

British Coach Works, Ltd.



BCW

Model 52

Assembly Manual



British Coach Works, Ltd.

Arnold, Pennsylvania 15068

Telephone: 412/339-3541

724

This assembly manual gives comprehensive and detailed information on the complete preparation and assembly of the BCW Model 52. Its binder is designed to be set upright as an easel for easy reading. The manual is divided into four major sections:

SECTION I *Introduction:* Description and recommendations on the VW type and model year to use. Where to purchase a VW. Important points to check when purchasing a VW.

SECTION II *VW Disassembly:* Description on how to remove the VW body and necessary components. Which VW parts should be saved. Listing of the recommended tools and materials to be used.

SECTION III *VW Chassis Preparation:* Reconditioning techniques. Simplified chassis modifications. Listing of the recommended tools and materials to be used.

SECTION IV *BCW Model 52 Assembly:* Easy to follow steps which show clear assembly details from the beginning to the finish of your project. Listing of the recommended tools and materials to be used.

By carefully following the assembly manual, you will be able to produce a professional, custom-built automobile. The BCW designers have done everything to insure absolute authenticity, while the BCW engineers have eliminated the "headaches" by having the factory pre-trim and pre-drill the body panels for a precise fitting assembly. It is the quality and attention to detail that will extend the classic beauty of your "investment" for many years.

Before proceeding with any operation, carefully read each section and become familiar with the BCW assembly components. Note that each numbered step is referenced by an arrow in the photo indicating the specific detail. All necessary fasteners are listed at the bottom of each page for easy reference and identification.

A VW service manual is highly recommended to be used as a supplement with this manual for identification, repair, and maintenance of your chassis and running gear. It can be purchased at your local VW dealer or bookstore.

Remember — building your car should be an enjoyable and rewarding experience. Avoid frustration by using a good set of recommended tools and allowing sufficient time to properly secure and fit the components to your VW chassis. The end result will be a professional looking, roadworthy classic that you can truly be proud of owning and have a great time driving.

The successful completion of your BCW is important to us. It's our reputation.

