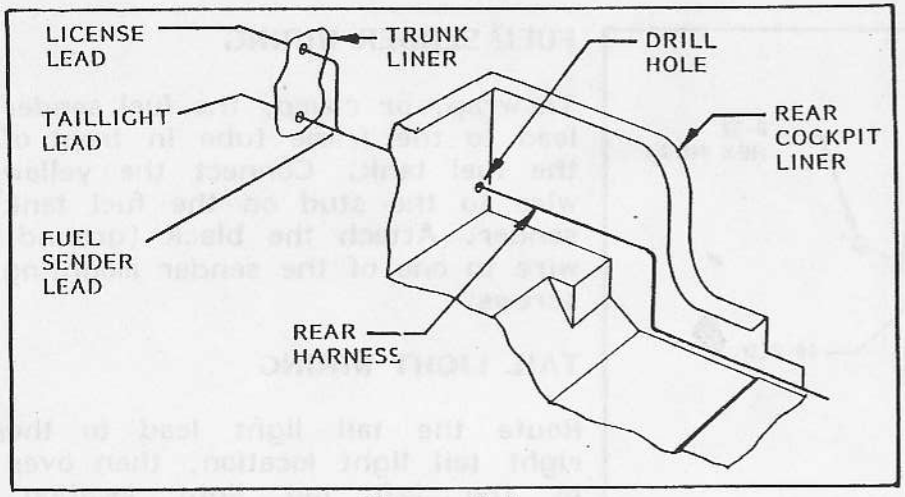


Figure 4-4

assemblies to the body, using eight #8-32 x 1" phillips machine screws, sixteen #8 flat washers, eight #8 lock washers and #8-32 hex nuts.

CHECK: Using a battery, test the light assemblies and mark the function of the two wires.

Connect the black (ground) wire to one of the mounting screws on each light assembly. The brown wires connect to the running (dim) light wires. The turn signal/brake (bright) light wires connect to the orange wires on the left side and the green wires on the right side.

NOTE: If you are using the rectangular style tail lights (not provided) they must be mounted differently, although the wires are the same. The additional pink wire is for backup lights, if you wish to install them on your car. If you do not use it, cap the wire to prevent it from shorting out.

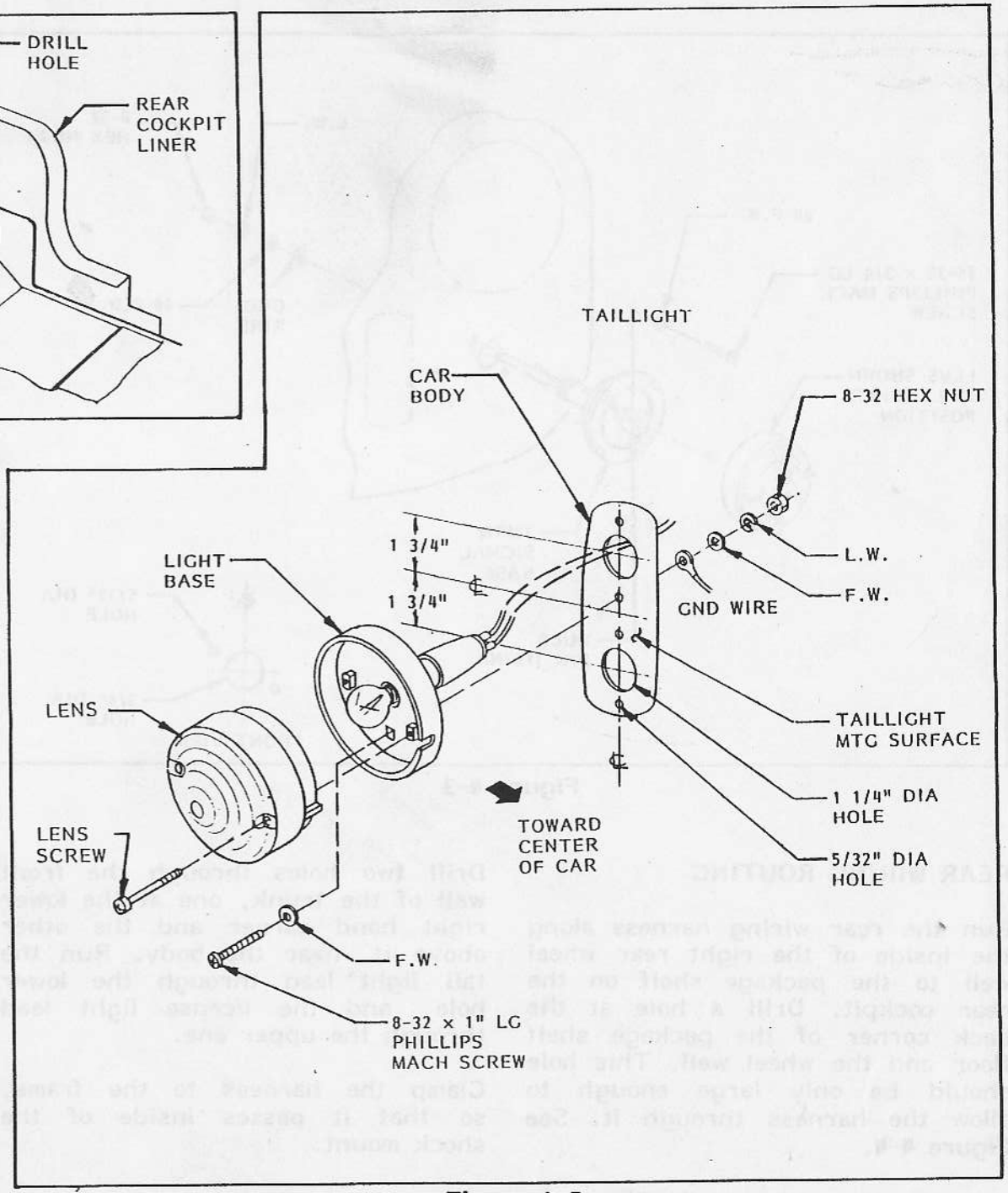


Figure 4-5

LICENSE LIGHT INSTALLATION

Remove the lens assembly from the base of the light. There are two mounting studs on the base. These must be removed to mount the base to the rear deck lid. Tap them out, using a hammer and a center punch.

Place the mounting base into position on the rear deck lid and mark the locations on the mounting holes and the opening for the wires. **See Figure 4-6.**

Drill two 5/32" holes for the mounting screws and one 1/4" hole for the wires to pass through. Attach the base to the deck lid, using two #8-32 x 1" phillips machine screws, four #8 flat washers, two #8 lock washers and two #8-32 hex nuts.

Clamp or tie wrap the license light lead alongside of the trunk latch release cable until it reaches the opening for the wires. Insert the wire through the hole.

There are two bullet connectors that come with the light assembly. Solder the black (ground) wire to the bullet connector on the light base. The brown connector must be soldered to the bullet connector for the center contact on each light bulb. Insert each wire into the open end of the bullet connector for the center contact on each light bulb. Insert each wire into the open end of the bullet connector and fill the connector with solder. Reinstall the lens assembly onto the base.

LICENSE BRACKET INSTALLATION

Place the license plate bracket 1/2" below the license light and mark the location of the mounting holes. Drill a 1/4" hole through each location and install the bracket, using two 1/4 x 1" hex head bolts, four 1/4" flat washers and two 1/4" lock nuts. **See Figure 4-6.**

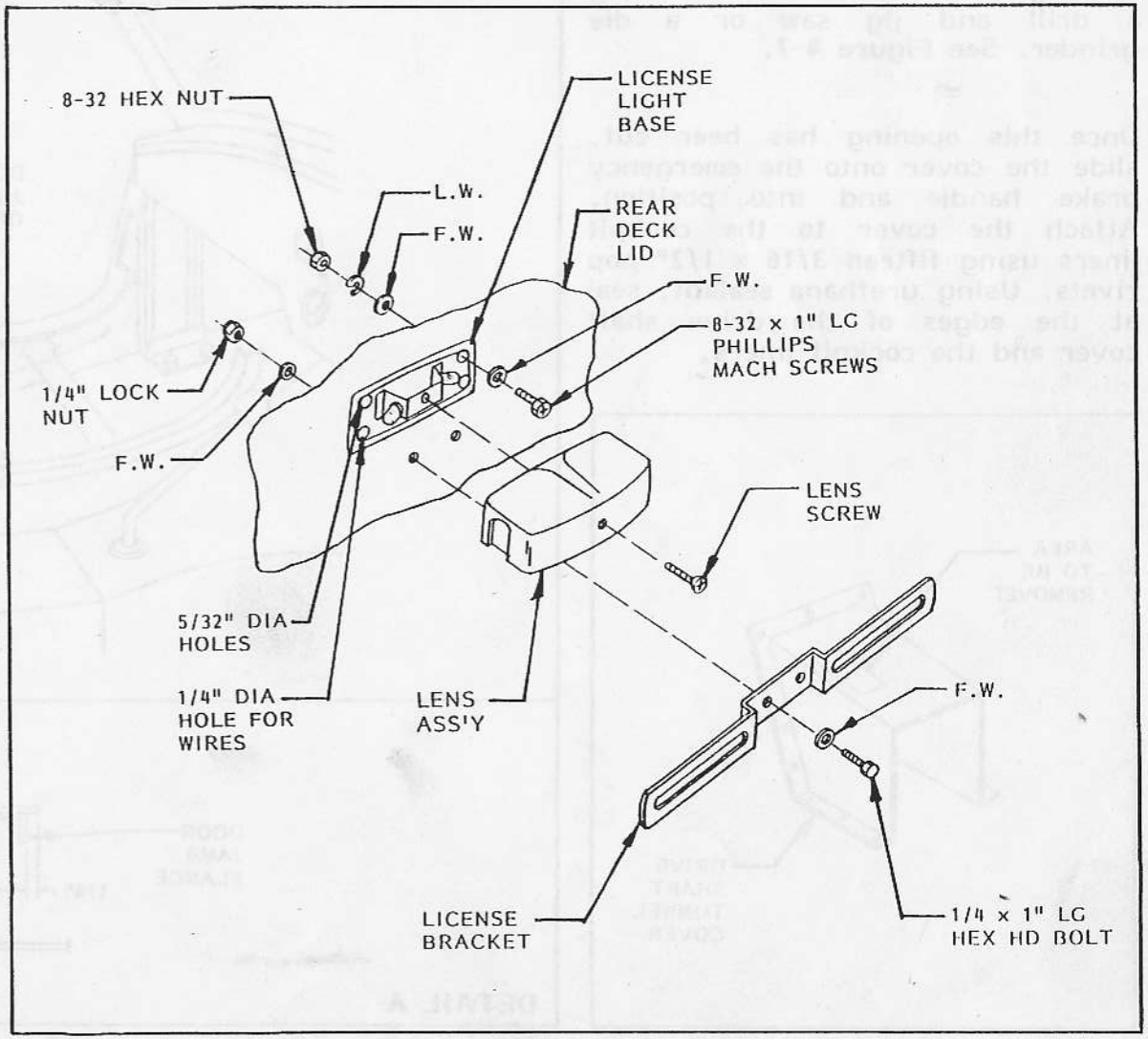


Figure 4-6

SECTION B
DRIVE SHAFT COVER INSTALLATION

DRIVE SHAFT TUNNEL COVER

Marked on the gelcoat of the drive shaft tunnel cover is the location of the emergency brake handle opening. Remove this area, using a drill and jig saw or a die grinder. **See Figure 4-7.**

Once this opening has been cut, slide the cover onto the emergency brake handle and into position. Attach the cover to the cockpit liners using fifteen 3/16 x 1/2" pop rivets. Using urethane sealant, seal at the edges of the drive shaft cover and the cockpit liners.

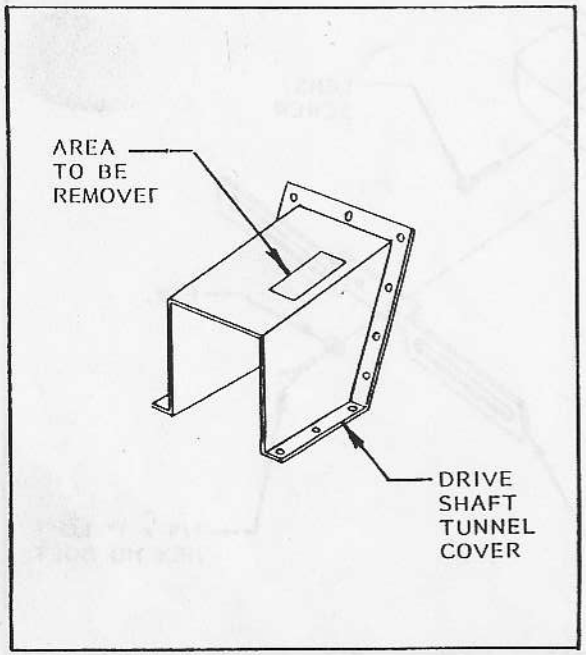


Figure 4-7

NOTE: Also seal all openings for the wiring harness, latch cables, etc. Allow the urethane to cure for at least 12 hours before working in the car again. The side vents and optional brake vent grilles also use urethane and may be installed at this time. **See Section C.**

Once the urethane has cured, attach the emergency brake lead to the cover. Connect the grey wire to the blade on the switch and the black wire to the screw on the switch.

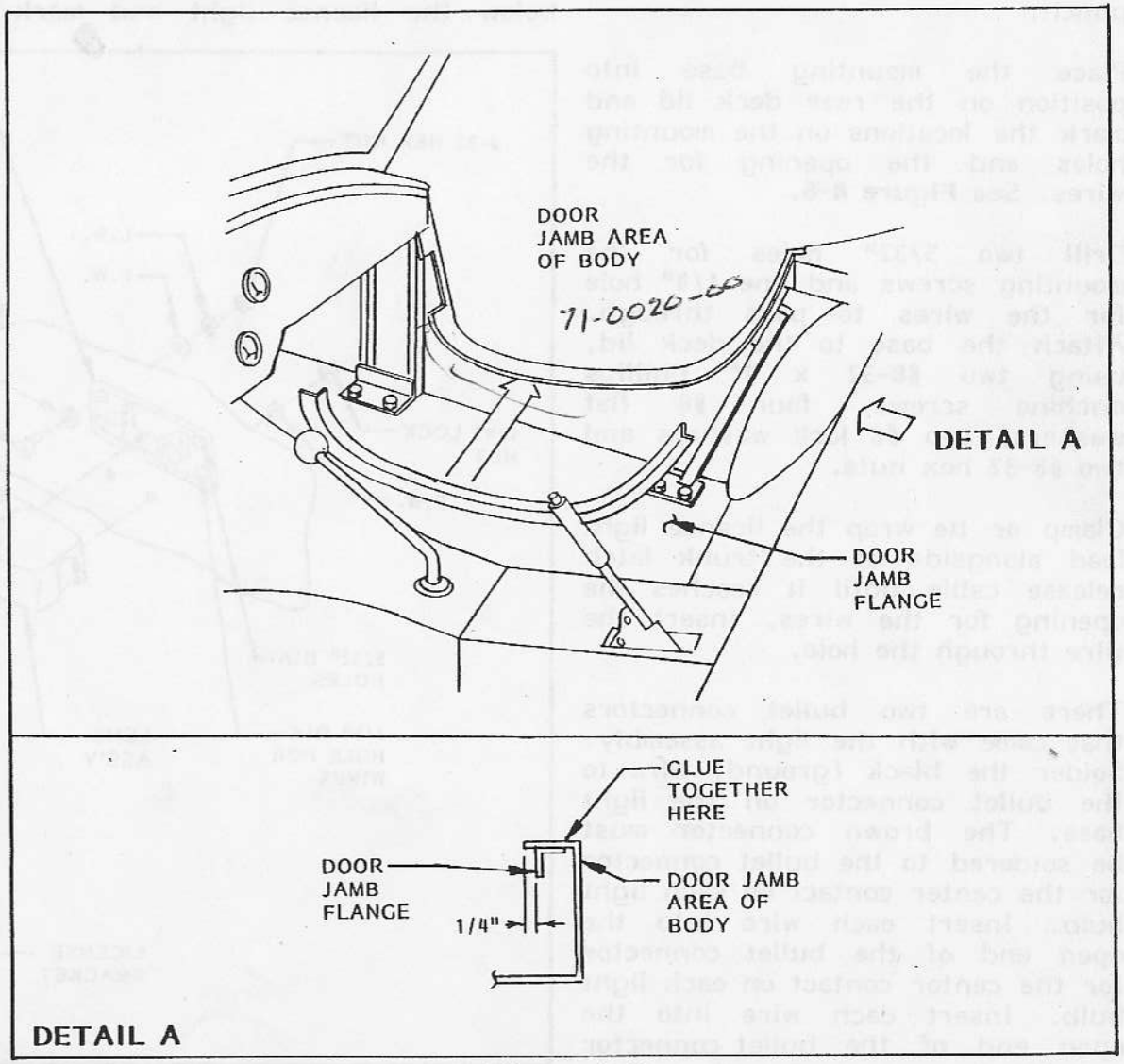


Figure 4-8

DOOR JAMB FLANGE INSTALLATION

Using a jig saw cut the door jamb flanges apart along the line marked into the gelcoat surface. These flanges will be mounted to the door jambs, so that the kick panels will be flush with the inside edge of the door jamb. **See Figure 4-8**

Position the flanges under the door jambs and lightly clamp them into place. Adjust the flange so that it is 1/4" from the inside edge of the door jamb or the thickness of the kick panel from the inside edge.

NOTE: The kick panel may vary slightly in thickness. When clamping to a gelcoat surface place a piece of cardboard or a rag between the gelcoat and the clamp to prevent any damage to the finish.

Mark the location of the flange onto the underside of the door jamb and remove the flange.

Lightly sand the mounting surface of the flange and the underside of the door jamb. Mix and apply auto body filler to the flanges and lightly clamp them back into position.

NOTE: The body filler should be equally applied to the mounting surface to ensure a good bond along the length of the flange. Reduce the normal amount of hardener to allow a longer working time before the filler starts to cure. Once the filler begins to harden, trim away any excess, using a razor knife.

KICK PANEL INSTALLATION

The kick panels also come as one piece. Using a jig saw, cut along the line marked in the center of the fiberglass. Place the kick panels against the door jamb flange with the smooth side exposed. **See Figure 4-9.**

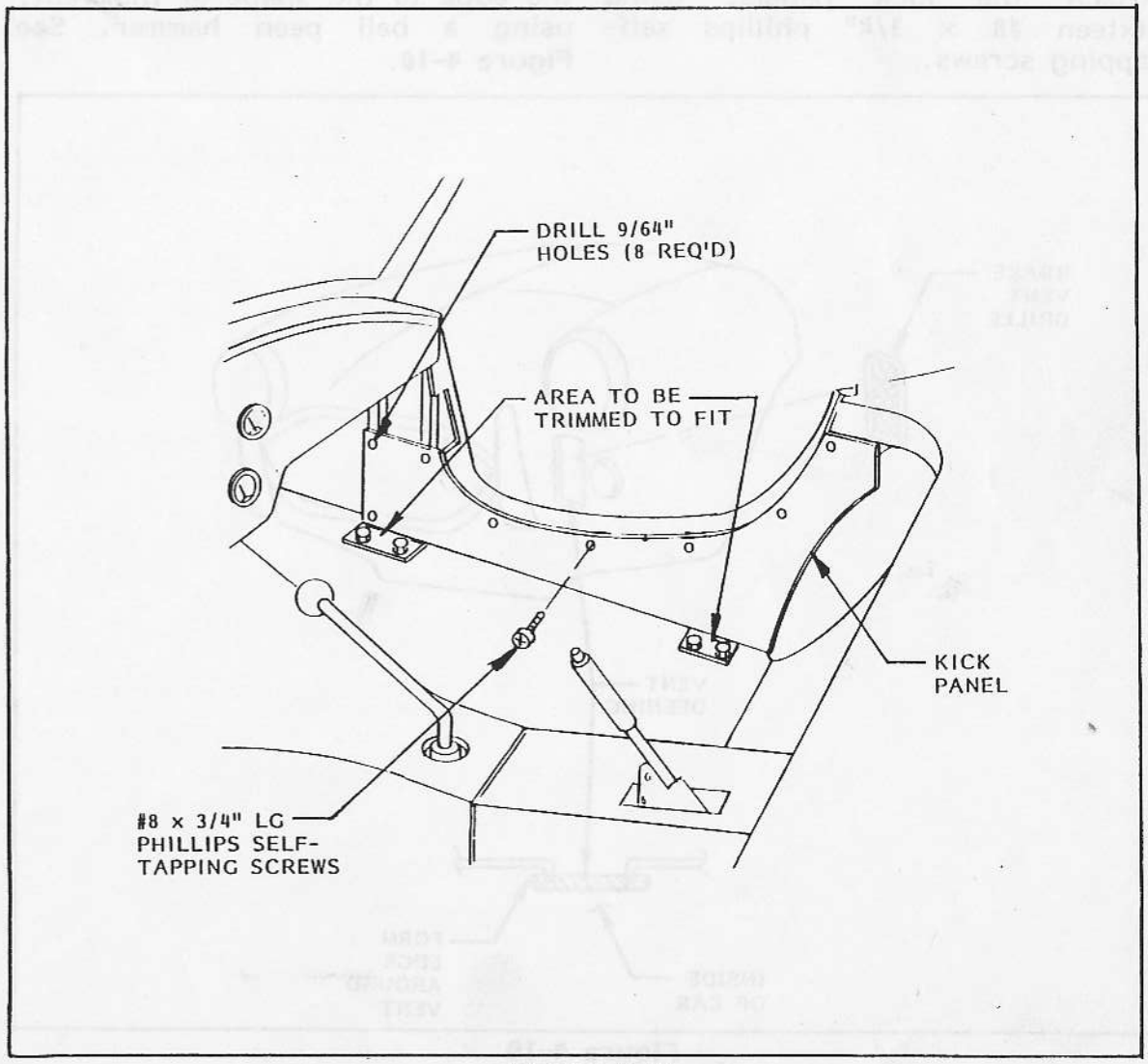


Figure 4-9

NOTE: It may be necessary to trim the kick panels slightly to match the door jamb opening and the floor.

Drill eight 9/64" holes through each kick panel, six through the door jamb flange and two into the front steering column support tube. Attach the kick panels, using sixteen #8 x 3/4" phillips self-tapping screws.