Craftsmen of Quality Coachwork

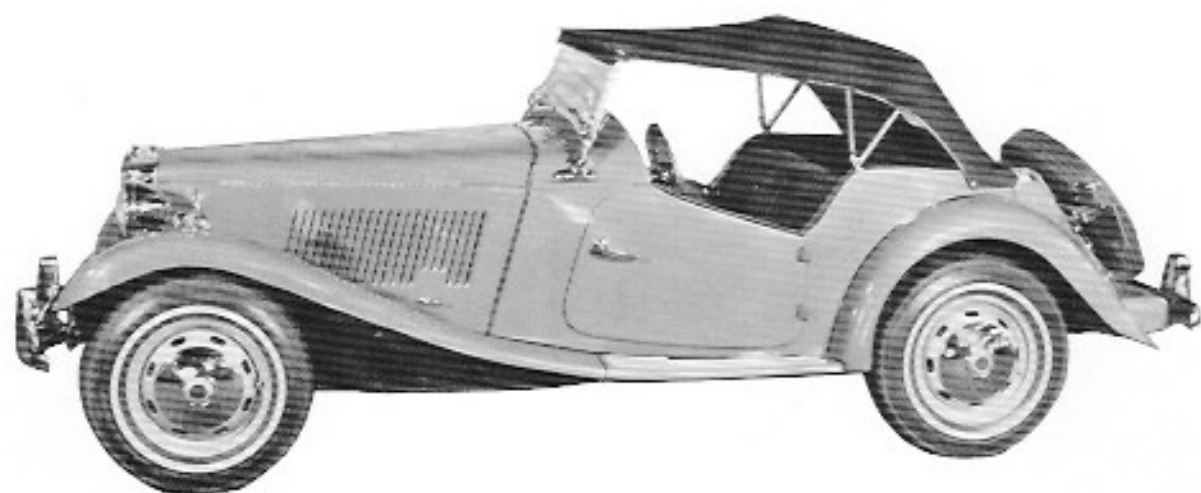
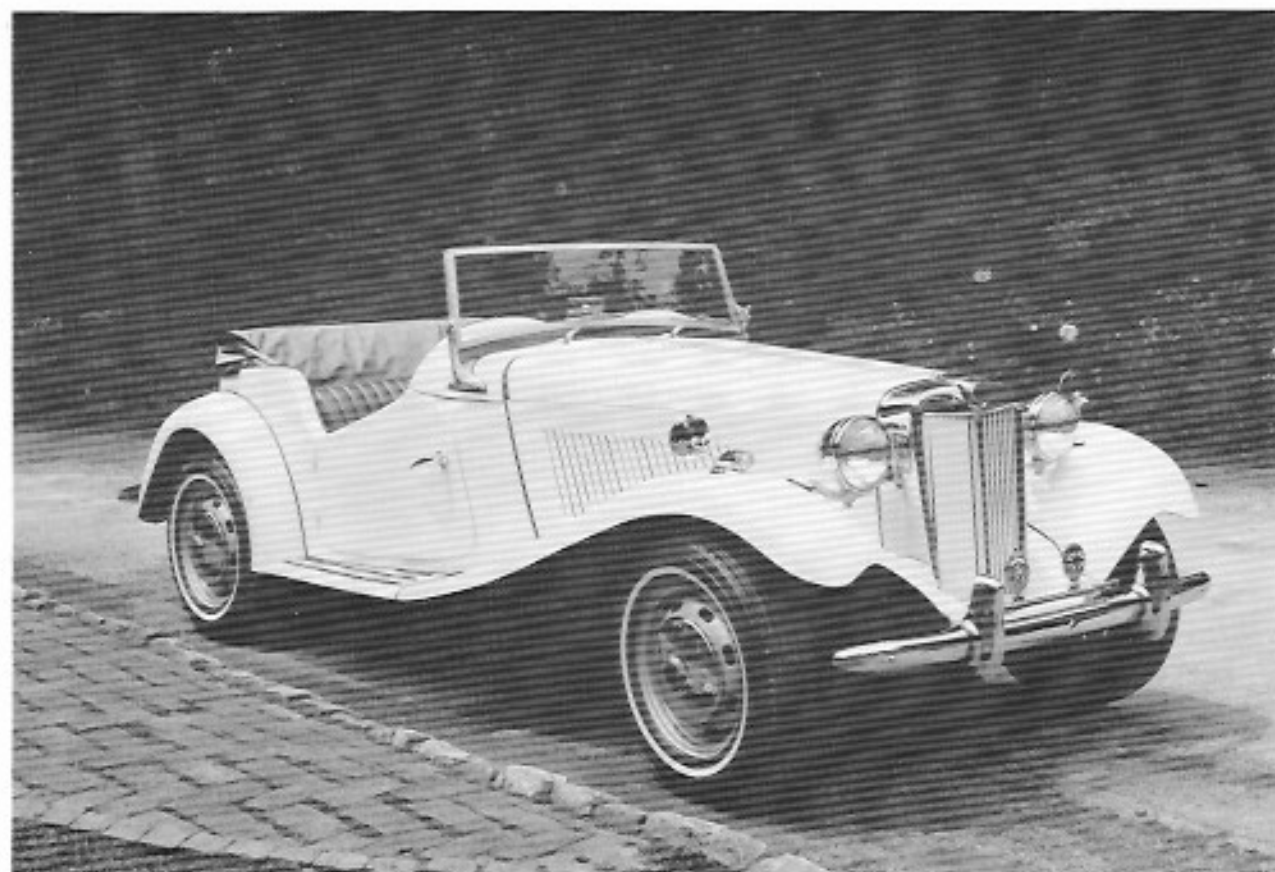


TABLE OF CONTENTS

What Kind of VW	I-II
The Complete Guide to VW Beetle Engines, Chassis & Suspensions	III

DISASSEMBLY INSTRUCTIONS

VW Disassembly	1
Tools Required for Disassembly	1
Seat and Battery Removal	2
Voltage Regulator and Body Bolts Removal	3
Speedometer Cable and Horn Removal	4
Fuel Tank Removal	5-6
Front Body Bolts and Filler Neck Removal	6
Brake Fluid Reservoir Removal	7
Steering Column Removal	8
Windshield Wiper Assembly Removal	9
Hood Latch Removal	10
Headlight Dimmer Relay and Accessory Switches Removal	11
Engine Compartment Removal	12
Body Bolts and Body Removal	13