SECTION C
TRIM INSTALLATION

OPTIONAL FRONT GRILLE INSTALLATION

Using masking tape, cover the inlet areas of the brake vents. Place option grilles against the inside of the vent opening and gently form the edge to the shape of the vent, using a ball peen hammer. **See Figure 4-10.**

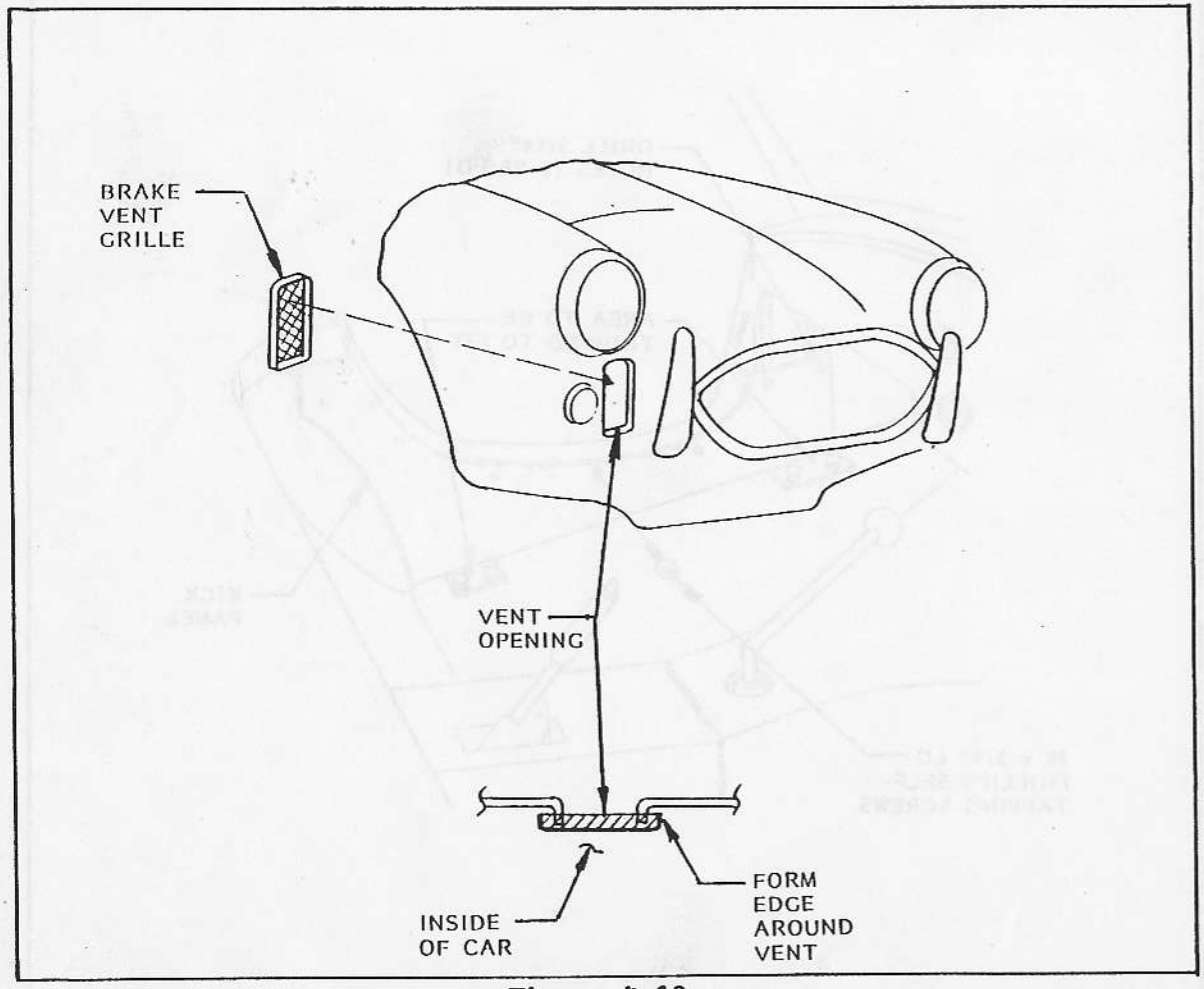


Figure 4-10

NOTE: To prevent urethane from sticking to the visable area on each grille, mark and tape only the area of the grille visable from the front.

Place a thin bead of urethane on the inside edge of the vent opening. Place grille against the opening Using a paint stick and some twine, tie the grille to the paint stick to hold it in place. Cover the grille edges bent around the vent opening with urethane.

VISABLE FROM THE FRONT

The urethane applied to the grille and the vent opening must be applied thick enough to hold the grille in position. Allow at least 12 hours before removing the masking tape and twine.

SIDE VENT INSTALLATION

The aluminum side vents are not interchangeable from left to right.

Identify the left side vent by the location of the pop rivets on the front edge. Place the vent against the side vent opening and align it with the opening. Drill two 3/16" holes through the front wheel well and the side vent. **See Figure 4-11.**

Use two #8-32 x 1 1/4" phillips machine screws, four #8 flat washers, two #8 lock washers, and two #8-32 hex nuts, to hold the side vent in position.

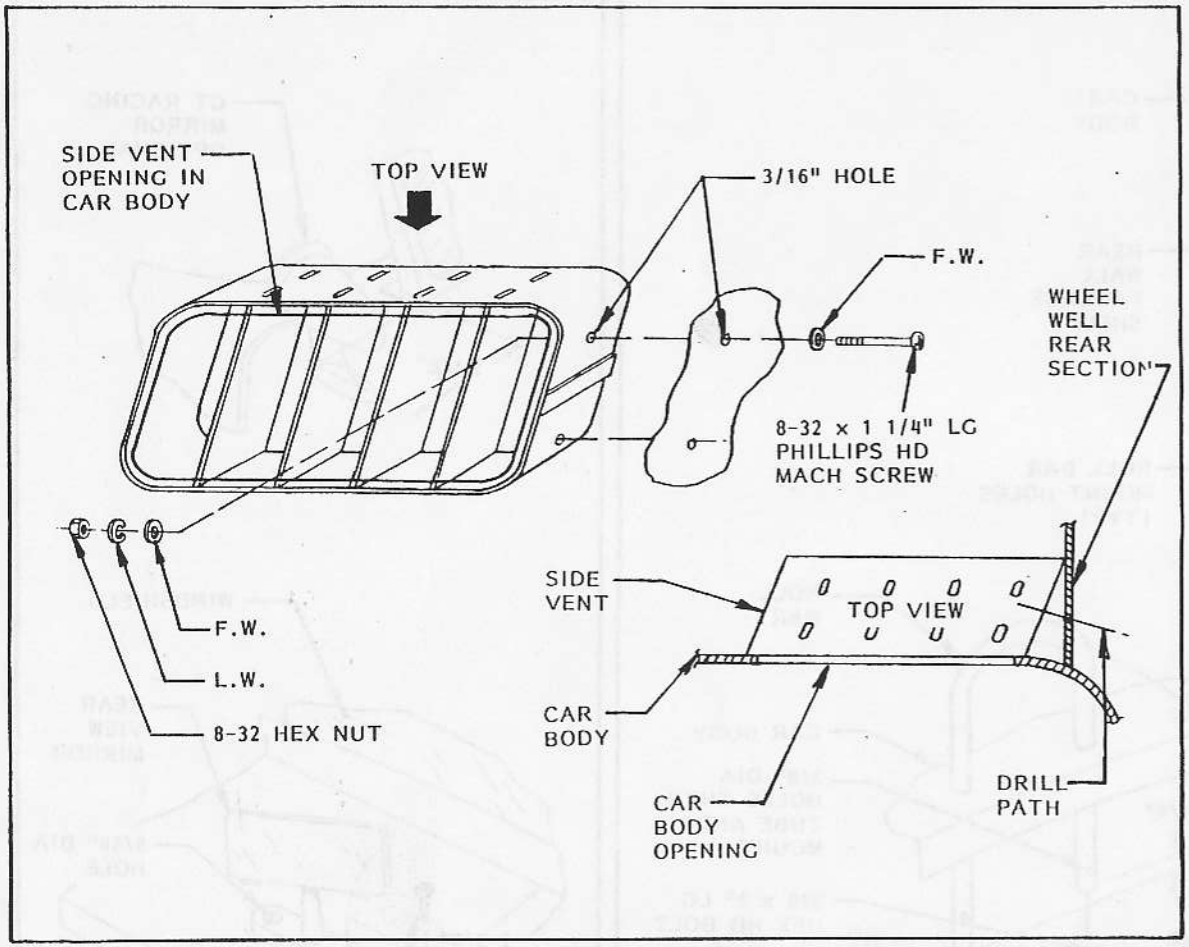


Figure 4-11

NOTE: The screws may be tightened or loosened to correctly position the vent even with the opening. The rear edge of the vent should be placed where the body and the foot well meet.

Repeat the procedure using the right side vent. Once both vents are in position use urethane to bond the vent to the inside of the vent opening.

ROLL BAR INSTALLATION

Mark the center of the body onto the rear cockpit lip and the package shelf area. From the center of the package shelf measure over to the center of each roll bar mount. Mark these measurements onto the rear cockpit lip. Using these marks, draw two parallel lines across the back of the rear body. Measure from the package shelf wall to the cockpit lip and mark each measurement along the two lines. This will give you the location of the package shelf wall. Measure from the package shelf wall to the center of each roll bar mount. Mark each line with this measurement.

Drill a 1/4" pilot hole through the center of the marking. Using a 1 3/4" hole saw, drill the openings for the roll bar. Insert the roll bar, with the short leg towards the center, through the holes in the body and package shelf.

Once the roll bar is firmly seated on the mounts, drill a 3/8" hole through the roll bar and mount tube. Secure the roll bar to the mount, using two 3/8 x 2" hex bolts and two 3/8" lock nuts. **See Figure 4-12.**

MIRROR INSTALLATION

Place the interior rear view mirror 3 1/2" back from the center of the windshield and mark the hole locations onto the body. At each of the marks drill a 9/64" pilot hole. Place the mirror back into position and attach it to the body, using two #8 x 5 3/4" phillips oval head self-tapping screws. **See Figure 4-13.**

The suggested position for the optional GT racing mirror is 2 3/8" over from the driver's windshield post and the front edge of the windshield post, even with the rear edge of the mirror mount.

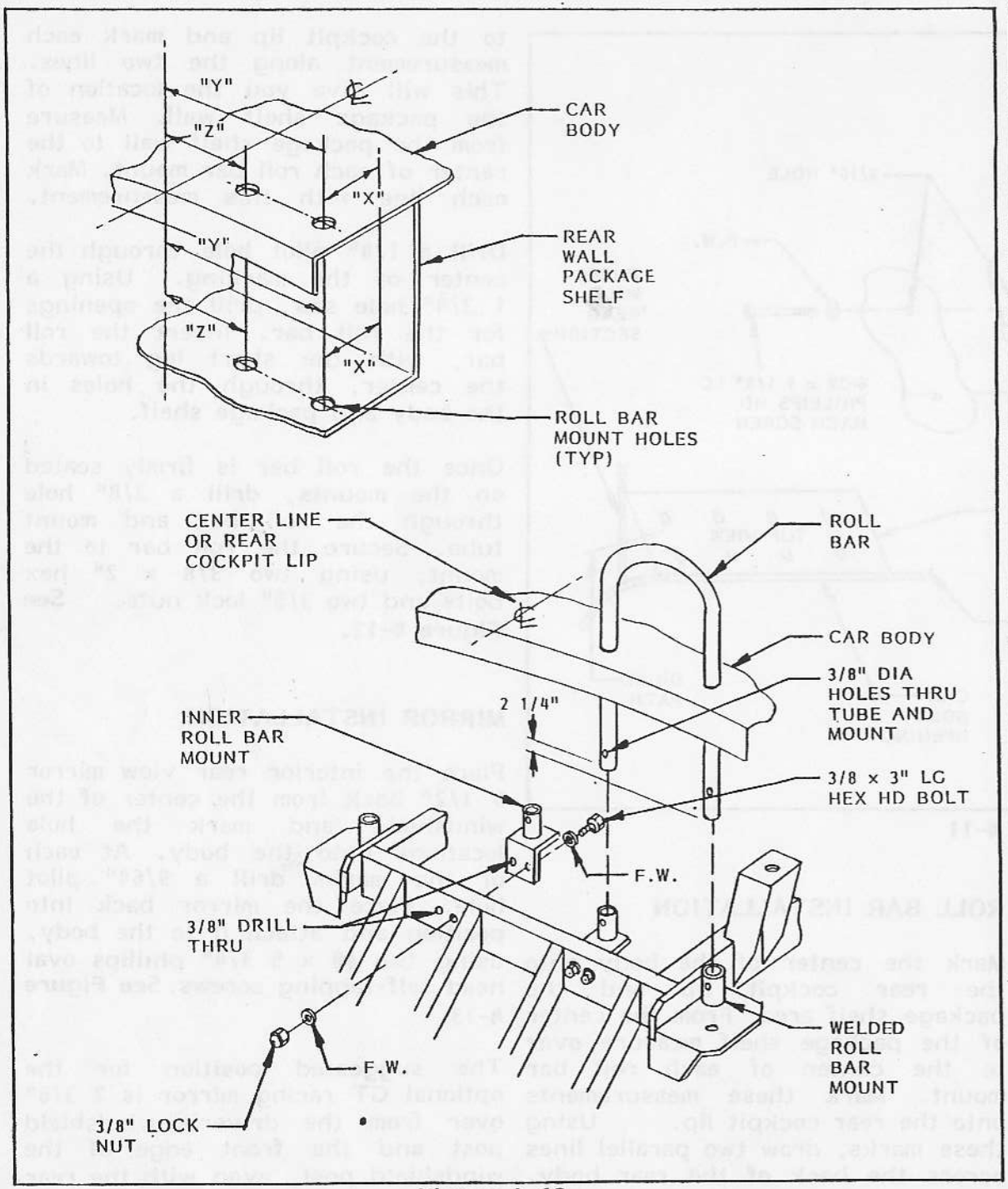


Figure 4-12

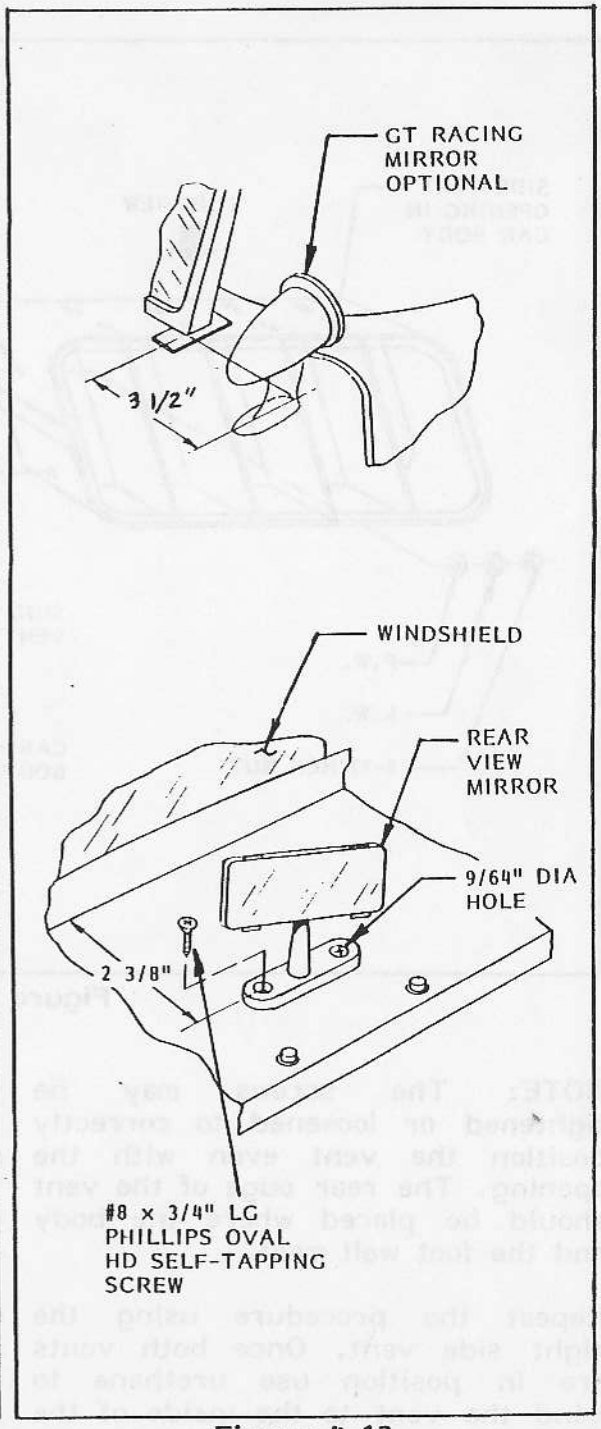


Figure 4-13

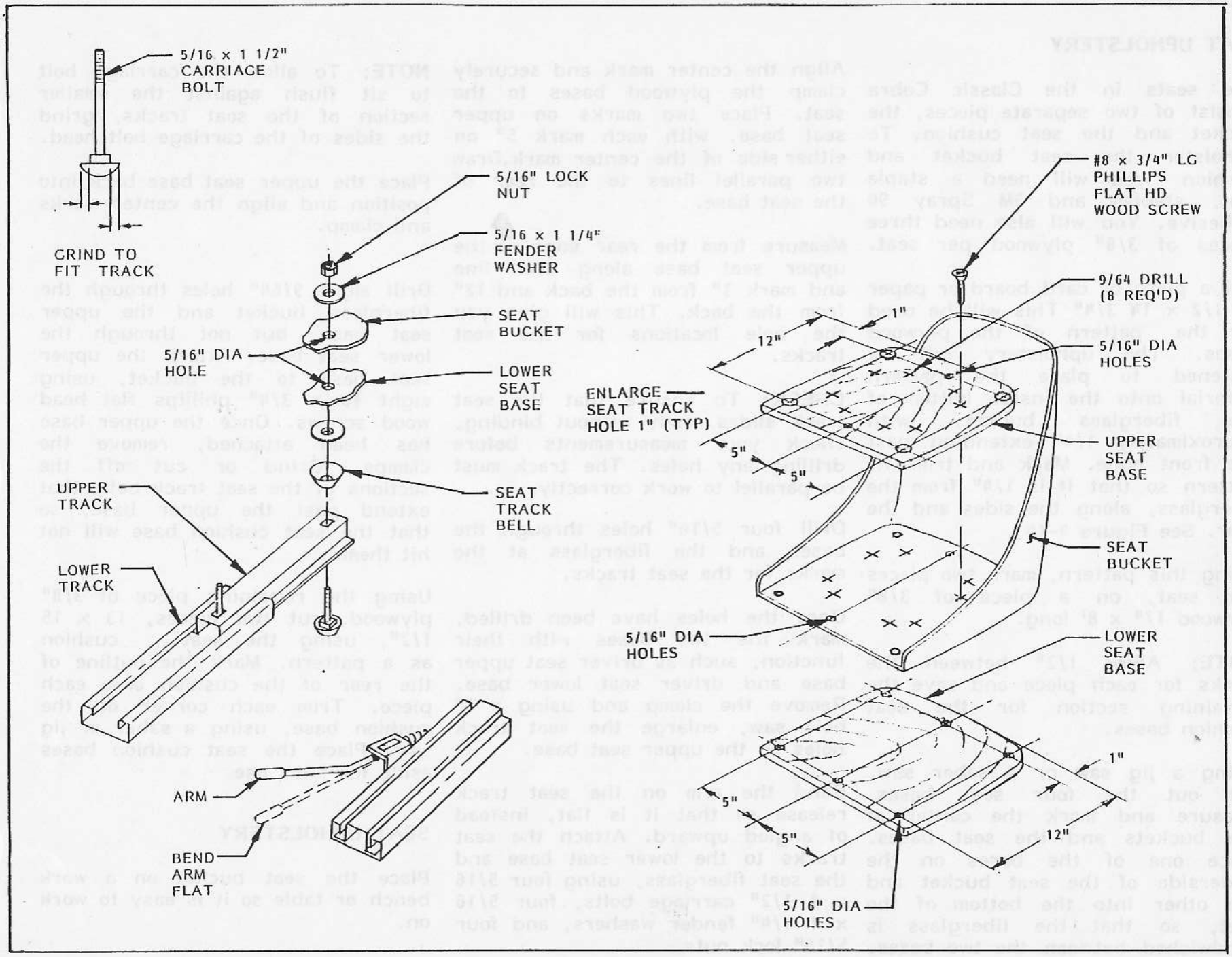

5/16 x 1 1/2" CARRIAGE BOLT
GRIND TO FIT TRACK
5/16" LOCK NUT
5/16 x 1 1/4" FENDER WASHER
SEAT BUCKET
5/16" DIA HOLE
LOWER SEAT BASE
SEAT TRACK BELL
UPPER TRACK
LOWER TRACK
ARM
BEND ARM FLAT
#8 x 3/4" LG PHILLIPS FLAT HD WOOD SCREW
9/64 DRILL (8 REQ'D)
1"
12"
5/16" DIA HOLES
ENLARGE SEAT TRACK HOLE 1" (TYP)
5"
5"
UPPER SEAT BASE
SEAT BUCKET
5/16" DIA HOLES
LOWER SEAT BASE
1"
5"
5"
12"
5/16" DIA HOLES

Figure 4-14

SECTION D UPHOLSTERY AND CARPETING

SEAT UPHOLSTERY

The seats in the Classic Cobra consist of two separate pieces, the bucket and the seat cushion. To upholster the seat bucket and cushion you will need a staple gun, staples and 3M Spray 90 Adhesive. You will also need three pieces of 3/8" plywood per seat.

Cut a piece of card board or paper 16 1/2 x 14 3/4" This will be used for the pattern of the plywood bases. The upholstery will be fastened to place the pattern material onto the inside bottom of the fiberglass bucket, with approximately 1/4" extending past the front edge. Mark and trim the pattern so that it is 1/4" from the fiberglass, along the sides and the rear. **See Figure 4-14.**

Using this pattern, mark two pieces per seat, on a piece of 3/8" plywood 17" x 8' long.

NOTE; Allow 1/2" between the marks for each piece and save the remaining section for the seat cushion bases.

Using a jig saw or a saber saw, cut out the four seat bases. Measure and mark the center of the buckets and the seat bases. Place one of the bases on the underside of the seat bucket and the other into the bottom of the seat, so that the fiberglass is sandwiched between the two bases. Align the center mark and securely clamp the plywood bases to the seat. Place two marks on upper seat base, with each mark 5" on either side of the center mark.Draw two parallel lines to the rear of the seat base.

Measure from the rear edge of the upper seat base along each line and mark 1" from the back and 12" from the back. This will give you the hole locations for the seat tracks.

CHECK: To ensure that the seat track slides easily without binding, check your measurements before drilling any holes. The track must be parallel to work correctly.

Drill four 5/16" holes through the bases and the fiberglass at the marks for the seat tracks.

Once the holes have been drilled, mark the two bases with their function, such as driver seat upper base and driver seat lower base. Remove the clamp and using a 1" hole saw, enlarge the seat track holes on the upper seat base.

Bend the arm on the seat track release so that it is flat, instead of angled upward. Attach the seat tracks to the lower seat base and the seat fiberglass, using four 5/16 x 1 1/2" carriage bolts, four 5/16 x 1 1/4" fender washers, and four 5/16" lock nuts.

NOTE: To allow the carriage bolt to sit flush against the smaller section of the seat tracks, grind the sides of the carriage bolt head.

Place the upper seat base back into position and align the center marks and clamp.

Drill eight 9/64" holes through the fiberglass bucket and the upper seat base, but not through the lower seat base. Attach the upper seat base to the bucket, using eight #8 x 3/4" phillips flat head wood screws. Once the upper base has been attached, remove the clamps. Grind or cut off the sections of the seat track bolts that extend past the upper base, so that the seat cushion base will not hit them.

Using the remaining piece of 3/8" plywood, cut two pieces, 13 x 15 1/2", using the seat cushion as a pattern. Mark the outline of the rear of the cushion onto each piece. Trim each corner on the cushion base, using a saber or jig saw. Place the seat cushion bases aside for later use.

SEAT UPHOLSTERY

Place the seat bucket on a work bench or table so it is easy to work on.

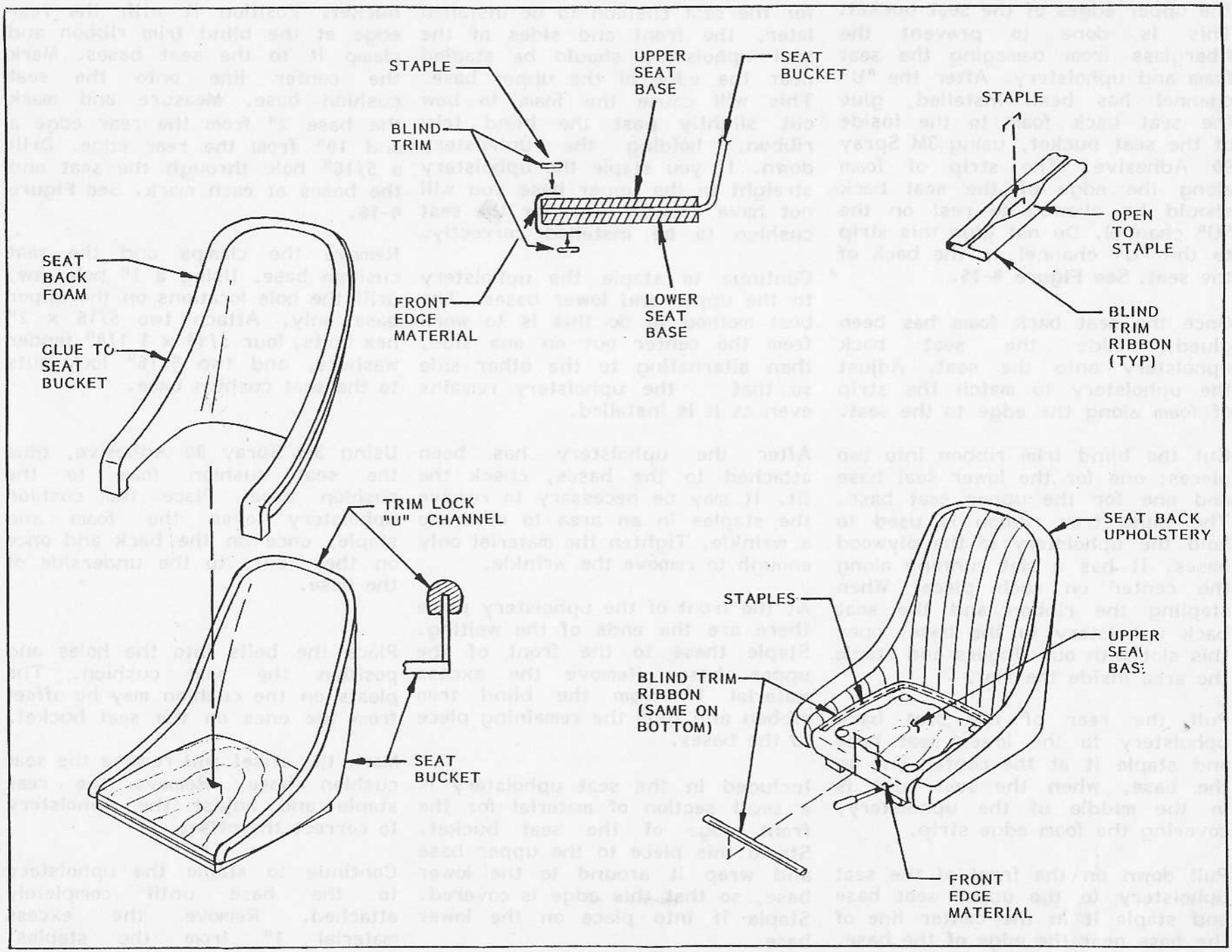

STAPLE
BLIND TRIM
UPPER SEAT BASE
SEAT BUCKET
FRONT EDGE MATERIAL
LOWER SEAT BASE
STAPLE
OPEN TO STAPLE
BLIND TRIM RIBBON (TYP)
SEAT BACK FOAM
GLUE TO SEAT BUCKET
TRIM LOCK "U" CHANNEL
SEAT BUCKET
SEAT BACK UPHOLSTERY
STAPLES
UPPER SEAT BASE
BLIND TRIM RIBBON (SAME ON BOTTOM)
FRONT EDGE MATERIAL

Figure 4-15

Install trim lock "U" channel along the upper edges of the seat bucket. This is done to prevent the fiberglass from damaging the seat foam and upholstery. After the "U" channel has been installed, glue the seat back foam to the inside of the seat bucket, using 3M Spray 90 Adhesive. The strip of foam along the edge of the seat back should be allowed to rest on the "U" channel. Do not glue this strip to the "U" channel or the back of the seat. **See Figure 4-15.**

Once the seat back foam has been glued, slide the seat back upholstery onto the seat. Adjust the upholstery to match the strip of foam along the edge to the seat.

Cut the blind trim ribbon into two pieces; one for the lower seat base and one for the upper seat base. The blind trim ribbon is used to hold the upholstery to the plywood bases. It has a slot running along the center on each piece. When stapling the ribbon and the seat back upholstery to the base, open this slot with our fingers and staple the area inside the slot.

Pull the rear of the seat back upholstery to the lower seat base and staple it at the center line on the base, when the seat edge is in the middle of the upholstery, covering the foam edge strip.

Pull down on the front of the seat upholstery to the upper seat base and staple it in the center line of the base near the edge of the base.

NOTE: In order to provide room for the seat cushion to be installed later, the front and sides of the seat upholstery should be stapled near the edge of the upper base. This will cause the foam to bow out slightly past the blind trim ribbon, holding the upholstery down. If you staple the upholstery straight to the upper base you will not have enough room for the seat cushion to be installed correctly.

Continue to staple the upholstery to the upper and lower bases. The best method to do this is to work from the center out on one side, then alternating to the other side so that the upholstery remains even as it is installed.

After the upholstery has been attached to the bases, check the fit. It may be necessary to remove the staples in an area to eliminate a wrinkle. Tighten the material only enough to remove the wrinkle.

At the front of the upholstery piece there are the ends of the welting. Staple these to the front of the upper base. Remove the excess material 1" from the blind trim ribbon and glue the remaining piece to the bases.

Included in the seat upholstery is a small section of material for the front edge of the seat bucket. Staple this piece to the upper base and wrap it around to the lower base, so that this edge is covered. Staple it into place on the lower base.

Place the cushion base into the seat bucket. Position it with the rear edge at the blind trim ribbon and clamp it to the seat bases. Mark the center line onto the seat cushion base. Measure and mark the base 2" from the rear edge a and 10" from the rear edge. Drill a 5/16" hole through the seat and the bases at each mark. **See Figure 4-16.**

Remove the clamps and the seat cushion base. Using a 1" hole saw, drill the hole locations on the upper base only. Attach two 5/16 x 2" hex bolts, four 5/16 x 1 1/4" fender washers, and two 5/16" lock nuts to the seat cushion base.

Using 3M Spray 90 Adhesive, glue the seat cushion foam to the cushion base. Place the cushion upholstery over the foam and staple, once on the back and once on the front, to the underside of the base.

Place the bolts into the holes and position the seat cushion. The pleats on the cushion may be offset from the ones on the seat bucket.

Mark the offset and remove the seat cushion base. Remove the rear staple and adjust the upholstery to correct the offset.

Continue to staple the upholstery to the base until completely attached. Remove the excess material 1" from the staples.

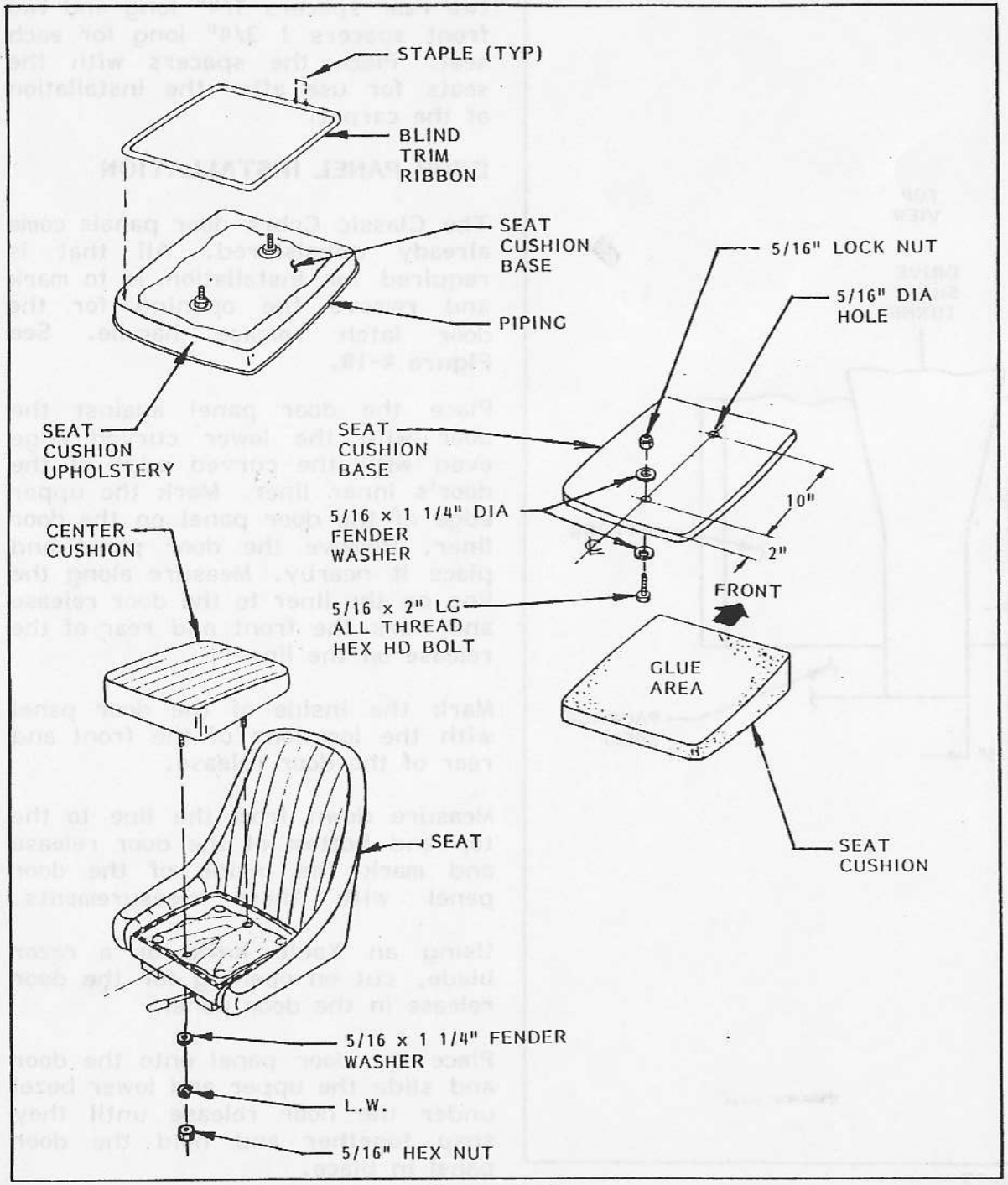


Figure 4-16

Reinstall the seat cushion onto the seat and attach, using two 5/16 x 1 1/4" fender washers, two 5/16" lock washers and two 5/16" hex nuts.

SEAT LOCATION

Measure the floor of the rear cockpit liner 4" from where the floor meets the package shelf. Mark a line at this location across the floor. Measure 5" from the driveshaft tunnel cover along this line and mark this as the location for the inside rear seat bolt. **See Figure 4-17.**

Place another mark 9 3/4" over from the first mark for the outside rear seat bolt. Measure forward 11 1/2" and mark a second line for the forward seat bolts.

Mark two parallel lines from the marks for the rear seat bolts, to the line for the forward seat bolts.

CHECK: To ensure that the seat tracks will be properly aligned, make sure that the lines marked make a rectangle 9 3/4 x 11 1/2" and that all corners are square.

Drill the locations for the seat bolts, using a 3/8" drill bit.

NOTE: The seat spacer material is made from the excess material left over from the bumper bolt tubes.

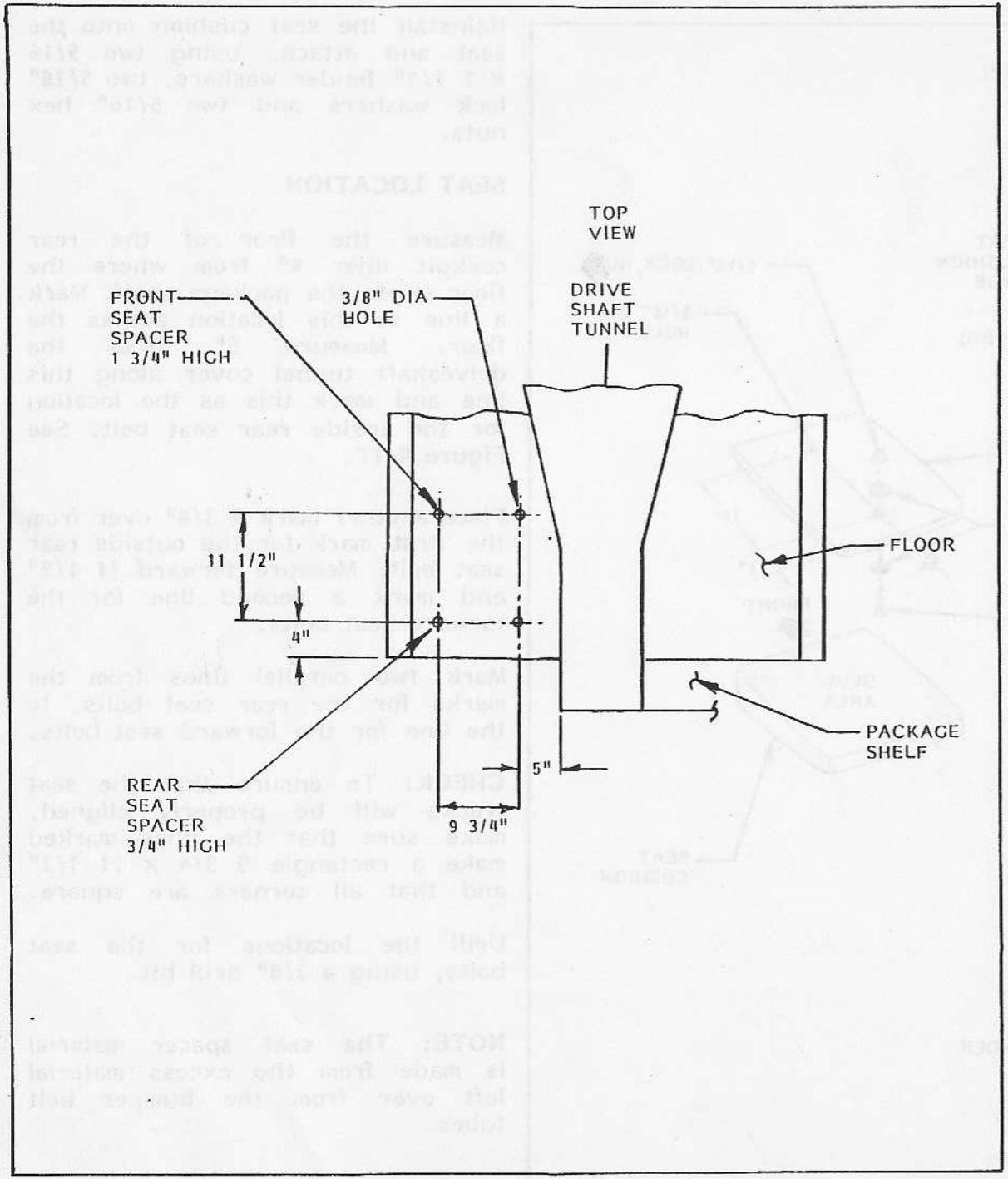


Figure 4-17

Using the seat spacer material, cut two rear spacers 3/4" long and two front spacers 1 3/4" long for each seat. Place the spacers with the seats for use after the installation of the carpet.

DOOR PANEL INSTALLATION

The Classic Cobra door panels come already upholstered. All that is required for installation is to mark and remove the opening for the door latch release handle. **See Figure 4-18.**

Place the door panel against the door with the lower curved edge even with the curved edge of the door's inner liner. Mark the upper edge of the door panel on the door liner. Remove the door panel and place it nearby. Measure along the line on the liner to the door release and mark the front and rear of the release on the line.

Mark the inside of the door panel with the locations of the front and rear of the door release.

Measure down from the line to the top and bottom of the door release and mark the inside of the door panel with these measurements.

Using an Xacto knife or a razor blade, cut on opening for the door release in the door panel.

Place the door panel onto the door and slide the upper and lower bezel under the door release until they snap together and hold the door panel in place.

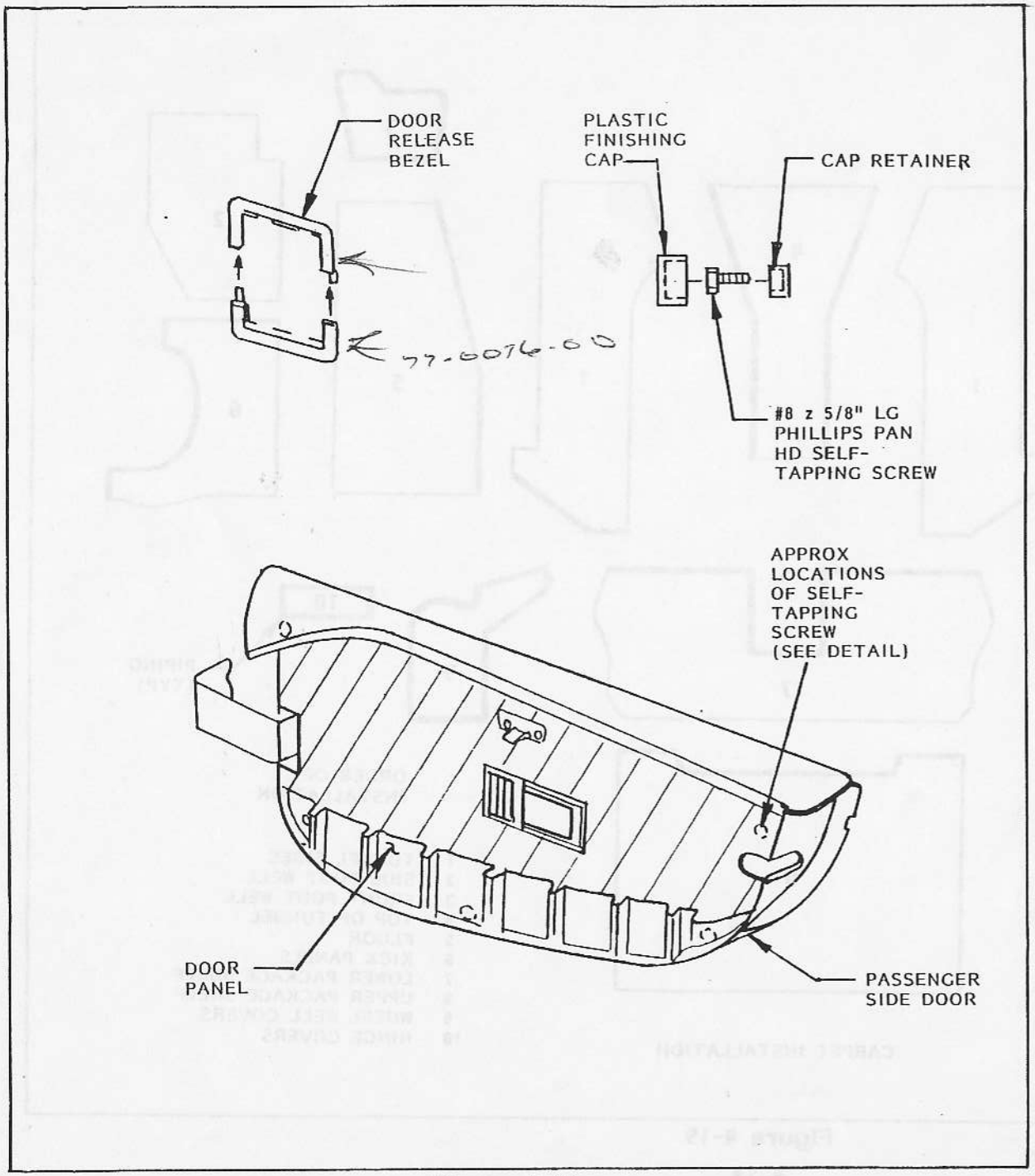


Figure 4-18

NOTE: It may be necessary to space the door release out, to allow the bezels behind it. #10 flat washers should be placed between the release and the inner door liner, at each screw location, to do this.

To attach the door panel to the door, drill five 9/64" holes through the panel into the door; one at each upper corner of the door panel and three inside the pocket of the door panel. Attach the door panel, using five #8 x 5/8" phillips pan head self-tapping screws, five #8 plastic cap retainers, and five #8 plastic finishing caps.

CARPET INSTALLATION

The areas where the carpet sections will be installed should be lightly sanded and cleaned with acetone to allow the adhesive to adhere better.

Layout the carpet in the cockpit area. This will allow you to see where each piece goes. Mark the back of each piece with its location. **See figure 4-19.**

Start with the carpet piece for the sides of the tunnel. Position them so that they overlap onto the floor, the top of the tunnel, the front wall of the foot well and the lower section of the rear cockpit liner. Tape each section into place to prevent it from moving out of position while the adhesive is being applied.

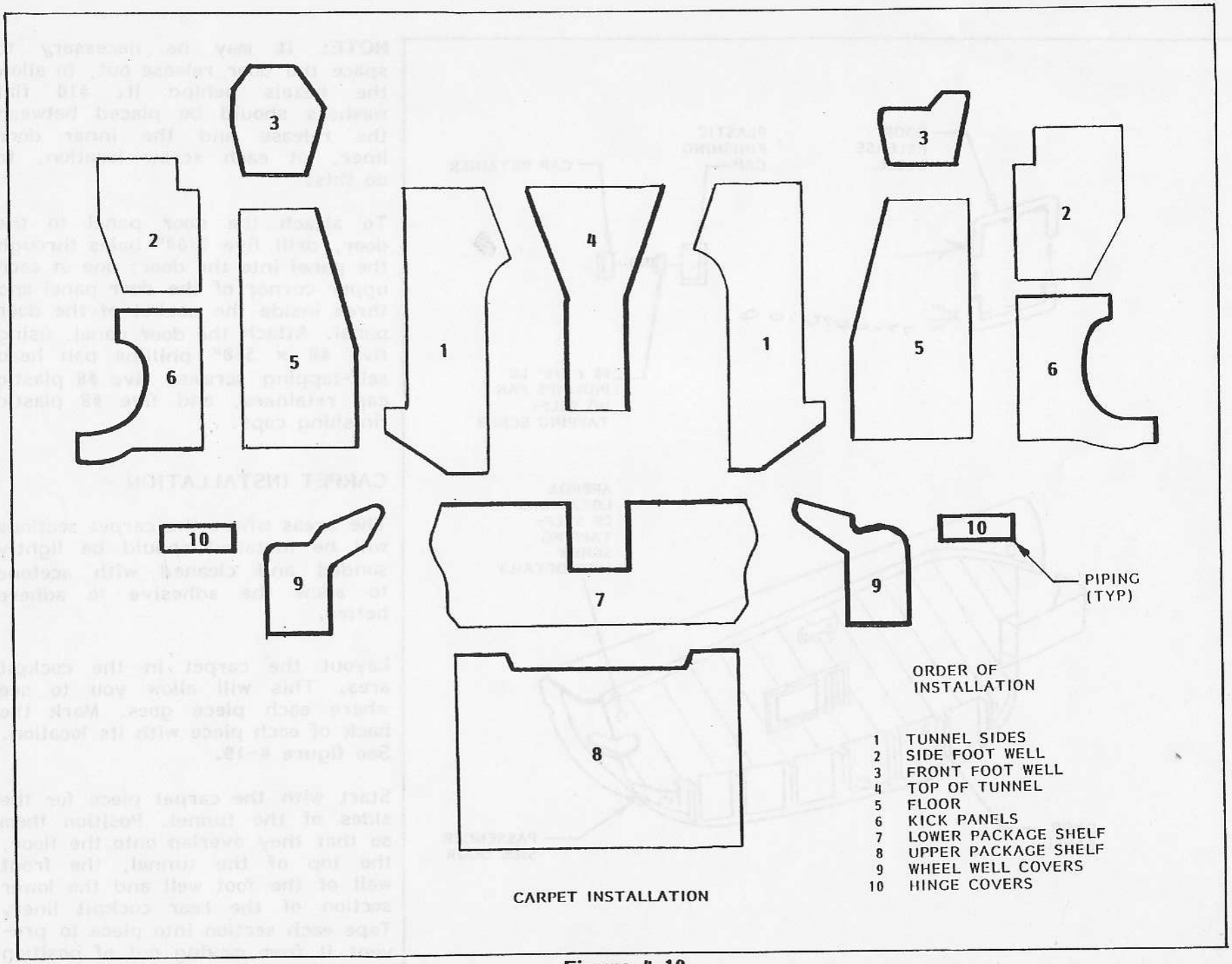

3
2
6
5
1
4
1
3
5
2
6
10
9
7
9
10
PIPING
(TYP)
8
CARPET INSTALLATION
ORDER OF
INSTALLATION
1 TUNNEL SIDES
2 SIDE FOOT WELL
3 FRONT FOOT WELL
4 TOP OF TUNNEL
5 FLOOR
6 KICK PANELS
7 LOWER PACKAGE SHELF
8 UPPER PACKAGE SHELF
9 WHEEL WELL COVERS
10 HINGE COVERS

Figure 4-19

Starting at the forward wall of the foot well spray the tunnel and the under side of the carpet using 3M Spray 90 adhesive.