CHASSIS PREPARATION

Chassis Preparation	15
Tools Required for Chassis Prep	15
Front Suspension Removal	17
Steering Box	18
Front Suspension Softening	19
Shifter Rod Removal	20-21
Shift Rod Modification	22
Reinstall Modified Front Suspension	23
Gear Shift Relocation	24
Modified Shift Rod Installation	25
Gear Shift Lever Installation	26
Cable Removal and Pedal Assembly	27
Pedal Assembly Relocation	28
Pedal Assembly — Cable Installation	29
Brake Extender — Pedal Stop Plate	30
Chassis Details / Wheels and Tires	31
Turn Indicator Lever	32
Fuel Tank Modification	33-34

ASSEMBLY INSTRUCTIONS

Parts List	
Exploded View of Car	
Assembly	35
Supplies Required for Assembly	35
Tools Required for Assembly	35
Paint	37-38
Rear Sub-Frame	39

Shock Absorbers and Bumper Brackets	40
Belly Pan Gasket	41
Body Side Panels	42
Rear Body Section	43
Cowl	44
Front Body Section	45
Master Cylinder Reservoir	46
Steering Column Angle and Dash Stabilizer Bar	47
Hood Release Handle	48
Steering Column	49-51
Steering Column Mount	52
Radiator Shell Assembly	53
Radiator Assembly Attachment	54
Cowl Rubber	55
Hood Side Panels	56
Check Points	57
Hood Handles	58
Hood	59
Upper Hood Latch Pin	60
Hood Release	61
Hood Molding Strip	62
Rear Fender	63
Rear Fender Welt	64
Front Fender & Running Board Assembly	65-67
Running Board Support Bracket	68
Running Board Tread	69
Front Splash Apron	70
Grill Shell Rubber	71
Headlight Tie Bar	72
Fuse Box	73
Wiring Loom	74
Battery Cables	75
Headlight Cradle Assembly	76
Horn Installation and Hood Restraint	77
Preliminary Firewall Installation	78
Firewall Sound Deadening Package	79
Gas Tank Installation	80
Firewall Installation	81
Windshield Wiper Mechanism	82
Heater Duct Installation	83
Inner Panel Sound Deadening Package	84
Inner Panels	85
Inner Panel — Center Section Sound Deadening Package	86
Inner Panel Center Section	87
Door Hinges	88
Door Installation	89
Door Handle Installation and Door Latch Installation	90
Door Striker and Door Weatherstripping	91
Door Sound Deadening Package and Door Restraint	92

Inner Door Sill	93
Air Filter Mounting	94
Simulated TD Gas Tank Details	95
Simulated Gas Filler	96
Simulated Gas Tank Ends	97
Spare Tire Carrier Assembly	98-99
Spare Tire Carrier Mounting	99
Rear Splash Apron	100
Attach Engine Cover	101
Bumper Assembly	102
Front Bumper Attachment and Rear Bumper Attachment	103
Spare Tire and Hubcap Emblem	104
TD Style License Plate Lamp and TD Front Parking Lamps	105
TD Tail Lamp Installation	106
TD Style Rear View Mirror and TD Style Fender Mirrors	107
Wood Dash	108
Instrumentation Installation	109
Dashboard Instrument Cluster Panel	110
Grab Handle Stabilizer Bar	111
TD Reproduction Windshield Assembly	112
Windshield Installation	113
Upholstery Lace Wind	114
Carpet Installation	115-116
Door Upholstery and Chrome Sport Shifter Installation	117
Seat Back Installation	118
Seat Box Installation	119
Seat Bottoms	120-121
Convertible Top Installation	122-123
Steering Wheel Installation	123
Luggage Compartment Floor	124
Finishing Details	125
Coachwork Maintenance	125-126
Shifter Relocation Template	Appendix A
Pedal Relocation Template	Appendix B
Hubcap Emblem Template	Appendix C

WHAT KIND OF VW ...

1969 OR NEWER VW BEETLE -- DO NOT USE SUPER BEETLES, SQUARE BACKS, BUSES, OR KARMANN GHIAS.

To assist you in your search for a good VW chassis, we offer the following suggestions:

In order to achieve the utmost satisfaction and enjoyment in owning and driving your completed BCW Model 52 we strongly urge you to diligently search for a good, late model VW chassis. A few extra dollars spent in buying a suitable chassis will repay dividends for many years to come.