NOTE: To prevent wrinkles, work in small sections at a time. Glue along the bottom first, then go back and glue along the upper section.

Once the tunnel sides have been installed, trim the excess carpet, but allow some overlap for the other carpet pieces to cover.

Position side foot well piece to the inside of body with it overlapping onto the floor and the front wall of the foot well. Glue it into place using Spray 90. Trim the excess carpet away, leaving some overlap for the other piece to cover.

The next two pieces to be applied are the forward foot well pieces. These will be glued to the front wall of the foot well, using a piece of chalk or a white grease pencil, Mark the areas on the driver's side piece that must be trimmed before installation, i.e.: the steering column cover, gas pedal mount and the master cylinder support.

Apply Spray 90 to the front wall and the underside of the carpet and install each piece.

The tunnel piece is next. Fold this piece in half lengthwise and mark the center line. Position the carpet along the top of the tunnel and mark the under side with the locations of the shifter and the emergency brake.

Using a razor knife or a pair of scissors, cut out the opening for the shifter.

NOTE: For the best results, cut out the shifter opening smaller than necessary or cut an "X" where the shifter goes through the carpet.

Remove any shifter boot or cover from the shifter and mask the shifter mechanisms. Place the carpet over the shifter handle and center the carpet on the tunnel.

Fold the rear of the carpet up so that it is in front of the emergency brake.

Using 3M Spray 90 Adhesive, spray the top of the tunnel and the under side of the carpet. Apply carpet to the tunnel, starting at the shifter and working it flat, while moving forward towards the firewall.

Once the tunnel forward of the shifter has been glued down, spray and apply the rear section of the carpet, after cutting out the emergency brake opening.

Make sure that there are no wrinkles on the top of the tunnel. Remove any wrinkles by lifting and repositioning the carpet in the area of the wrinkle. This must be done quickly, before the glue has bonded permanently. It may be necessary to reapply adhesive to that area.

Place the floor piece into position with the finished edges at the front wall of the foot well and along the sides of the tunnel. Start gluing where the rear meets the lower section of the rear cockpit liner. Once the part is secure, fold the carpet and glue it to the floor in sections, working forward to the front foot well piece. After the floor piece is secured, trim away any excess to allow for some overlap.

Remove the kick panels to allow the floor carpet to be glued underneath them.

The kick panels are the only two pieces that are carpeted outside of the car.

Place kick panel carpet on a flat surface with the underside facing up. Apply Spray 90 to the smooth side of the panel and the underside of the carpet. Place the kick panel onto the carpet with the finished edge along the curved area for the door jamb.

Trim the location of screw holes so that the screws only go through one layer of carpet before wrapping the carpet around all the kick panel edges, with the exception of the door jamb edge. This can be done by notching the carpet edge where the screw holes are.

Apply adhesive to the rough side of the kick panel along the edge where the carpet is wrapped around. Using an awl or a 9/64" drill bit, push through the screw holes and the carpet to mark each location. Mark in chalk or tape over each hole location and pierce the tape with the awl to mark the hole locations.

Before reinstalling the kick panels, place the carpet piece for the lower section of the rear cockpit liner into position with the finished edge around the tunnel. Glue it into place, one side at a time, so that the finished edge is tight around the tunnel. Trim only the excess along the top at the package shelf. The excess at the sides will be covered by the kick panels.

Reinstall the kick panels, using the original hardware.

Before applying the package shelf carpet, unbolt and remove the roll bar(s) to ease installation. Position the package shelf carpet with the finished edge where the edge of the shelf meets the lower section of the rear cockpit liner. Glue this area down first, then working back along the shelf to the rear wall, up the wall and under the body, above the shelf. Slit the carpet to allow the trunk release through.

NOTE: If you are using the optional decorative roll bar(s) make the openings for the roll bar tubes before gluing down the carpet.

Once the carpet has been installed, reinstall the roll bar(s) using the original hardware.

Position the wheel well carpet pieces into place and using a piece of chalk or a white grease pencil mark their outlines onto the carpet they overlap. Remove the wheel well piece and spray the adhesive inside the outlines. Apply adhesive to the underside of each piece and carefully apply each piece into place.

The last two pieces of interior carpet are for the door hinges. Glue each piece onto the inside surface of the door hinge.

TRUNK CARPET INSTALLATION

The optional trunk carpet set consists of three pieces; the trunk wall carpet, the trunk floor and the deck lid carpet. **See Figure 4-20.**

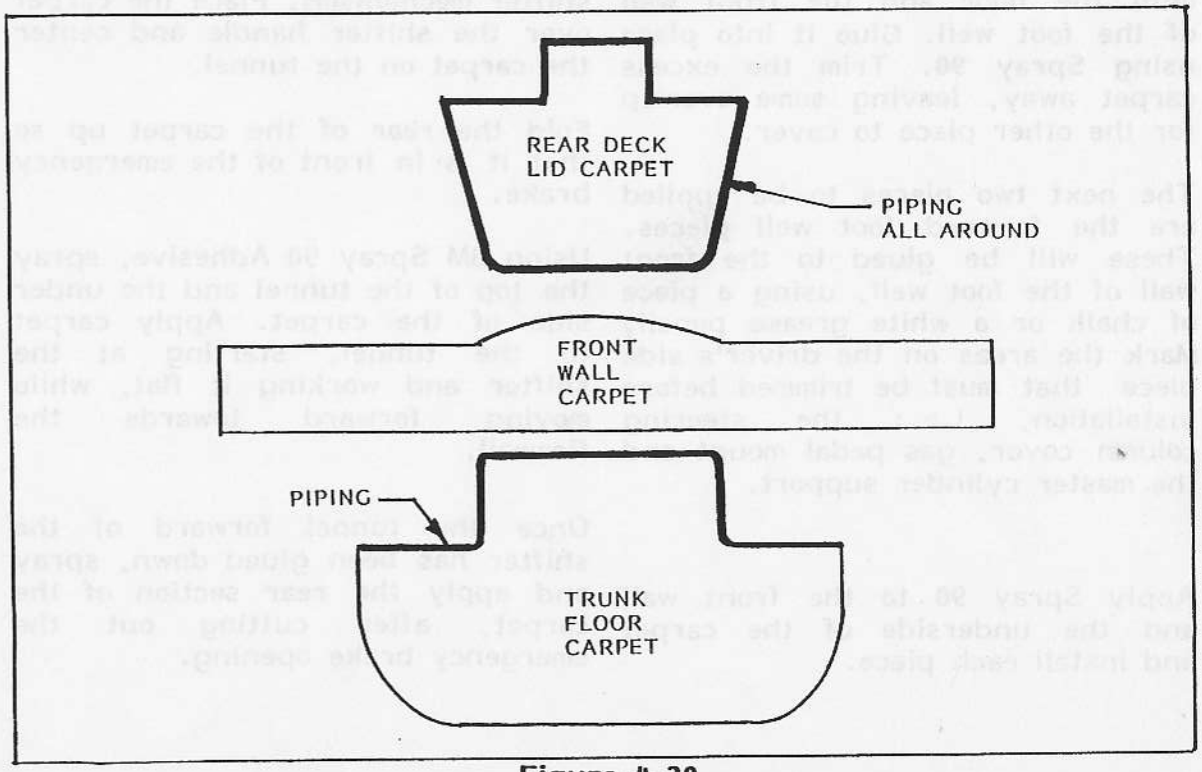


Figure 4-20

Lightly sand the floor and front wall of the trunk and clean with acetone to allow the adhesive to adhere better.

Place the trunk wall carpet into position and using a piece of chalk or a white grease pencil, mark the excess along the top and sides.

Using 3M Spray 90 Adhesive, spra, the front wall and the under side of the trunk wall carpet. Apply the carpet to the wall starting in the center and working outward. Trim the carpet for the hinge mounts and the release cable before gluing those areas. After the carpet has been applied, trim away any excess along the top and sides, using a razor knife. Allow some excess on the floor to be overlapped by the floor carpet.

Place the trunk floor carpet into place and mark areas to be trimmed, i.e.: the bumper mounts, gas filler hose and trunk striker bolt.

Using 3M Spray 90 Adhesive, glue the carpet to the trunk floor, starting at the center and working outwards. Trim the excess along the edges, after the carpet has been installed.

The last piece of trunk carpet is for the inside of the rear deck lid.

Position the carpet on the inside of the rear deck lid and mark the outline with masking tape. Spray the back of the carpet and only inside the area outlined with tape.

Apply the carpet into place and remove the tape.

CARPET CLEAN UP

White grease pencil and over spray from the spray 90 adhesive can be removed, using a rag with a small amount of mineral spirits. Chalk lines will vacuum out. Vacuum the car out thoroughly before proceeding with the next step.

NOTE: Mineral spirits will dissolve the adhesive if the carpet is saturated with it, so only use small amounts to remove the over spray.

SEAT INSTALLATION

Using an awl or a phillips screw driver, poke a hole in the carpet at each seat bolt location, by pushing up from underneath the car. **See Figure 4-21.**

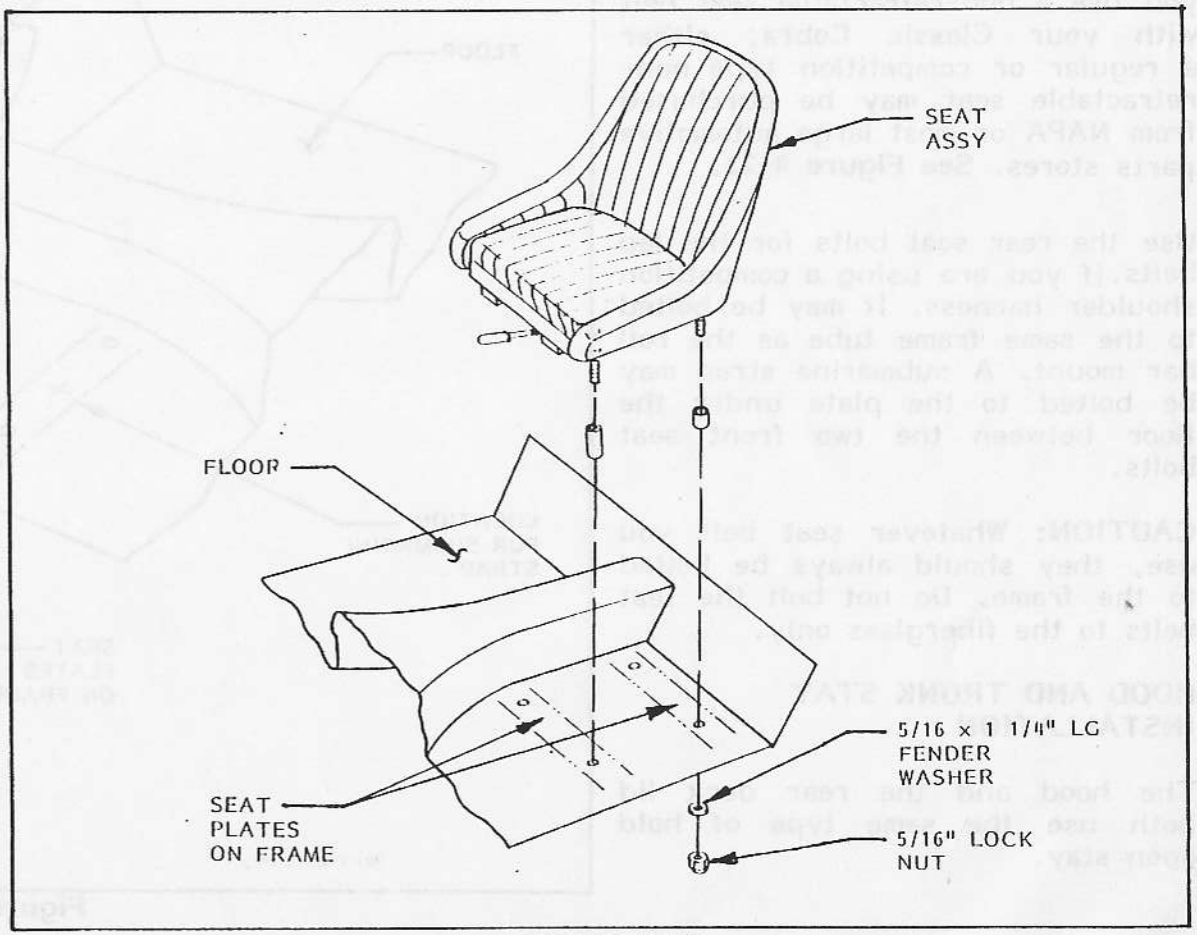


Figure 4-21

Trim around the hole location, using a razor knife, so that the hole is clearly visable.

Place the seat into position with the two 1 3/4" spacers under the front two bolts and the two 3/4" spacers under the rear two bolts. Attach the seats to the car, using four 5/16 x 1 1/4" fender washers and four 5/16" lock nuts.

SEAT BELTS

It is strongly recommended that you use a non-retractable seat belt with your Classic Cobra; either a regular or competition type non-retractable seat may be purchased from NAPA or most large automotive parts stores. **See Figure 4-22.**

Use the rear seat bolts for the lap belts. If you are using a competition shoulder harness. It may be bolted to the same frame tube as the roll bar mount. A submarine strap may be bolted to the plate under the floor between the two front seat bolts.

CAUTION: Whatever seat belt you use, they should always be bolted to the frame. Do not bolt the seat belts to the fiberglass only.

HOOD AND TRUNK STAY INSTALLATION

The hood and the rear deck lid both use the same type of hold open stay.

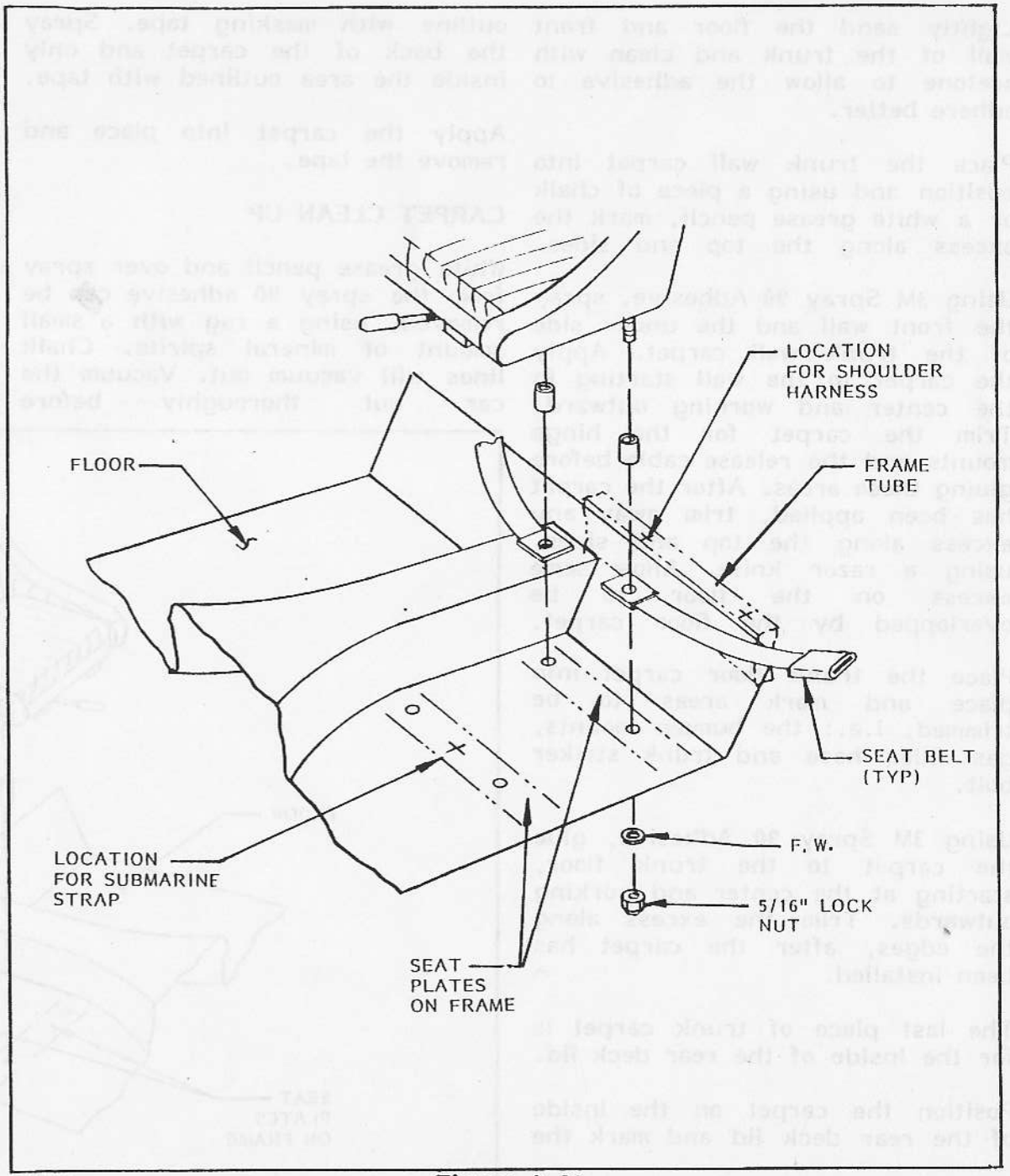


Figure 4-22

Measure back from the front edge of the hood 25" and mark the hood inner liner on the driver's side. **See Figure 4-23.**

Place the front edge of the stay mount on this mark and mark the two mount holes onto the hood inner liner.

Drill a 3/16" hole into the liner for each of the mount holes, and using 3/16 x 1/2" pop rivets, attach the stay to the inner liner of the hood.

Use a broom handle to hold the hood open while installing the hood stay bracket.

From the front edge of the rear section of the driver's wheel well measure and mark a line 2 1/4" back. Measure up along this line to the underside of the hood opening and mark the line at 3 3/4".

Place the front corner of the hood stay bracket at this mark, and mark the bracket mount holes onto the rear section of the wheel well.

Drill a 1/4" hole through each of the marks for the bracket mount holes.

Attach the hood stay bracket to the wheel well using three 1/4 x 1" hex head bolts, six 1/4" flat washers, and three 1/4" lock nuts.

Remove the broom handle and lower the hood until the stay mount is on the hood stay bracket. Mark the hood stay mount hole onto the stay bracket.

Drill a 1/4" hole through the bracket at each of the mount hole locations. Then attach the hood stay to the bracket using two 1/4 x 1" hex head bolts, four 1/4" hex head bolts, four 1/4" flat washers, and two 1/4" lock nuts.

REAR DECK LID STAY

Measure back from the front edge of the rear deck lid 13 1/4" and mark the deck lid inner liner on the driver's side. **See Figure 4-23.**

Place the front edge of the stay mount on this mark and mark the two mount holes onto the rear deck lid inner liner.

Drill a 3/16" hole into the liner for each of the mount holes and using 3/16 x 1/2" pop rivets, attach the stay to the inner liner of the rear deck lid.

Measure 6" back from the front wall of the trunk and using a piece of chalk or a white grease pencil, mark the inside wall of the trunk liner on the driver's side. Measure up from the trunk floor 1 1/4" and mark. Place the front corner of the deck lid stay bracket at this mark, and mark the brackets mount holes onto the inside wall of the trunk.

Drill a 1/4" hole through each of the marks for the bracket mount holes. Attach the rear deck lid stay bracket to the inside wall using two 1/4 x 1" hex head bolts, four 1/4" flat washers, and two 1/4" lock nuts.

Lower the deck lid until the stay mount is on the rear deck lid stay bracket. Mark the stay mount holes onto the stay bracket.

Drill a 1/4" hole through the bracket at each of the mount hole locations; then attach the rear deck lid stay to the bracket, using two 1/4 x 1" hex head bolts, four 1/4" flat washers, and two 1/4" lock nuts.

SECTION E
CONVERTIBLE TOP AND TONNEAU COVER INSTALLATION

CONVERTIBLE TOP INSTALLATION

The convertible top for the Classic Cobra is very similar to an original top. It does not fold down when not in use, but is disassembled instead, and stored in the trunk, just like the original. It also uses the same type attaching hardware as the original.

Perhaps the most difficult portion of the installation of this type of top is the placement of the top mounting studs. In order that the top fits flush against the body

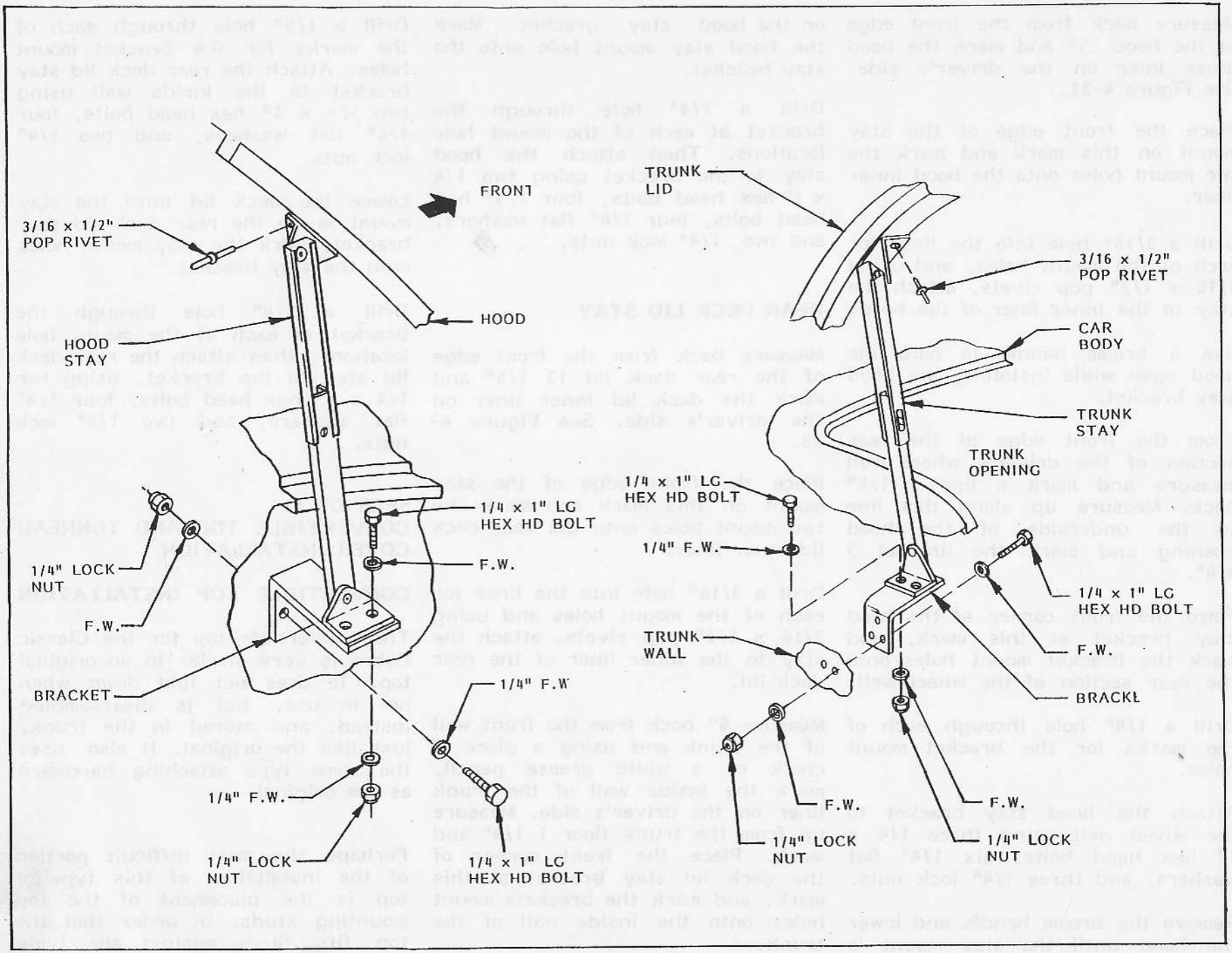

FRONT
3/16 x 1/2" POP RIVET
HOOD
HOOD STAY
1/4 x 1" LG HEX HD BOLT
F.W.
1/4" LOCK NUT
F.W.
BRACKET
1/4" F.W
1/4" F.W.
1/4" LOCK NUT
1/4 x 1" LG HEX HD BOLT
TRUNK LID
3/16 x 1/2" POP RIVET
CAR BODY
TRUNK STAY
TRUNK OPENING
1/4 x 1" LG HEX HD BOLT
1/4" F.W.
1/4 x 1" LG HEX HD BOLT
F.W.
TRUNK WALL
BRACKET
F.W.
F.W.
1/4" LOCK NUT
1/4" LOCK NUT

Figure 4-23

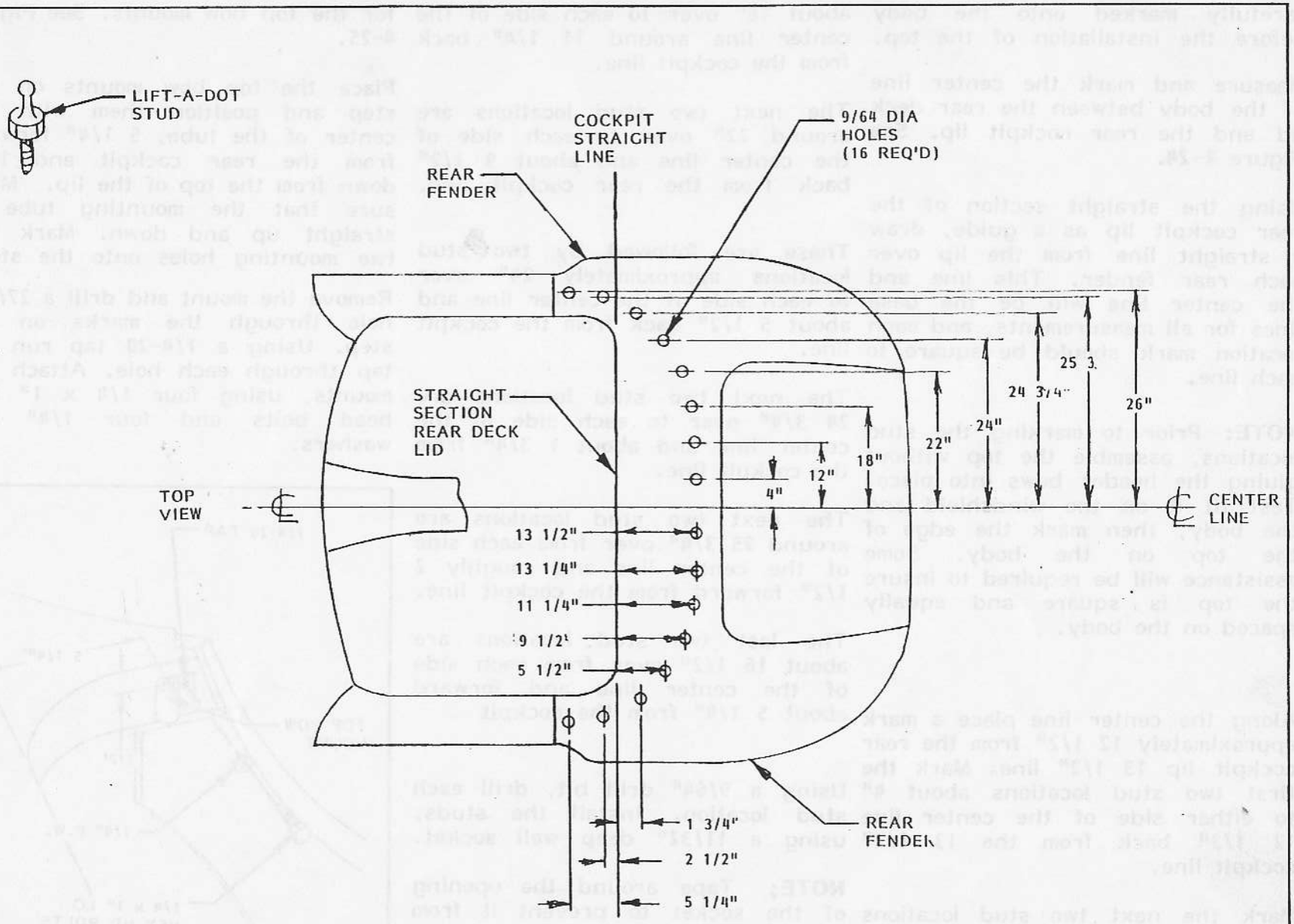

LIFT-A-DOT STUD
COCKPIT STRAIGHT LINE
9/64 DIA HOLES (16 REQ'D)
REAR FENDER
STRAIGHT SECTION REAR DECK LID
TOP VIEW
CENTER LINE
REAR FENDER
13 1/2"
13 1/4"
11 1/4"
9 1/2"
5 1/2"
1 3/4"
2 1/2"
5 1/4"
4"
12"
18"
22"
24"
24 3/4"
25 3/4"
26"

Figure 4-24

locations of these studs must be carefully marked onto the body before the installation of the top.

Measure and mark the center line of the body between the rear deck lid and the rear cockpit lip. **See Figure 4-24.**

Using the straight section of the rear cockpit lip as a guide, draw a straight line from the lip over each rear fender. This line and the center line will be the base lines for all measurements, and each location mark should be square to each line.

NOTE: Prior to marking the stud locations, assemble the top without gluing the header bows into place. Test fit it on the windshield and the body, then mark the edge of the top on the body. Some assistance will be required to insure the top is square and equally spaced on the body.

Along the center line place a mark approximately 12 1/2" from the rear cockpit lip 13 1/2" line. Mark the first two stud locations about 4" to either side of the center line 12 1/2" back from the 13 1/2" cockpit line.

Mark the next two stud locations approximately 12" over to each side of the center line and about 12 1/2" back from the 13 1/4" cockpit line.

The next two stud locations are about 18" over to each side of the center line around 11 1/4" back from the cockpit line.

The next two stud locations are around 22" over to each side of the center line and about 9 1/2" back from the rear cockpit line.

These are followed by two stud locations approximately 24" over to each side of the center line and about 5 1/2" back from the cockpit line.

The next two stud locations are 24 3/4" over to each side of the center line and about 1 3/4" from the cockpit line.

The next two stud locations are around 25 3/4" over from each side of the center line and roughly 2 1/2" forward from the cockpit line.

The last two stud locations are about 16 1/2" over from each side of the center line and forward about 5 1/4" from the cockpit .

Using a 9/64" drill bit, drill each stud location. Install the studs, using a 11/32" deep well socket.

NOTE; Tape around the opening of the socket to prevent it from scratching the body.

At the front of the rear cockpit lip, just behind the door opening, are two stepped areas. These are for the top bow mounts. **See Figure 4-25.**

Place the top bow mounts on the step and position them with the center of the tube, 5 1/4" forward from the rear cockpit and 1/2" down from the top of the lip. Make sure that the mounting tube is straight up and down. Mark the two mounting holes onto the step.

Remove the mount and drill a 27/64" hole through the marks on the step. Using a 1/4-20 tap run the tap through each hole. Attach the mounts, using four 1/4 x 1" hex head bolts and four 1/4" flat washers.

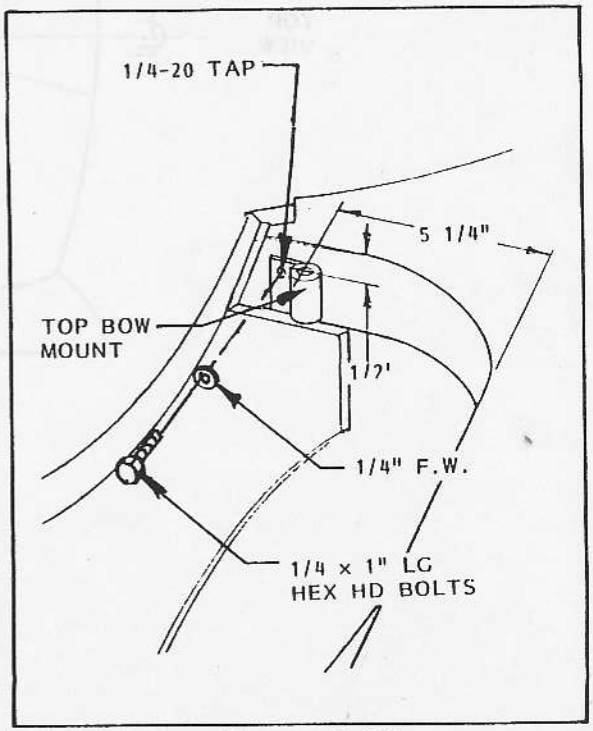


Figure 4-25

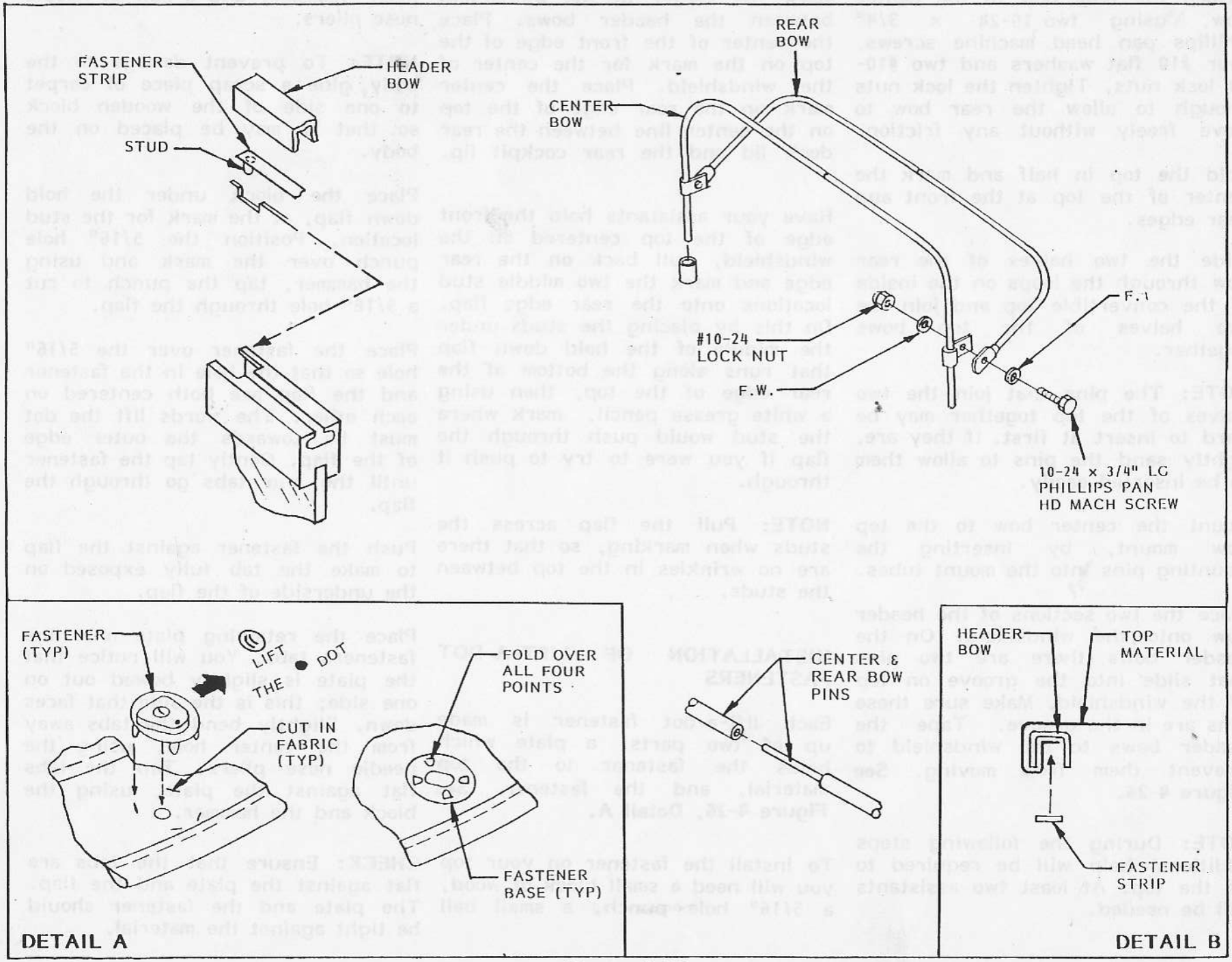

FASTENER STRIP
HEADER BOW
STUD
REAR BOW
CENTER BOW
#10-24 LOCK NUT
F.W.
F.W.
10-24 x 3/4" LG PHILLIPS PAN HD MACH SCREW
FASTENER (TYP)
LIFT THE DOT
CUT IN FABRIC (TYP)
FOLD OVER ALL FOUR POINTS
FASTENER BASE (TYP)
DETAIL A
CENTER & REAR BOW PINS
HEADER BOW
TOP MATERIAL
FASTENER STRIP
DETAIL B

Figure 4-26

Attach the rear bow to the center bow, using two 10-24 x 3/4" phillips pan head machine screws, four #10 flat washers and two #10-24 lock nuts. Tighten the lock nuts enough to allow the rear bow to move freely without any friction.

Fold the top in half and mark the center of the top at the front and rear edges.

Slide the two halves of the rear bow through the loops on the inside of the convertible top and join the two halves of the top bows together.

NOTE: The pins that join the two halves of the top together may be hard to insert at first. If they are, lightly sand the pins to allow them to be inserted easily.

Mount the center bow to the top bow mount, by inserting the mounting pins into the mount tubes.

Place the two sections of the header bow onto the windshield. On the header bows there are two pins that slide into the groove on top of the windshield. Make sure these pins are in the groove. Tape the header bows to the windshield to prevent them from moving. **See Figure 4-26.**

NOTE: During the following steps additional help will be required to fit the top. At least two assistants will be needed.

Mark the center of the windshield between the header bows. Place the center of the front edge of the top on the mark for the center of the windshield. Place the center mark on the rear edge of the top on the center line between the rear deck lid and the rear cockpit lip.

Have your assistants hold the front edge of the top centered on the windshield, pull back on the rear edge and mark the two middle stud locations onto the rear edge flap. Do this by placing the studs under the middle of the hold down flap that runs along the bottom of the rear edge of the top, then using a white grease pencil, mark where the stud would push through the flap if you were to try to push it through.

NOTE: Pull the flap across the studs when marking, so that there are no wrinkles in the top between the studs.

INSTALLATION OF LIFT-A-DOT FASTENERS

Each lift-a-dot fastener is made up of two parts; a plate which holds the fastener to the top material, and the fastener. **See Figure 4-26, Detail A.**

To install the fastener on your top you will need a small block of wood, a 5/16" hole punch, a small ball peen hammer, and a pair of needle nose pliers.

NOTE: To prevent damage to the body, glue a scrap piece of carpet to one side of the wooden block so that it may be placed on the body.

Place the block under the hold down flap, at the mark for the stud location. Position the 5/16" hole punch over the mark and using the hammer, tap the punch to cut a 5/16" hole through the flap.

Place the fastener over the 5/16" hole so that the hole in the fastener and the flap are both centered on each other. The words lift the dot must be towards the outer edge of the flap. Gently tap the fastener until the four tabs go through the flap.

Push the fastener against the flap to make the tab fully exposed on the underside of the flap.

Place the retaining plate onto the fasteners tabs. You will notice that the plate is slightly bowed out on one side; this is the side that faces down. Slightly bend the tabs away from the center hole, using the needle nose pliers. Tap the tabs flat against the plate, using the block and the hammer.

CHECK: Ensure that the tabs are flat against the plate and the flap. The plate and the fastener should be tight against the material.

All the fasteners should be installed in this manner.

Install the fasteners to the top on the marks for the studs next to the center line. Once these two fasteners have been installed, attach the fastener to the studs, by pushing them down onto the studs. To release them, lift up on the rear edge of the flap until they pop off the studs.

Attach the two middle fasteners to the stud. Pull the hold down flap across the body and mark the next two stud locations onto the flap and install these two fasteners.

Attach these fasteners to their studs. Have your assistants pull the front edge of the top down along the front of the windshield, to ensure there is enough material to fold inside the header bow channel. Continue to mark and mount the stud fasteners along the hold down flap, until all studs have fasteners. **See Figure 2-26, Detail B.**

NOTE: Alternate sides so that you do not place the fastener on one side only. This is the best way to avoid wrinkles.

Once all the studs have fasteners on them, have your assistant pull the front edge down along the front of the windshield, with the front edge centered on the mark for the center of the windshield. Climb into the car and using a white grease pencil, mark the header bow locations onto the inside of the top material.

Remove the top and the header bows from the car and lay them out on a flat surface, with the inside facing up.

Apply Goodyear Pliobond Adhesive, or an equivalent contact cement, to the two halves of the header bows and the inside of the top material forward of the marks for the header bow.

NOTE: Apply the adhesive to the top and front portion of the header bow. The rear of the bow will not have any material glued to it.

Place the header bow half back into place on the windshield and tape them into place at the lower corner only.

Carefully reinstall the top bows and attach fasteners to the studs, with the help of your assistants. Pull the top material tights before applying it to the header bows.

Work outwards from the center with an assistant, applying the same area on the opposite side.

Once the top material is bonded to the header bows, remove the top and place it back onto the flat surface, with the inside facing up.

Take the aluminum header bow straps and bend them to match the inside of the header bow "U" channel. Mark and trim away any excess at the lower corner of the header bow. **See Figure 4-27.**

Apply Goodyear Pliobond Adhesive or an equivalent contact cement to the inside of the header bow "U" channel and the inside of the remaining top material along the front edge.

Apply the remaining material into the "U" channel and start at the center and work outwards to the end.

Once the material has been applied to the inside of the "U" channel, place the aluminum straps into the "U" channel and clamp them into place, using several small "C" clamps.

NOTE: It may be necessary to trim some of the material in order to get the aluminum strap into place. The strap must be against the remaining material and the "U" channel to prevent the front edge of the top from coming loose.

Once the material has bonded to the "U" channel, remove the aluminum straps and apply adhesive to the straps and material in the "U" channel and re-clamp the straps into the "U" channel.

Install the convertible top catch onto the windshield post, using two #6-32 x 5/16" phillips pan head machine screws.

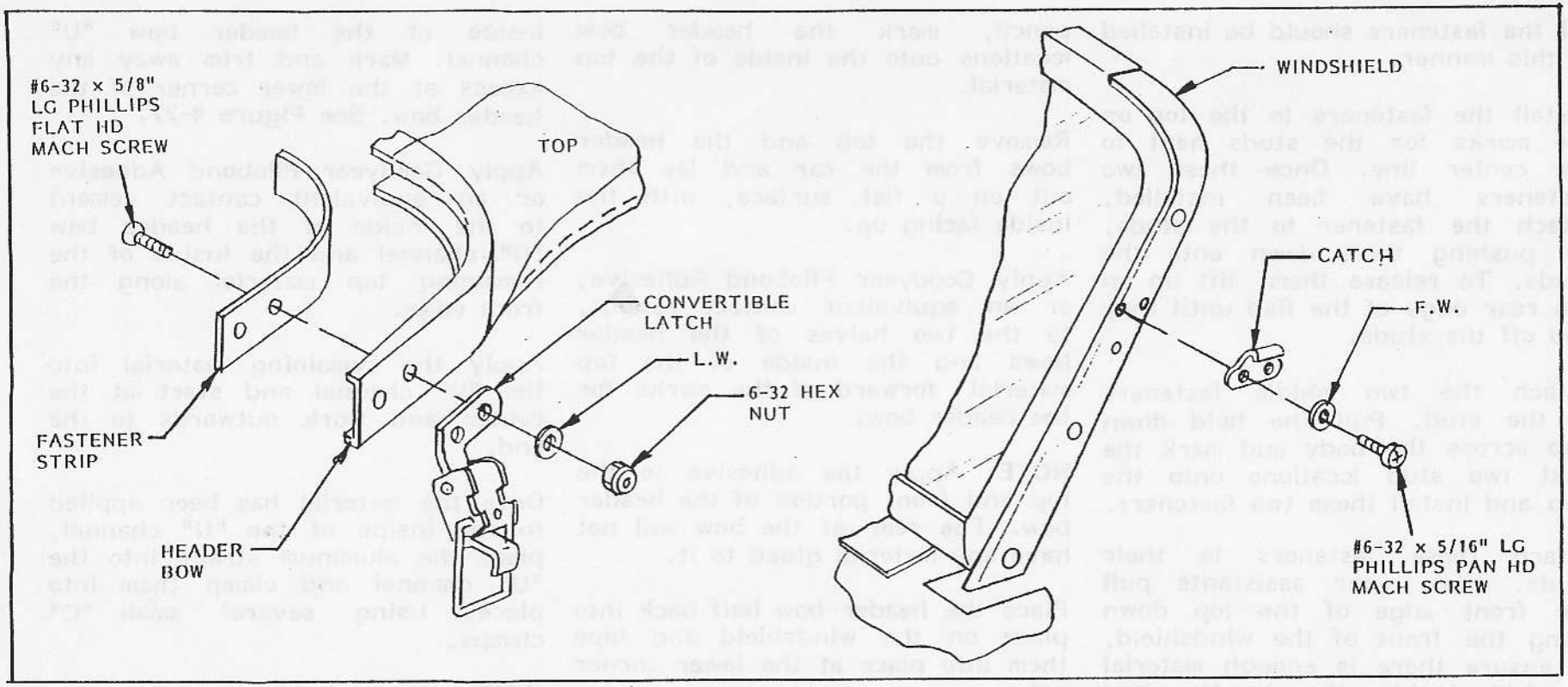


Figure 4-27

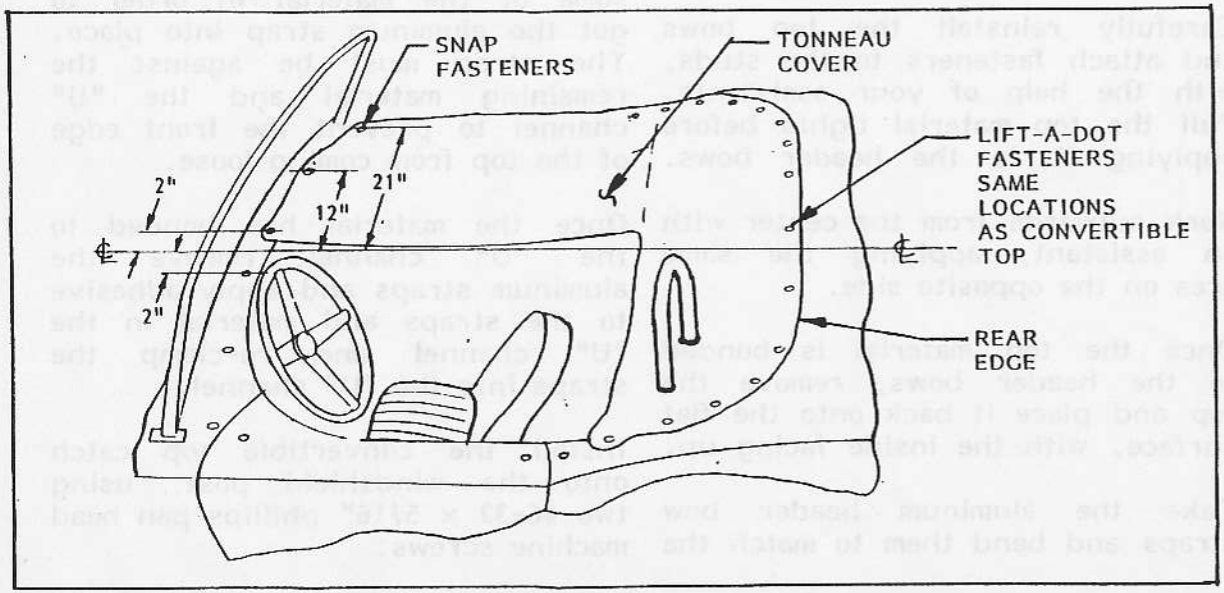


Figure 4-28

Position the convertible top latch with the center of the bottom mount hole 9/16" from the lower end of the header bow "U" channel. Mark each of the mount holes onto the header bow and drill a 5/32" hole through the "U" channel and the aluminum straps. Attach the latch to the header bow, using two #6-32 x 5/8" phillips flat head machine screws, two #6 lock washers and two #6-32" hex nuts.

NOTE: Place the phillips head of the screw inside of the "U" channel with the lock washer and nut on the latch side of the "U" channel. Trim the screw flush with the nut after the latch has been secured.

TONNEAU INSTALLATION

The rear edge of the optional tonneau cover uses the same type fastener as the convertible top. The front edge uses the snap type fasteners.

Fold the tonneau in half, lengthwise, and mark the center for the front and rear edges. Place the tonneau over the cockpit area and align the front and rear centers with the center line marks on the body and the windshield.

Install the lift-a-dot fastener along the rear edge of the tonneau as per the instructions for the top.

Once all the fasteners have been installed, pull the tonneau forward until it is tight and mark the body along the front edge of the tonneau cover. **See Figure 4-28.**

Measure from the center line and place the following marks between the front edge mark and the front cockpit lip. The first marks 2" from center, the second marks 12" from center and the last two marks 21" from center. Each of these marks should be centered between the front edge mark for the tonneau cover and the front cockpit lip.

Using a 9/64" drill bit, drill a hole through each of these marks. Install a self-tapping male snap stud into each of these holes.

Pull the tonneau cover tight and mark the location of each snap stud onto the front edge of the tonneau cover. Attach a female snap and button at each of the locations, using the snap tools provided with the snap kit.

The roll bar tonneau is installed the same way but includes additional male and female snaps for the roll bar flaps. Install the buttons and female snap on the upper flap and the male snap and retainer on the lower flap.

WIND WING INSTALLATION

Remove the second and forth windshield post screws and install the wind wing blocks onto the windshield post, using the longer screws supplied with the wind wind kit. **See Figure 4-29.**

Remove the protective paper from the area of the wind wing hinge mount and attach the hinge arms to the wind winds, using the short phillips oval head screws and the acorn nuts.

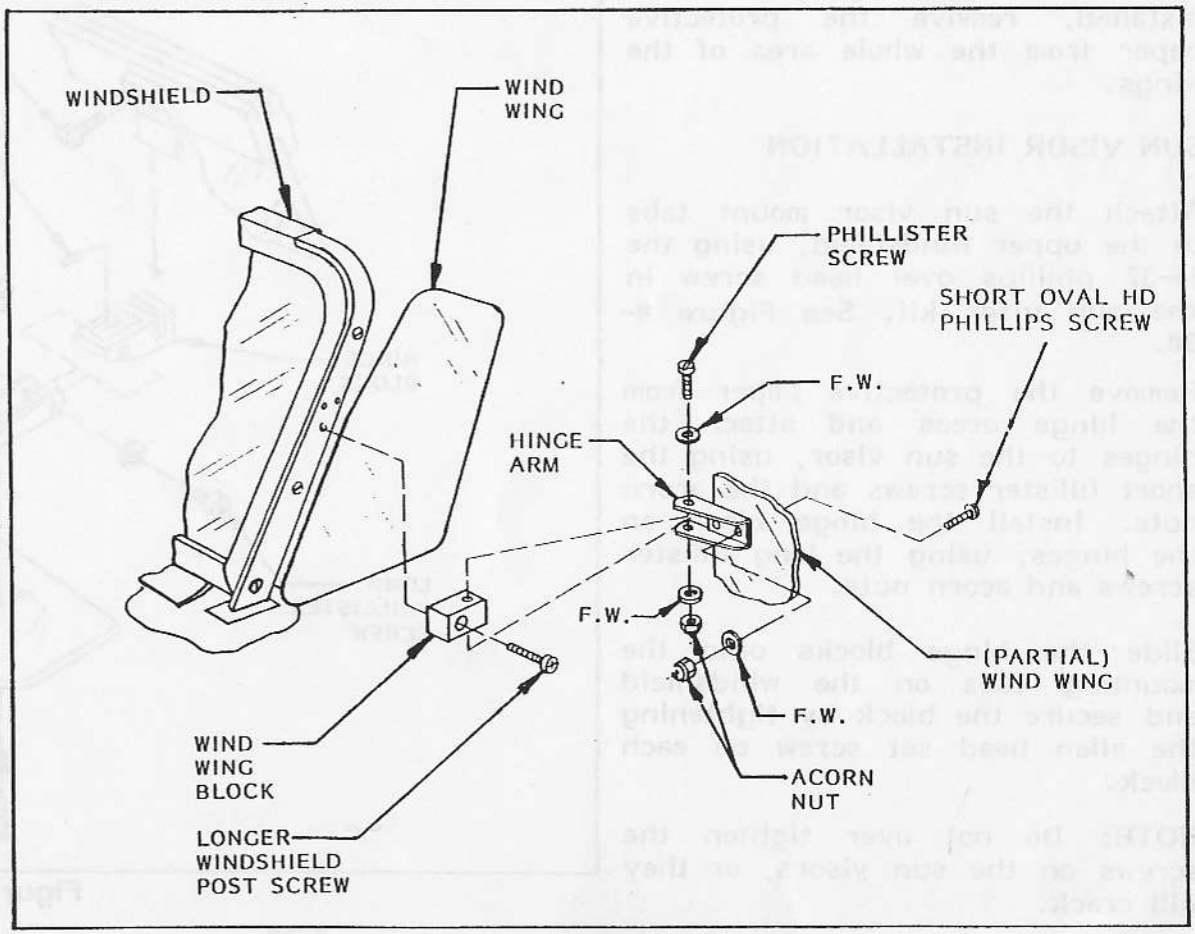


Figure 4-29

WARNING: Do not overtighten the screws; the wind wings may crack if you do so.

Attach the wind wing hinges to the wind wing blocks, using the common fillister machine screws and acorn nuts. Tighten enough so that the wind wings are not loose, but may be placed into any position with some slight effort.

CHECK: Ensure that the top latches clear the wind wings when the top is installed.

Once the wind wings have been installed, remove the protective paper from the whole area of the wings.

SUN VISOR INSTALLATION

Attach the sun visor mount tabs to the upper windshield, using the #6-32 phillips oval head screw in the sun visor kit. **See Figure 4-30.**

Remove the protective paper from the hinge areas and attach the hinges to the sun visor, using the short fillister screws and the acorn nuts. Install the hinge block on the hinges, using the long fillister screws and acorn nuts.

Slide the hinge blocks onto the mounting tabs on the windshield and secure the block by tightening the allen head set screw on each block.

NOTE: Do not over tighten the screws on the sun visors, or they will crack.

Once the sun visors are installed, remove all of the protective paper.

SIDE WINDOW ASSEMBLY

Cut four pieces of felt window channel, two pieces 20" long and two pieces 31" long. These pieces are for the sliding plexiglass of the side window.

Bend and place the 31" long piece of the window channel into the "U" channel along the top and rear of the side window frame. Place the 20" piece of the window channel into the lower section of the frame.

Place the rear (sliding) plexiglass into the window channel and slide it into position. Place the forward (angled) plexiglass into position on the window frame.

NOTE: Do not remove the protective paper until the final assembly of the side windows

Place the sliding window stop "U" channel into the side window; position it on the upper section 1" back from the point on the upper "U" channel and 9 3/4" back from the point on the lower "U" channel.

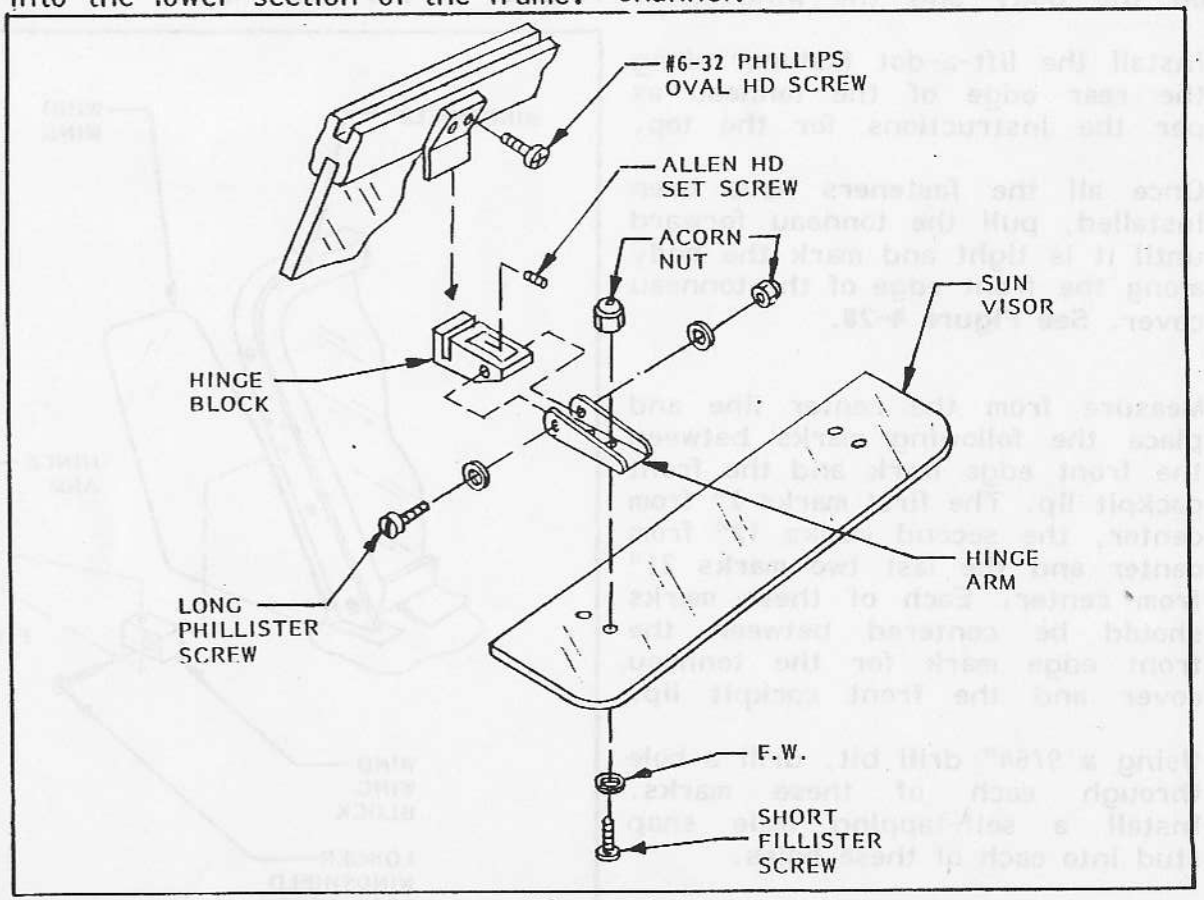


Figure 4-30

NOTE: It may be necessary to trim the sliding window stop slightly in order to get a tight fit.

Mark the center of the sliding window stop onto the upper and lower sections of the frame. Place an additional mark on the lower frame 1/4" up from the bottom and on the upper frame 1/4" down from the top. **See Figure 4/31.**

Drill a 3/16" hole through the sliding window stop, fixed window plexiglass and the side window frame at each mark

WARNING: When drilling through plexiglass always use a fresh drill bit; never apply pressure to force the drill bit to cut harder and maintain a medium speed. This will prevent the plexiglass from cracking.

Once these holes have been drilled, countersink the holes on the outside of the side window frame. Disassemble all the pieces and clean and paint the frame pieces, as desired.

After the paint has dried, glue the window channel pieces into the side window frames, using urethane or 3M Super Weatherstrip Adhesive, Pt. #051135-08008.

Glue the section of 1/4" "U" channel into the lower section of the window frame to hold the lower window channel in position. Slide the fender bead between the window frame and the "U" channel and continue to glue it into place along the lower window frame. It will need to be notched at the upright for the fixed window.

Insert the sliding window to the closed position. Place the fixed window and the sliding window stop into position. Align the holes in the frame with the holes in the window and the sliding window stop. Attach the fixed window and the sliding window stop to the side window frame, using three #10-24 x 1 1/2" phillips oval head machine screws, three #10 flat washers, three #10 lock washers and three #10-24 acorn hex nuts.

SIDE WINDOW INSTALLATION

Install the convertible top onto the car and remove the wind wings from the windshield post.

NOTE: To protect the upper section of the door from being scratched by the side window post, apply masking tape onto the upper section of the door.

Position the side window on top of the door with the curved rear section overlapping the inner bulb seal on the top. Angle the front end of the side window, so that it is 3/16" inside of the windshield post. Mark the position of the side window post onto the top of the door.

Drill a 3/8" hole through the top of the door at each mark. Shorten the ferrule for the front post 5/8".

NOTE: The hole for the front ferrule must be drilled through the inner door liner also. The hole for the rear ferrule must go through the door beam.

CHECK: Insert the ferrules and install the side window. Ensure that the doors close correctly and that the windows are flush with the top seal.

Apply a small amount of urethane to each hole before inserting the ferrules.

After the ferrules have been installed, bond the ferrule covers over the exposed section of the forward ferrules Apply auto body filler to fill the rough side of the covers and then clamp them to the door until the filler has cured Remove the clamps and use a drill bit to remove any excess filler inside of the ferrules.

Cut the side window seal into two 31 1/2" long pieces. Place the thick side of the seal against the lower side of the frame with the end flush at the rear of the side window frame. Trim the front end of the seal so that it matches the angle on the frame. Glue the seal to the frame, using urethane, and allow it to cure for 12 hours.

After the urethane has cured, remove the tape from the top of the door.

Drill a 1/8" hole through the tab on the inside of the lower side window frame. This tab is used to mount the side window retaining strap.

Drill a 1/8" hole in the strap, 3/8" from the straight end of the strap. Drill a 3/8" hole through the strap,

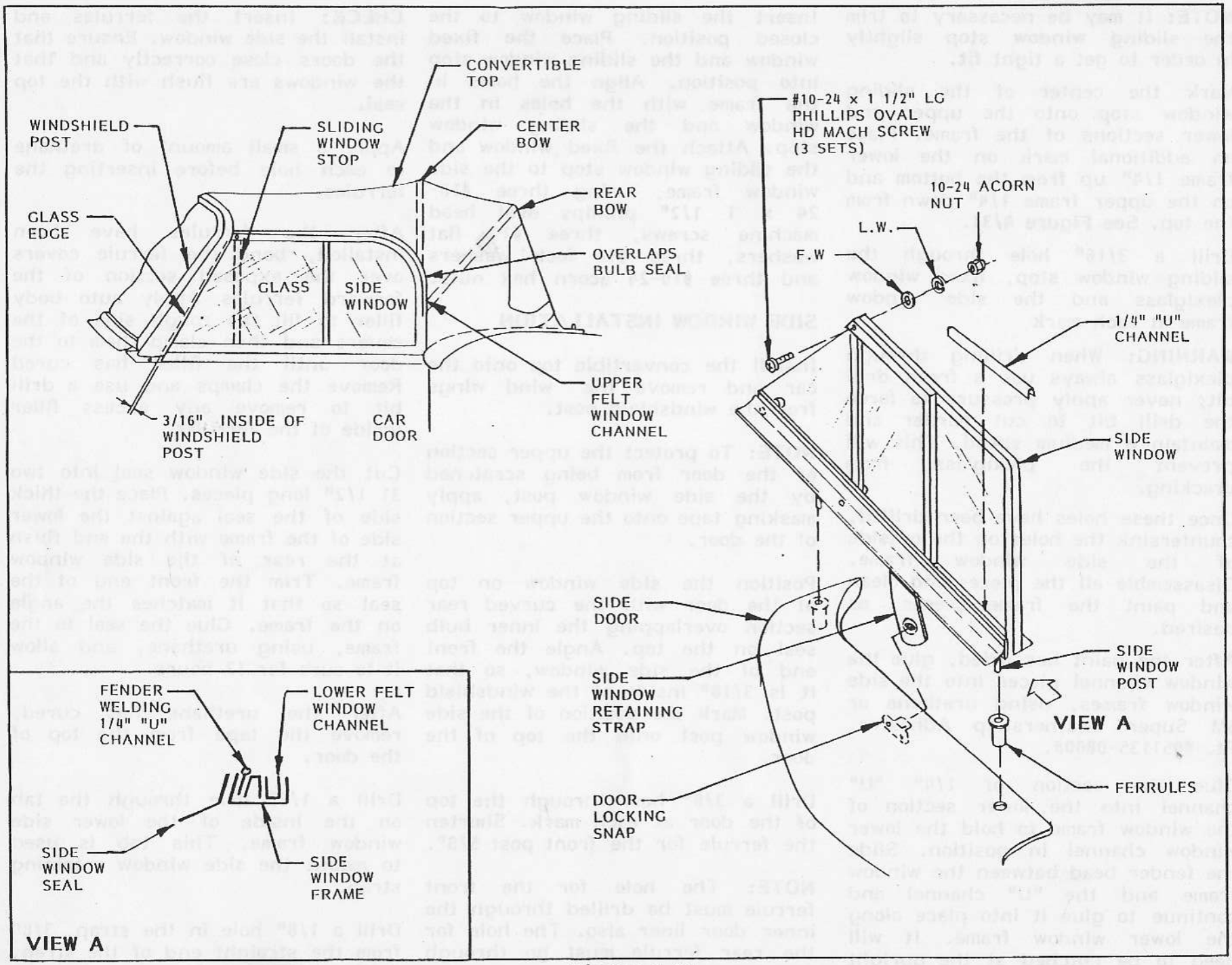

CONVERTIBLE TOP
WINDSHIELD POST
SLIDING WINDOW STOP
CENTER BOW
REAR BOW
GLASS EDGE
GLASS
SIDE WINDOW
OVERLAPS BULB SEAL
UPPER FELT WINDOW CHANNEL
3/16" INSIDE OF WINDSHIELD POST
CAR DOOR
#10-24 x 1 1/2" LG PHILLIPS OVAL HD MACH SCREW (3 SETS)
10-24 ACORN NUT
L.W.
F.W
1/4" "U" CHANNEL
SIDE WINDOW
SIDE DOOR
SIDE WINDOW RETAINING STRAP
SIDE WINDOW POST
VIEW A
DOOR LOCKING SNAP
FERRULES
FENDER WELDING 1/4" "U" CHANNEL
LOWER FELT WINDOW CHANNEL
SIDE WINDOW SEAL
SIDE WINDOW FRAME
VIEW A

Figure 4-31

1" from the pointed end. Enlarge this hole to form a slot, using the bezel for the locking snap as a guide.

Attach the bezel to the strap using a hammer and a wooden block. Bend the four tabs over onto the bezel base on the plain side of the strap. Insert the locking snap into the bezel and lock it into position.

Attach the strap to the side window using a #8-32 x 1/2" round head slotted machine screw, a plastic cap retainer, plastic cover cap and a #8-32 lock nut.

Place the side window into place on the door and mark the position of the locking snap onto the inner door panel. Remove the snap from the strap.

Drill two 9/64" holes through the hole location for the locking snap. Attach the snap to the door using two #8 x 1" phillips oval head self-tapping screws.

DOOR AND TRUNK SEAL INSTALLATION

Apply the door edge seal to the inside edge of the door. Apply the same self-adhesive seal to the raised section of the trunk opening on the body. **See Figure 4-32.**

EXHAUST INSTALLATION

Due to space limitation, it will be difficult to run the exhaust over the rear axle. Therefore we recommend that the exhaust exit out the side of the car, just forward of the rear wheels. You may use the stock manifolds or the optional Classic Cobra headers/side pipe, available from our parts department. **See Figure 4-33.**

NOTE: Prior to the installation of the side pipe, the side pipe opening must be removed from the body. **See Chapter 3, Section A.**

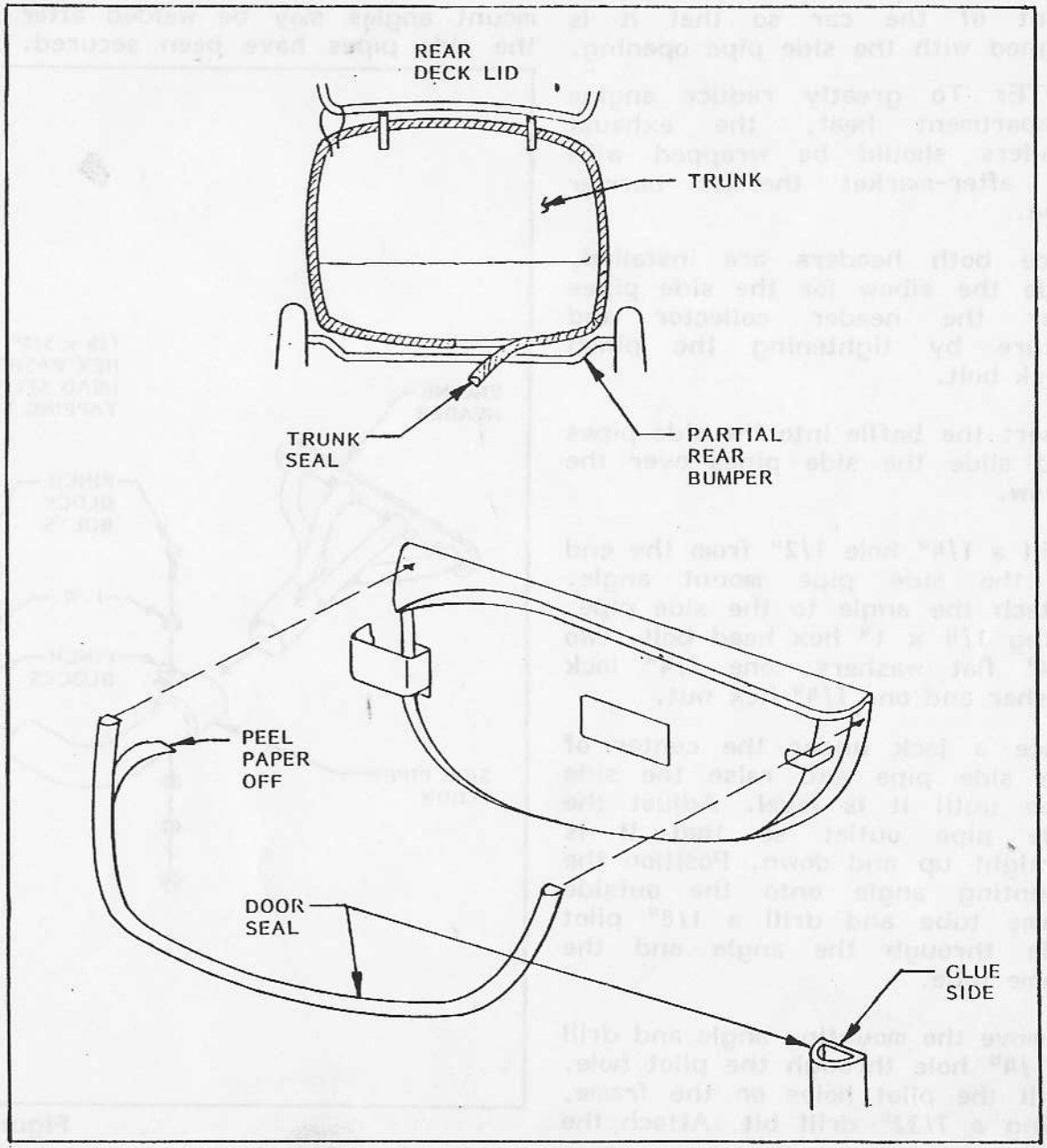


Figure 4-32

Remove the stock manifolds, and install the Classic Cobra headers. There is a slight difference between the left and right hand header. The collecter is offset towards the front of the car so that it is aligned with the side pipe opening.

NOTE: To greatly reduce engine compartment heat, the exhaust headers should be wrapped with an after-market thermal barrier tape.

Once both headers are installed, slide the elbow for the side pipes over the header collector and secure by tightening the pinch block bolt.

Insert the baffle into the side pipes and slide the side pipes over the elbow.

Drill a 1/4" hole 1/2" from the end of the side pipe mount angle. Attach the angle to the side pipe, using 1/4 x 1" hex head bolt, two 1/4" flat washers, one 1/4" lock washer and one 1/4" hex nut.

Place a jack under the center of the side pipe and raise the side pipe until it is level. Adjust the side pipe outlet so that it is straight up and down. Position the mounting angle onto the outside frame tube and drill a 1/8" pilot hole through the angle and the frame tube.

Remove the mounting angle and drill a 1/4" hole through the pilot hole. Drill the pilot holes on the frame, using a 7/32" drill bit. Attach the mounting angles to the frame, using two 1/4 x 5/8" hex washer head self-tapping screws.

NOTE: For additional security the mount angles may be welded after the side pipes have been secured.

Reattach the side pipe mounting angle, using the original hardware and tighten the pinch block bolts on the side pipe and elbows securely.

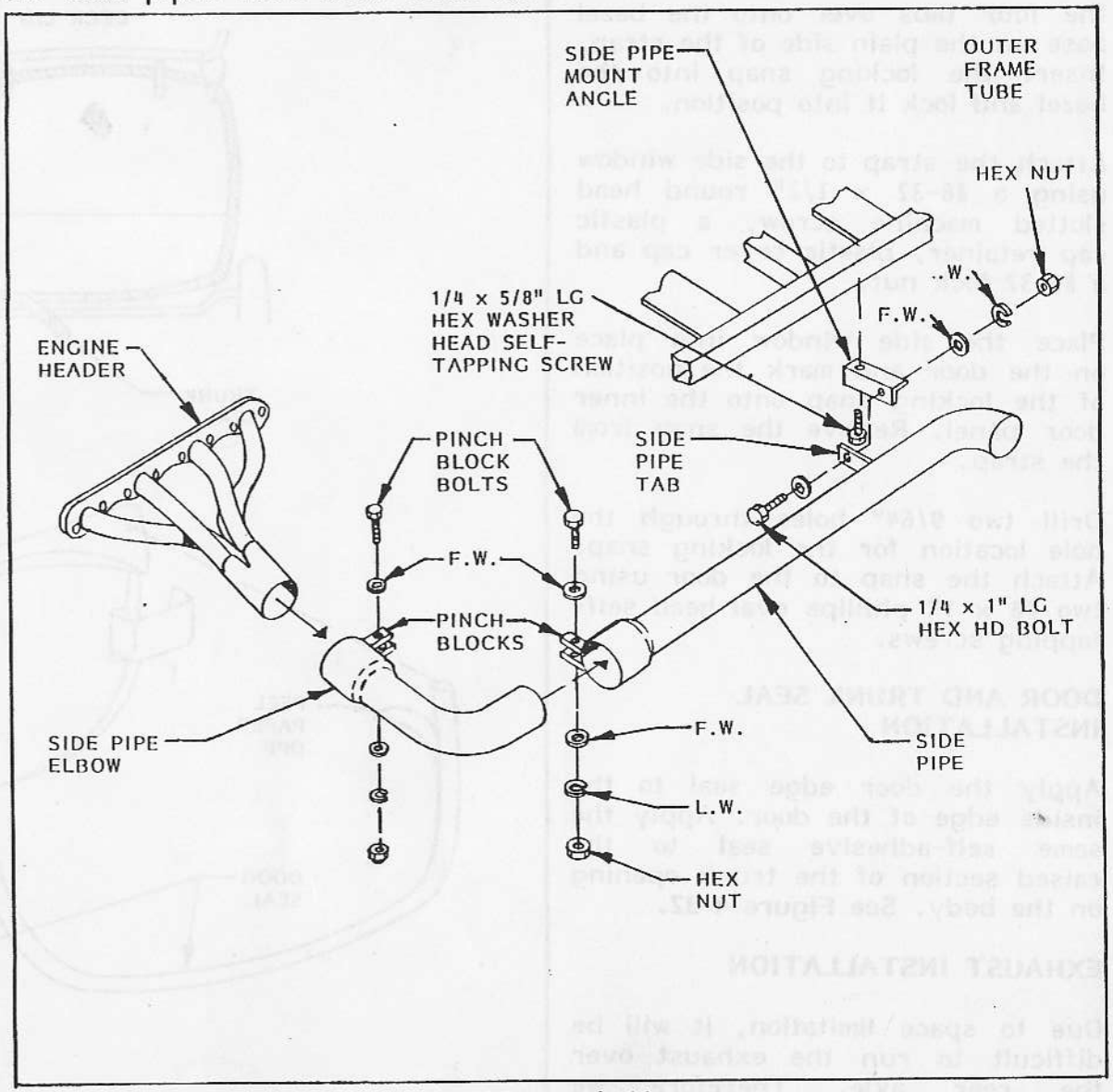


Figure 4-33

CHAPTER 5 FINAL PREPARATION

WHEELS AND TIRES

The Classic Cobra has been designed to operate with 14 x 6' wheels on the front and 15 x 7' wheels on the rear. For the proper offset consult with our factory technical department. Wheels are available from our factory as an option, should you have difficulty finding them locally.

The recommended tires are P205/70HR-14 for the front and P255/60HR15 for the rear. The mounted tires should not extend past the outside rim of the fenders.

ID PLATE

The ID plate included with your Cobra kit should be installed on the body. It may be mounted either on the fire wall or the driver's door jamb, below the striker bolt.

PRETEST CHECK LIST

All bolts are tightened properly
All moving parts have been lubricated
The brakes have been bled and adjusted
The master cylinder is full
The engine oil level is correct
The radiator is filled with coolant
The transmission fluid level is correct
The battery is charged
The battery clamps have been tightened
The front end has been aligned
The tires have been inflated to manufacturers specifications
The wheels have been balanced
The steering wheel has been tightened
All bolts on the steering extension are tightened
The fire wall bearing has been greased.
All hoses have been properly secured
The engine has been timed
The carburetor has been adjusted
All fan belts are tightened properly
The horns work
The emergency brake is adjusted properly
The headlights are adjusted
The engine has been run and any leaks corrected
The electric fan thermostat has been adjusted (if used)
All caps are installed, i.e.: gas cap, radiator cap, oil filler cap, and master cylinder cover
All lights work correctly
All switches work correctly
The neutral safety switch is properly adjusted
The exhaust system has no leaks
The car meets your state's safety and emission requirements
There is no binding in any of the control cable or linkage, i.e.: brakes, throttle, kick down, and transmission
The door latches shut completely
The hood and trunk are closed and latched
Tighten all the lug nuts
The gas tank is at least half full
Fasten your seat belt

TEST DRIVE

On your initial test drive bring along a tool box and an observer. Have your observer write down anything you notice during the test drive. During the test drive check all the functions of items installed on the car.

POST TEST CHECK

Upon return from the test drive you should place the car back on jack stands and inspect it. Check for loose fasteners and any leaks. Go over any notes our observer may have made during the test drive and take appropriate steps to correct any mechanical problems that you might have.

FIBERGLASS CARE AND REPAIR

The fiberglass parts of your car have a gel-coated finish. This finish is made of a specific pigment and blended polyester resin and sprayed into the mold before the fiberglass is applied. This process provides the parts with a durable color finish that requires very little to be kept looking new.

GELCOAT CARE

The gelcoat finish should be cleaned and waxed periodically to maintain its high gloss. The best type of wax for the gelcoat finish is a nonabrasive pure carnauba wax.

An automotive wax pre-cleaner containing a fine rubbing compound is suitable for removing minor scratches or scuff marks. Scratches that cannot be removed with rubbing compound can be removed by wet sanding with 400 grit sandpaper. Then wet sand with 600 grit sandpaper. When wet sanding a scratch the most effective way to remove it is to sand across the scratch instead of along the same direction as the scratch. Keep the area sanded to a minimum.

After sanding, buff the area with rubbing compound, such as 3M Super Duty Rubbing Compound, Part #051144-05955. When buffing you should keep the speed of the buffer to around 2,000 RPM, while pressing firmly. Once the area has been buffed, wash with soap and water to remove all excess rubbing compound. Rinse and dry before applying a glaze such as regular mirror glaze #3 or Cleanbright, #27, Liquid Ebony. Glaze with machine. Polish the glaze with the buffer, then wax with the same wax normally used.

WARNING: Care should be taken not to rub through the gelcoat surface when buffing. A power buffer should be used with care. The surface may also be buffed by hand if a power buffer is not available.

NOTE: Rubbing compound, glaze and pure carnauba wax may be purchased from an auto body and paint supply store. These are usually higher quality than what is found in most retail stores.

GEL COAT TOUCH-UP AND SURFACE REPAIRS

This section covers the two basic types of damage; i.e.: damage to the gelcoat surface that cannot be sanded out and damage through the gelcoat surface to fiberglass. Repair as follows:

STEP 1.
To be sure that the area to be repaired is dry, clean and free of oil or wax, clean the area with lacquer thinner, and or acetone.

STEP 2.
Roughen the bottom and the sides of the damaged area using a power drill with a burr attachment. Lightly sand to feather the edge surrounding the scratch or gouge, being careful not to undercut this edge. **See Figure 5-1, Detail A.**

STEP 3.
A small amount of gelcoat, the same color as the finish should be placed on a small can lid or a piece of scrap fiberglass, like the one removed from the window area. Use just enough to fill the damaged area. If the damage has penetrated into the fiberglass, an equal amount of fibers (which can be made from glass mat shredded into small fibers) should be mixed with the gelcoat using a small putty knife. Add three drops of catalyst per teaspoon of gelcoat, using an eye dropper. Be sure to mix the catalyst thoroughly with the gelcoat for the maximum working time. The working time will be about 15 to 20 minutes before it begins to "gel" or harden. **See Figure 5-1, Detail B.**

STEP 4
Fill the scratch or gouge to above the damaged area about 1/16", working the material well into the damaged area with the putty knife. Be careful to puncture and eliminate any air bubbles that may occur. **See Figure 5-1, Detail C.**

NOTE: If fiberglass fibers have not been used in mixture, skip steps 5 through 7 and proceed to Step 8.

STEP 5
When the gelcoat feels rubbery to the touch (10-15) minutes) trim the gelcoat flush with the surface and then allow to cure completely (30-60 minutes). The gelcoat will shrink slightly as it cures making a slight depression. **See Figure 5,Detail D.**

STEP 6
Carefully roughen the bottom and edges of the depression, using an electric drill with a burr attachment as in Step 2. Sand to feather the depression into the surrounding area. Wipe the area clean with a white rag, wet with acetone.

STEP 7
Again mix a small amount of gelcoat with catalyst, only this time do not

add glass fiber. Using a putty knife, fill the depression with gelcoat 1/16" above the surrounding surface

STEP 8
Spread the gelcoat level with the surrounding area and allow to cure (30-60 minutes). **See Figure 5-1, Detail E.** Before the gelcoat has begun to cure it may be covered with cellophane or wax paper, if desired, to aid in spreading it evenly. Remove the cellophane or wax paper after the gelcoat has cured.

STEP 9
Wet sand the repaired area using a sanding block with 600 grit wet/dry sandpaper. Finish by buffing as you would for minor surface scratches. **See Figure 5-1, Detail F.**

PAINTING WITH GELCOAT

Painting with gelcoat when the surface color of a part has changed due to weathering or a large area has been repaired it may be necessary to spray the affected area with gelcoat.

Sand the area to be sprayed with 220 grit sandpaper. Clean the area with lacquer thinner and or acetone to remove any wax, oil or dust where possible, place masking tape on a sharp break contour adjacent to the area, such as a corner or a body line.

NOTE: Mask a large enough area so that you will not have to spray closer than 2 inches to the tape. If you spray up to the tape, a thick lap line that is difficult to remove will result. Mask with paper any areas that may possibly be exposed to over spray.

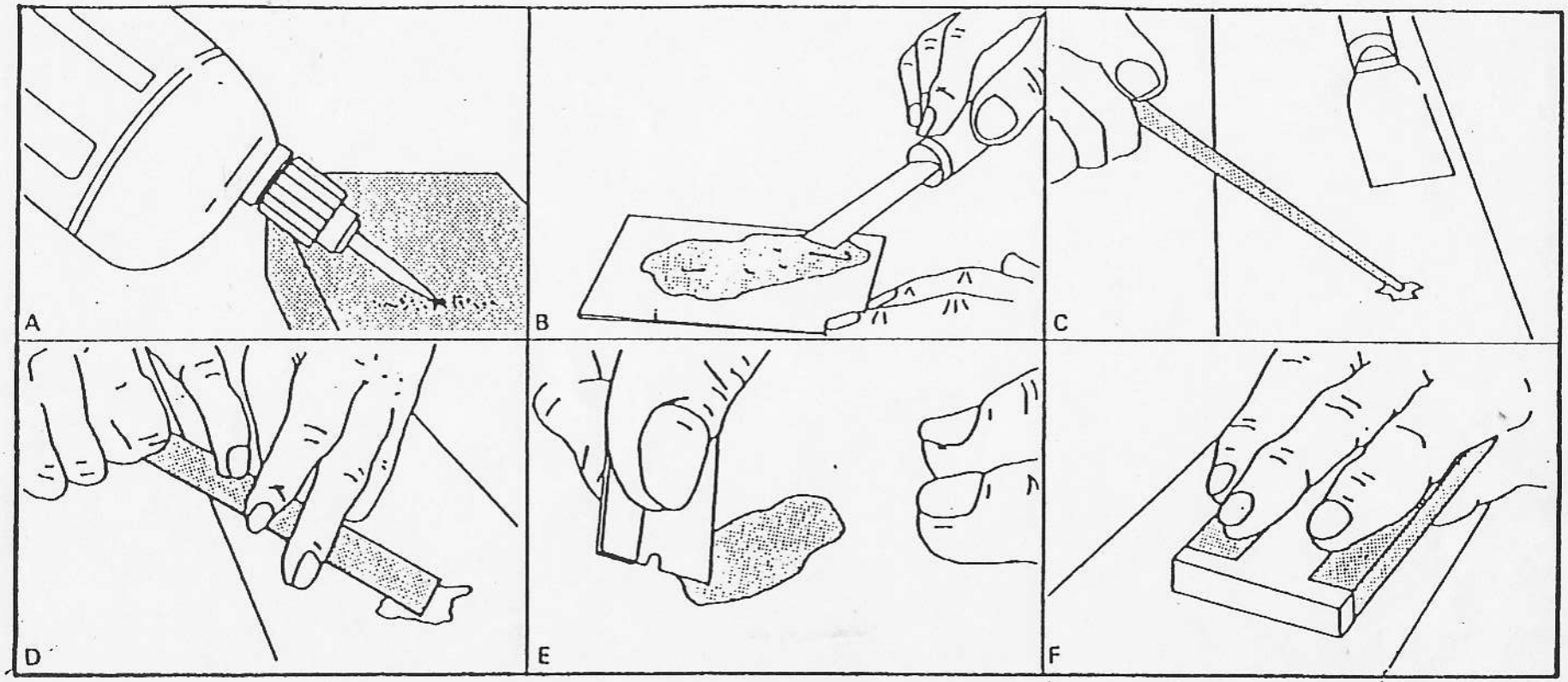


Figure 5-1

Thin the gelcoat approximately 25 percent with acetone to get a sprayable consistency. Do not thin more than 50 percent, otherwise the acetone will dull the finish.

Add catalyst to the gelcoat using the following method if you use 4 ounces of gelcoat mixed with 1 ounce of acetone. Add 1/2 ounce or 1/2 teaspoon of catalyst, 4 parts gelcoat, 1 part acetone and 1/2 part of catalyst. Mix thoroughly to prevent an uneven cure.

The gelcoat may be sprayed with a touch-up spray gun or a disposable aerosol paint sprayer. Spray the gelcoat uniformly to avoid having areas that are too thin or too thick and to produce sufficient buildup for final sanding and buffing.

After the gelcoat has cured, remove the paper and fine masking tape from the surrounding area. Wet sand with 400 grit sandpaper to remove any orange peel or lap lines that may have developed. Then wet sand with 600 grit sandpaper before buffing as you would for minor surface scratches.

HARDWARE

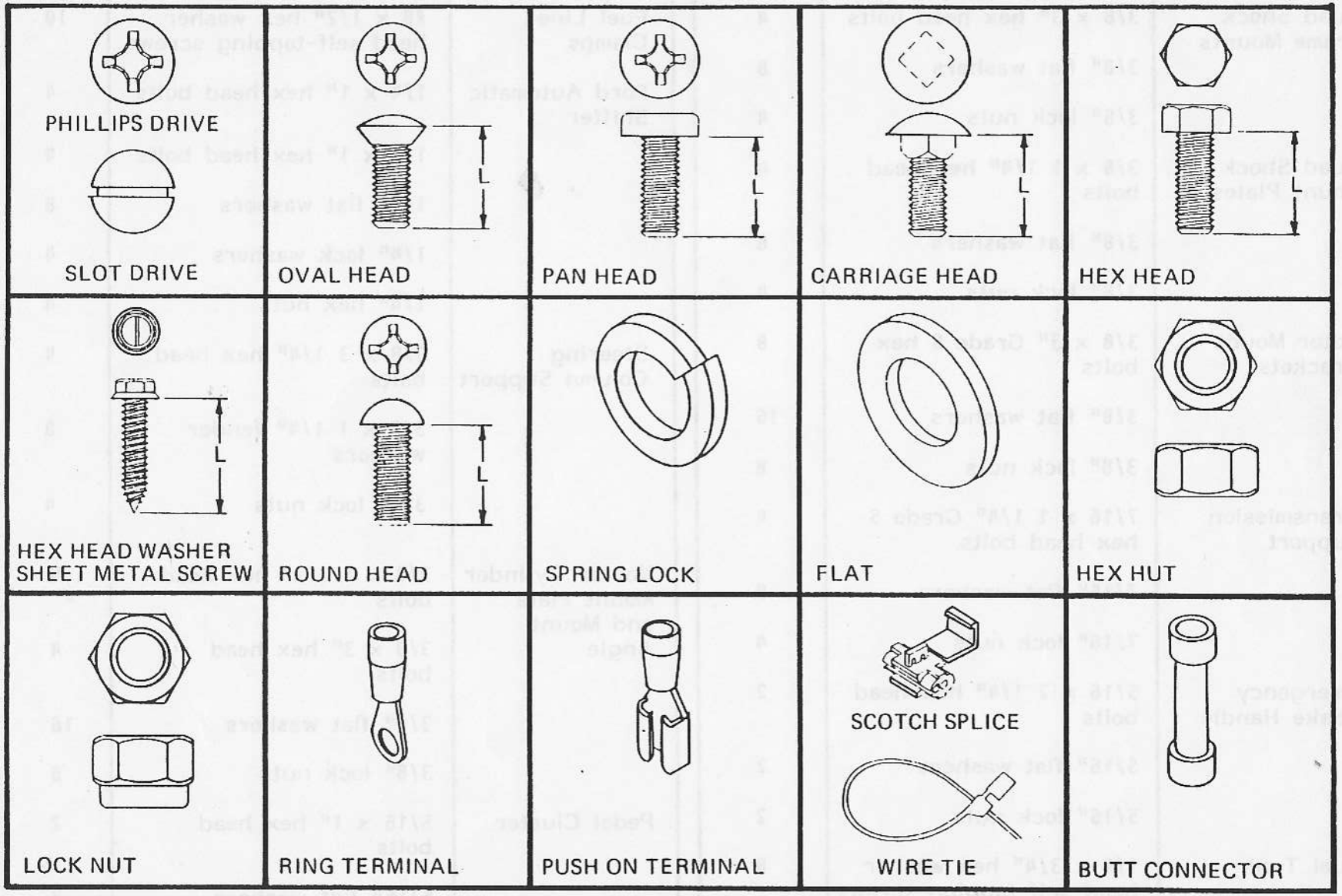


Figure 5-2

DESCRIPTION	DIMENSIONS & TYPE	NUMBER USED
Quad Shock Frame Mounts	3/8 x 3" hex head bolts	4
	3/8" flat washers	8
	3/8" lock nuts	4
Quad Shock Mount Plates	3/8 x 1 1/4" hex head bolts	4
	3/8" flat washers	8
	3/8" lock nuts	4
Motor Mount Brackets	3/8 x 3" Grade 5 hex bolts	8
	3/8" flat washers	16
	3/8" lock nuts	8
Transmission Support	7/16 x 1 1/4" Grade 5 hex head bolts	4
	7/16" flat washers	8
	7/16" lock nuts	4
Emergency Brake Handle	5/16 x 2 1/4" hex head bolts	2
	5/16" flat washers	2
	5/16" lock nuts	2
Fuel Tank	1/4 x 3/4" hex washer head self-tapping screws	8
	1/4" flat washer	8

DESCRIPTION	DIMENSIONS & TYPE	NUMBER USED
Fuel Line Clamps	#8 x 1/2" hex washer head self-tapping screws	10
Ford Automatic Shifter	1/4 x 1" hex head bolts	4
	1/4 x 1" hex head bolts	4
	1/4" flat washers	8
	1/4" lock washers	4
	1/4" hex nuts	4
Steering Column Support	3/8 x 3 1/4" hex head bolts	4
	3/8 x 1 1/4" fender washers	8
	3/8" lock nuts	4
Master Cylinder Mount Plate and Mount Angle	3/8 x 1 1/2" hex head bolts	4
	3/8 x 3" hex head bolts	4
	3/8" flat washers	16
	3/8" lock nuts	8
Pedal Cluster	5/16 x 1" hex head bolts	2
	5/16" flat washers	4
	5/16" locknuts	2

OPTIONAL NUT AND BOLT LIST

DESCRIPTION	DIMENSIONS & TYPE	NUMBER USED
Clutch Cable	1/4 x 2" hex head bolts	2
	1/4" flat washers	4
	1/4" lock nuts	2
Power Master Cylinder	3/8" flat washer	4
	3/8" lock nuts	4
Manual Master Cylinder	3/8 x 1" hex head bolts	4
	3/8" flat washer	4
	3/8 x 2" hex head bolts	2
	3/8" flat washers	4
	3/8" lock nuts	2
Brake Proportioning Valve	5/16" flat washer	2
	5/16" lock nuts	2
Brake Hose Brackets	1/4 x 5/8" hex washer head self-tapping screws	3
Brake Line Clamps	#8 x 1/2" hex washer head self-tapping screws	12
	#8 x 1/2 phillips head machine screws	3
	#8 flat washers	6
	#8 lock washers	3
	#8 hex nuts	3

DESCRIPTION	DIMENSIONS & TYPE	NUMBER USED
Fire Wall Bearing	5/16 x 1" carriage bolts	3
	5/16" flat washers	3
	5/16" lock washers	3
	5/16" hex nuts	3
Steering Column	3/8 x 1 1/2" hex head bolts	2
	3/8" flat washers	4
	3/8" lock washers	2
	3/8" hex nuts	2
Steering Column Bracket (Camaro/ Firebird)	3/8 x 1 1/2" hex head bolts	4
	3/8" flat washers	8
	3/8" lock nuts	4
Gas Pedal Pad	1/4 x 1" flat head allen machine screws	2
	1/4" flat washers	2
	1/4" lock nuts	2
Accelerator Pedal Arm	5/16 x 1 1/2" hex head bolt	1
	5/16" flat washers	2
	5/16" lock nut	1

OPTIONAL NUT AND BOLT LIST

DESCRIPTION	DIMENSIONS & TYPE	NUMBER USED
Throttle Cable Sleeve	5/16 x 3/8" allen head set screws	2
Accelerator Mount Plate	1/4 x 1 1/2" hex head bolts	3
	1/4" flat washer	6
	1/4" lock nuts	3
Radiator	1/4 x 1 1/2" hex head bolts	4
	1/4 x 1" fender washers	4
	1/4" flat washer	4
	1/4" lock nuts	4
Wiring Clamps	#8 x 1/2" hex washer head self-tapping screws	6
	#8-32 x 3/4" phillips machine screws	6
	#8 flat washers	12
	#8 lock washers	6
	#8-32 hex nuts	6
Starter Solenoid	1/4 x 1" hex head bolts	2
	1/4" flat washers	4
	1/4" lock washers	2
	1/4" hex nuts	2

DESCRIPTION	DIMENSIONS & TYPE	NUMBER USED
Ballast Resistor	1/4 x 1 1/2" hex head bolt	1
	1/4" flat washers	2
	1/4" lock washer	1
	1/4" hex nut	1
Voltage Regulator	1/4 x 1" hex head bolts	2
	1/4" flat washers	4
	1/4" lock washers	2
	1/4" hex nuts	2
Ignition Module	1/4 x 1" hex head bolts	3
	1/4" flat washers	3
Dash Board	1/4 x 1 1/2" hex head bolts	2
	1/4 x 1" hex head bolts	2
	1/4" flat washers	8
	1/4" lock washers	4
	1/4" hex nuts	4
Dash Board Brackets	1/4 x 5/8" hex washer head self-tapping screws	2
	#10 x 3/4 phillips pan head self-tapping screw	2

OPTIONAL NUT AND BOLT LIST

DESCRIPTION	DIMENSIONS & TYPE	NUMBER USED
	#10 plastic cap retainers	2
	#10 plastic finishing caps	2
Fuse Panel	#10-24 x 1" phillips machine screws	2
	#10 flat washer	4
	#10 lock washer	2
	#10-24 hex nuts	2
Relays	#10-24 x 1" phillips machine screw	5
	#10 flat washers	10
	#10 lock washers	5
	#10-24 hex nuts	5
Hood Support Bar	3/8 x 3" hex head bolts	4
	3/8" flat washers	8
	3/8" lock nuts	4
Front Sway Bar	3/8 x 3" hex head bolts	4
	3/8" flat washers	8
	3/8" lock nuts	4
Roll Bar Mount	3/8 x 3" hex head bolts	2
	3/8" flat washers	4
	3/8" lock nuts	2

DESCRIPTION	DIMENSIONS & TYPE	NUMBER USED
Rear Cockpit Liner	3/16 x 1 1/2" Pop rivets	10
Trunk Liner	3/16 x 1/2" pop rivets	8
Wheel Wells	3/16 x 1/2" pop rivets	22
Front Bumper Brackets	7/16 x 1 1/2" hex head bolts	4
	7/16" flat washers	8
	7/16" lock nuts	4
Front Bumper Tubes	7/16 x 8" hex head bolts	4
	1/2" flat washers	4
Front Grille Guard	1/4 x 5/8" hex washer head self-tapping screws	4
Rear Bumper Brackets	1/2 x 5 1/2" hex head bolts	2
	1/2" flat washers	4
	1/2" lock nuts	2
Rear Bumper Tubes	7/16 x 6 1/2" hex head bolts	4
	1/2" flat washers	10

OPTIONAL NUT AND BOLT LIST

DESCRIPTION	DIMENSIONS & TYPE	NUMBER USED
Rear Bumper Covers	3/16 x 1/2" pop rivets	12
Windshield	3/8 x 1 1/2" hex head bolts	4
	3/8" flat washer	8
	3/8" lock nuts	4
Surround Plates	#8 x 5/8" round head phillips self-tapping screws	2
Wiper Motor Clamp	1/4 x 1 1/2" hex head bolts	2
	1/4" flat washers	2
	1/4" lock nuts	2
Hood Hinges	3/8 x 1 3/4" hex head bolts	2
	3/8" flat washers	4
	3/8" lock nuts	2
Hood Hinge Bracket	1/4 x 1 1/2" hex head bolts	2
	1/4" flat washers	4
	1/4" lock nuts	2
Hinge Arms	1/4 x 1" hex head bolts	4
	1/4" flat washers	4

DESCRIPTION	DIMENSIONS & TYPE	NUMBER USED
	1/4" lock washers	4
Hood Striker	1/4 x 1" hex head bolts	2
	1/4 x 1" fender washers	2
	1/4" lock washer	2
Hood Latch	3/16 x 1/2" pop rivets	4
Hood Release Cable Bracket	1/4 x 5/8" hex washer head self-tapping screw	1
Hood Latch Box	1/4 x 1" hex head bolts	5
	1/4" flat washers	10
	1/4" lock nuts	5
Hood Bumpers	5/16 x 1 1/4" fender washers	4
	5/16" hex nuts	4
Trunk Latch	1/4 x 1" hex head bolts	3
	1/4" flat washers	3
Rear Deck Lid Hinge Bracket	1/4 x 1" hex head bolts	8
	1/4 x 1 1/4" fender washers	8
	1/4" flat washers	8
	1/4" lock nuts	8

OPTIONAL NUT AND BOLT LIST

DESCRIPTION	DIMENSIONS & TYPE	NUMBER USED
Rear Deck Lid Hinges	3/8 x 1 1/4" hex head bolt	2
	3/8" flat washer	4
	3/8" lock nuts	2
Rear Deck Lid Hinge Arms	1/4 x 1" hex head bolts	4
	1/4" flat washers	4
Rear Deck Lid Striker	1/2" lock nut	1
Fuel Filler Cap	#10-24 x 1 1/4" oval head phillips stainless steel machine screws	4
	#10 flat washers	4
	#10 lock washers	4
	#10-24 hex nuts	4
Door Latch	1/4 x 1" hex head bolts	6
	1/4" flat washers	6
Door Release	#10 x 1" pan head phillips self-tapping screws	6
Door Hinge Pin	3/32" x 1" cotter pin	2
Door Hinge	1/4 x 2" hex head bolts	4
	1/4" flat washers	8
	1/4" lock nuts	4
Door Hinge Arms	1/4 x 1" hex head bolts	8
	1/4" flat washer	8
Door Striker Post	3/8 x 3" hex head bolts	8
	3/8" flat washers	8
	3/8" lock nuts	4
Door Striker Bolt	3/8 x 1 1/2" Fender washers	2
	3/8" lock nuts	2
Front Wiring Clamps	#10 x 5/8" hex washer head self-tapping screws	4
	#10-24 x 1" phillips machine screws	2
	#10 flat washers	4
	#10 lock washers	2
	#10-24 hex nuts	2
Headlight	#8 x 5/8" hex washer head head self-tapping screws	16
Front Turn Signals	#8-32 x 3/4" phillips machine screw	4
	#8 flat washer	8

OPTIONAL NUT AND BOLT LIST

DESCRIPTION	DIMENSIONS & TYPE	NUMBER USED
	#8 lock washers	4
	#8-32 hex nuts	4
Tail Lights	#8-32 x 1" phillips machine screws	8
	#8 flat washers	16
	#8 lock washer	8
	#8-32 hex nuts	8
License Light	#8-32 x 1" phillips machine screws	2
	#8 flat washers	4
	#8 lock washer	2
	#8-32 hex nuts	2
License Bracket	1/4 x 1" hex head bolts	2
	1/4" flat washers	4
	14" lock nuts	2
Drive Shaft Tunnel Cover	3/16 x 1/2" pop rivets	15
Kick Panels	#8 x 3/4" phillips self-tapping screws	16
Side Vents	38-32 x 1 1/4" phillips machine screws	4

DESCRIPTION	DIMENSIONS & TYPE	NUMBER USED
	#8 flat washers	8
	#8 lock washers	4
	#8-32 hex nuts	4
Roll Bar	3/8 x 2" hex head bolts	2
	3/8" lock nuts	2
Inside Mirror	#8 x 3/4" phillips oval head self-tapping screws	2
Seat Tracks	5/16 x 1 1/2" carriage bolts	8
	5/16 x 1 1/4" fender washers	16
	5/16" lock nuts	8
Seat Bases	#8 x 3/4 phillips flat head wood screws	16
Seat Cushion Bases	5/16' x 2" hex head all thread bolt	4
	5 1/6 x 1 1/4" fender washer	12
	5/16" lock nuts	4
	5/16" lock washers	4
	5/16" hex nuts	4
Door Panels	#8 x 5/8" phillips pan head self-tapping screws	10

OPTIONAL NUT AND BOLT LIST

DESCRIPTION	DIMENSIONS & TYPE	NUMBER USED
	#8 plastic cap retainers	10
	#8 plastic finishing caps	10
Seats	5/16 x 3" carriage bolts	4
	5/16 x 2" carriage bolts	4
	5/16 x 1 1/4" fender washers	16
	5/16" lock nuts	8
Hood Stay	3/16 x 1/2" pop rivets	2
Hood Stay Mount	1/4 x1" hex head bolts	5
	1/4" flat washers	10
	1/4" lock nuts	5
Rear Deck Lid Stay	3/16 x 1/2" pop rivets	2
Rear Deck Lid Stay Mount	1/4 x 1" hex head bolts	4
	1/4" flat washers	8
	1/4" lock nuts	4
Convertible Top Mounts	1/4 x 1" hex head bolts	4
	1/4" flat washers	4

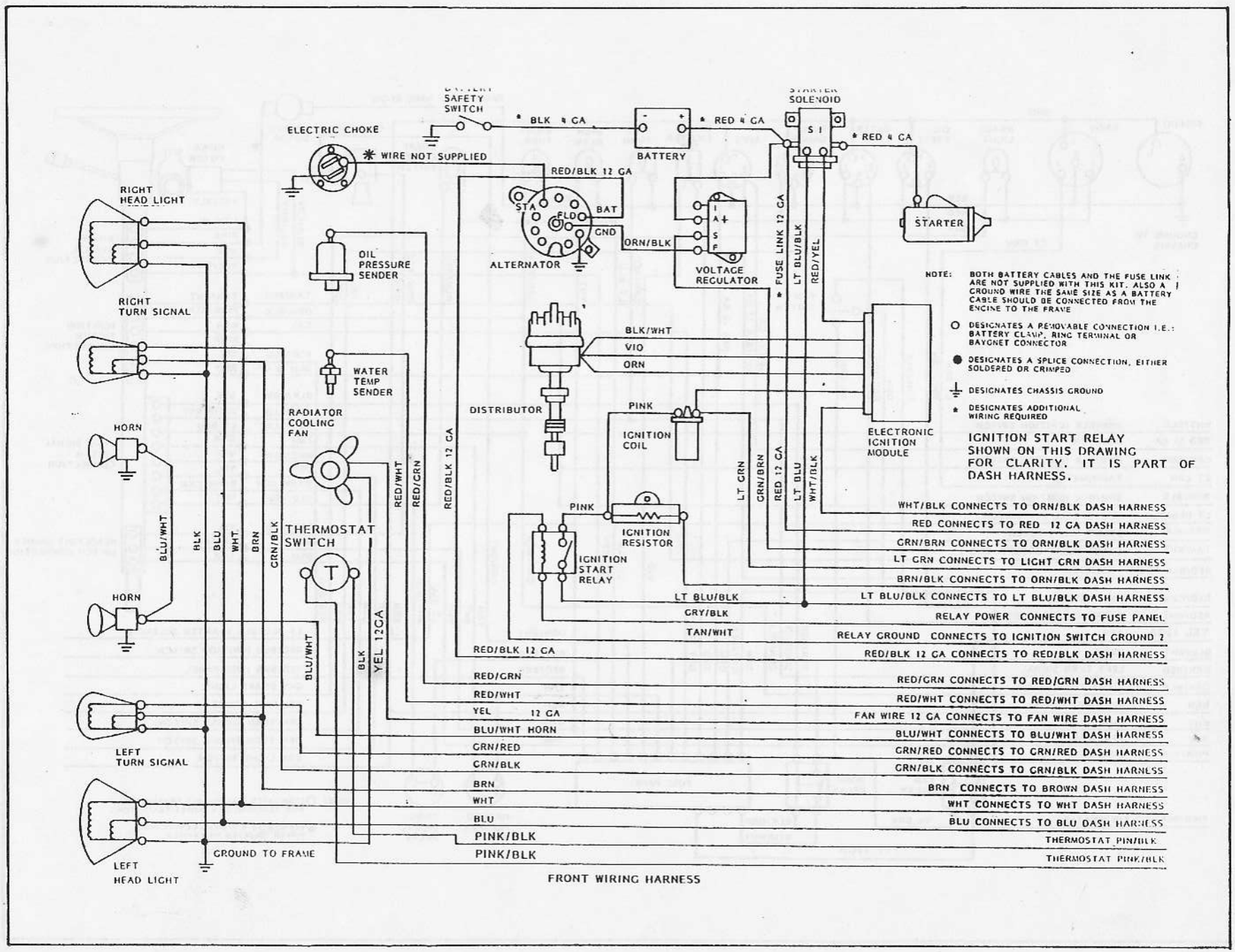
DESCRIPTION	DIMENSIONS & TYPE	NUMBER USED
Rear Bow	#10-24 x 3/4" phillips pan head machine screws	2
	#10 flat washers	4
	#10-24 lock nuts	2
Convertible Top Catch	#6-32 x 5/16" phillips pan head machine screws	4
Convertible Top Latch	#6-32 x 5/8" phillips pan head machine screws	4
	#6 lock washers	4
	#6-32 hex nuts	4
Side Windows	#10-24 x 1 1/2" phillips oval head machine screws	6
	#10 flat washers	6
	#10 lock washers	6
	#10-24 acorn nuts	6
Side Window Straps	#8-32 x 1/2" round head slotted machine screw	2
	#8 plastic cap retainers	2
	#8 Plastic finishing caps	2
	#8-32 lock nuts	2
	#8 x 1" oval head phillips self-tapping screws	4

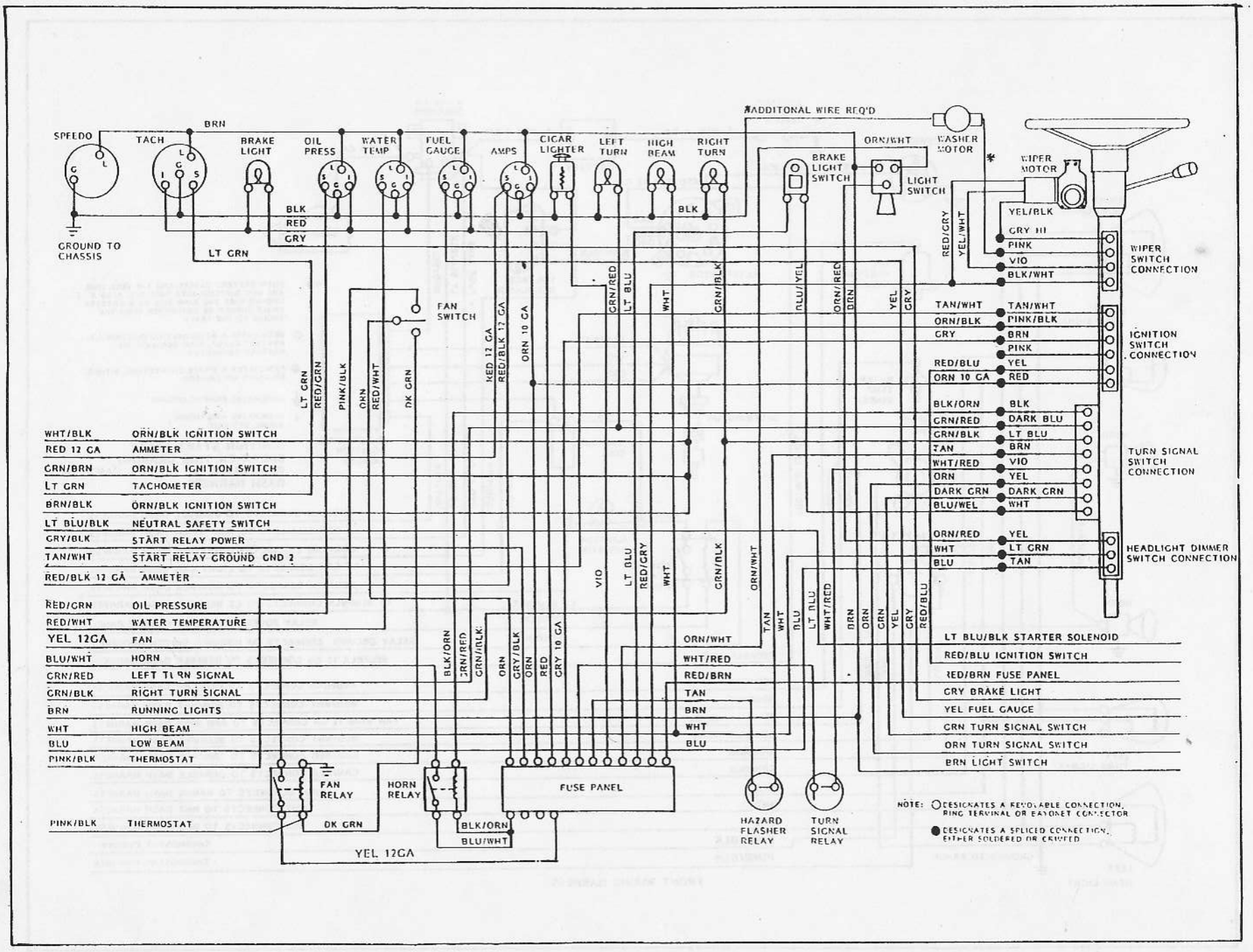
OPTIONAL NUT AND BOLT LIST

DESCRIPTION	DIMENSIONS & TYPE	NUMBER USED
Side Pipes	1/4 x 1" hex head bolts	2
	1/4" flat washers	4
	1/4" lock washers	2
	1/4" hex nuts	2
Mount Angles	1/4 x 5/8" hex washer head self-tapping screws	4

DESCRIPTION	DIMENSIONS & TYPE	NUMBER USED

OPTIONAL NUT AND BOLT LIST


SAFETY SWITCH
ELECTRIC CHOKE
* WIRE NOT SUPPLIED
* BLK 4 GA
BATTERY
* RED 4 GA
STARTER SOLENOID
S I
* RED 4 GA
STARTER
RED/BLK 12 GA
STA
FLD
BAT
GND
ALTERNATOR
ORN/BLK
I
A+
S
F
VOLTAGE REGULATOR
* FUSE LINK 12 GA
LT BLU/BLK
RED/YEL
RIGHT HEAD LIGHT
RIGHT TURN SIGNAL
OIL PRESSURE SENDER
WATER TEMP SENDER
RADIATOR COOLING FAN
HORN
HORN
THERMOSTAT SWITCH
T
BLU/WHT
BLK
BLU
WHT
BRN
GRN/BLK
RED/WHT
RED/GRN
RED/BLK 12 GA
YEL 12GA
BLU/WHT
LEFT TURN SIGNAL
LEFT HEAD LIGHT
GROUND TO FRAME
DISTRIBUTOR
BLK/WHT
VIO
ORN
PINK
IGNITION COIL
ELECTRONIC IGNITION MODULE
PINK
IGNITION RESISTOR
IGNITION START RELAY
LT GRN
GRN/BRN
RED 12 GA
LT BLU
WHT/BLK
LT BLU/BLK
GRY/BLK
TAN/WHT
NOTE: BOTH BATTERY CABLES AND THE FUSE LINK ARE NOT SUPPLIED WITH THIS KIT. ALSO A GROUND WIRE THE SAME SIZE AS A BATTERY CABLE SHOULD BE CONNECTED FROM THE ENGINE TO THE FRAME
O DESIGNATES A REMOVABLE CONNECTION I.E.: BATTERY CLAMP, RING TERMINAL OR BAYONET CONNECTOR
DESIGNATES A SPLICE CONNECTION, EITHER SOLDERED OR CRIMPED
DESIGNATES CHASSIS GROUND
* DESIGNATES ADDITIONAL WIRING REQUIRED
IGNITION START RELAY SHOWN ON THIS DRAWING FOR CLARITY. IT IS PART OF DASH HARNESS.
WHT/BLK CONNECTS TO ORN/BLK DASH HARNESS
RED CONNECTS TO RED 12 GA DASH HARNESS
GRN/BRN CONNECTS TO ORN/BLK DASH HARNESS
LT GRN CONNECTS TO LIGHT GRN DASH HARNESS
BRN/BLK CONNECTS TO ORN/BLK DASH HARNESS
LT BLU/BLK CONNECTS TO LT BLU/BLK DASH HARNESS
RELAY POWER CONNECTS TO FUSE PANEL
RELAY GROUND CONNECTS TO IGNITION SWITCH GROUND 2
RED/BLK 12 GA CONNECTS TO RED/BLK DASH HARNESS
RED/GRN
RED/GRN CONNECTS TO RED/GRN DASH HARNESS
RED/WHT
RED/WHT CONNECTS TO RED/WHT DASH HARNESS
YEL 12 GA
FAN WIRE 12 GA CONNECTS TO FAN WIRE DASH HARNESS
BLU/WHT HORN
BLU/WHT CONNECTS TO BLU/WHT DASH HARNESS
GRN/RED
GRN/RED CONNECTS TO GRN/RED DASH HARNESS
GRN/BLK
GRN/BLK CONNECTS TO GRN/BLK DASH HARNESS
BRN
BRN CONNECTS TO BROWN DASH HARNESS
WHT
WHT CONNECTS TO WHT DASH HARNESS
BLU
BLU CONNECTS TO BLU DASH HARNESS
PINK/BLK
THERMOSTAT PINK/BLK
PINK/BLK
THERMOSTAT PINK/BLK
FRONT WIRING HARNESS


SPEEDO
TACH
BRN
BRAKE LIGHT
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WATER TEMP
FUEL GAUGE
AMPS
CIGAR LIGHTER
LEFT TURN
HIGH BEAM
RIGHT TURN
ADDITONAL WIRE REQ'D
ORN/WHT
WASHER MOTOR
BRAKE LIGHT SWITCH
LIGHT SWITCH
WIPER MOTOR
BLK
RED
GRY
BLK
GROUND TO CHASSIS
LT GRN
FAN SWITCH
YEL/BLK
GRY
PINK
VIO
BLK/WHT
WIPER SWITCH CONNECTION
TAN/WHT
ORN/BLK
GRY
RED/BLU
ORN 10 GA
TAN/WHT
PINK/BLK
BRN
PINK
YEL
RED
IGNITION SWITCH CONNECTION
BLK/ORN
GRN/RED
GRN/BLK
TAN
WHT/RED
ORN
DARK GRN
BLU/WEL
BLK
DARK BLU
LT BLU
BRN
VIO
YEL
DARK GRN
WHT
TURN SIGNAL SWITCH CONNECTION
ORN/RED
WHT
BLU
YEL
LT GRN
TAN
HEADLIGHT DIMMER SWITCH CONNECTION
WHT/BLK ORN/BLK IGNITION SWITCH
RED 12 GA AMMETER
GRN/BRN ORN/BLK IGNITION SWITCH
LT GRN TACHOMETER
BRN/BLK ORN/BLK IGNITION SWITCH
LT BLU/BLK NEUTRAL SAFETY SWITCH
GRY/BLK START RELAY POWER
TAN/WHT START RELAY GROUND GND 2
RED/BLK 12 GA AMMETER
RED/GRN OIL PRESSURE
RED/WHT WATER TEMPERATURE
YEL 12GA FAN
BLU/WHT HORN
GRN/RED LEFT TURN SIGNAL
GRN/BLK RIGHT TURN SIGNAL
BRN RUNNING LIGHTS
WHT HIGH BEAM
BLU LOW BEAM
PINK/BLK THERMOSTAT
PINK/BLK THERMOSTAT
FAN RELAY
HORN RELAY
FUSE PANEL
DK GRN
BLK/ORN
BLU/WHT
YEL 12GA
HAZARD FLASHER RELAY
TURN SIGNAL RELAY
ORN/WHT
WHT/RED
RED/BRN
TAN
BRN
WHT
BLU
LT BLU/BLK STARTER SOLENOID
RED/BLU IGNITION SWITCH
RED/BRN FUSE PANEL
GRY BRAKE LIGHT
YEL FUEL GAUGE
GRN TURN SIGNAL SWITCH
ORN TURN SIGNAL SWITCH
BRN LIGHT SWITCH
NOTE: ○ DESIGNATES A REMOVABLE CONNECTION, RING TERMINAL OR BAYONET CONNECTOR
● DESIGNATES A SPLICED CONNECTION, EITHER SOLDERED OR CRIMPED

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