The following sources may be useful when hunting for your VW chassis:

- 1 — Local newspaper classified ads.
- 2 — Neighborhood "give away" ad sheets.
- 3 — Automobile insurance agents or adjusters.
- 4 — VW repair garages. (Some shops also sell a completely³ reconditioned and fully guaranteed chassis.)
- 5 — Spread the word among your friends and fellow workers about your project and they will probably be glad to help you in your search.
- 6 — Bulletin boards in colleges, supermarkets, barbershops, gas stations and company employees' bulletin boards.
- 7 — Salvage yards or junk yards.
- 8 — Your area VW dealer may have a "traded in" VW Bug Sedan which has a damaged or rusted body.

If you do not have confidence in your ability to select a good chassis, it may be wise to consult your mechanic or possibly have a mechanically minded friend assist you in your search.

Complete satisfaction and pride of ownership of a completed BCW Model 52 can only come by being sure that you purchase a chassis that is mechanically sound, safe and trouble free.

The following suggestions will be most helpful when inspecting a chassis for major defects or damage:

- 1 — Inspect the floor pan for severe rust or damage caused by collision or battery acid.
- 2 — Check the distance between wheel centers on both sides to make sure that they are the same.
- 3 — Inspect the front end for bent parts caused by collision.
- 4 — Check for misalignment, rusted front torsion bar tubes, worn ball joints, worn wheel bearings and condition of steering damper, steering box and shocks.
- 5 — Check for excessive play in steering.
- 6 — Check for excessive brake pedal softness, leaky wheel cylinders and master cylinder.
- 7 — The transaxle lubricant should be checked for metal chips in the oil. Also check for oil leaks. Check for smooth, quiet and positive shifting.
- 8 — Check the engine by using the usual troubleshooting methods such as an oil pressure check, compression test and looking for oil leaks and exhaust smoke.
- 9 — Check for lubrication stickers on door post for past maintenance record.

Avoid purchasing a car that was involved in a head-on or rear-end collision. Severe damage may have been done to the chassis, front end, rear suspension or engine.

We have found that it is usually advisable to pay a little more for a good, low mileage chassis which has a damaged or rusted body, hood, fenders, doors, bald tires, etc., than to buy a high mileage car which may be worn out.

We recommend that you purchase a running car instead of buying a floor pan and other components from a junk yard with which to build your own chassis. When you buy a running car, you have some assurance that the mechanical parts are working and even though they may need some repairs, they probably will not require replacement.

A car that was in a "roll-over" accident may turn out to be your best buy, because even though the hood, fenders, body and deck lid look like a "lost cause" the parts that you need, such as the engine, transmission, transaxle, floor pan and front end, will usually survive a "roll-over" unscathed.

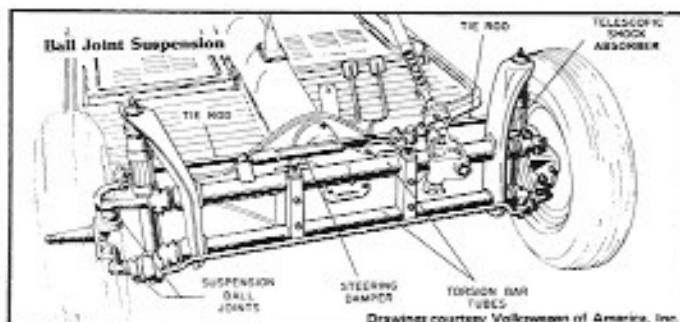
IMPORTANT:

Be sure that you get a title or bill of sale from the seller. This will be required when you apply for a license for your BCW Model 52. Also ask the seller for his VW owner's manual.

The Complete Guide to ... VW BEETLE ENGINES, CHASSIS & SUSPENSIONS

©Auto Logic Publications, Inc., The Complete Guide to Kit Cars, P.O. Box 2073, Wilmington, DE 19899

Year	Chassis #	Engine Series	Displacement	Horsepower	Voltage	Front Suspension	Rear Suspension	Special Features
1961-1965	3-792-597 to 6-502-399 and 115-000-001 to 115-074-200	Series D	1200cc	40	6 volt	Link and King pin	Swing Axle	All gears synchromeshed
1966	116-000-001 to 116-021-228	Series F	1300cc	50	6 volt	Ball Joint	Swing Axle	Dimmer switch mounted on steering column
1967	117-000-001 to 117-044-092	Series H	1500cc	53	12 volt	Ball Joint	Swing Axle	Dual brake system introduced with front and rear independent brakes. Two speed wiper system.
1968	116-000-000 to 116-1-016	Series H	1500cc	53	12 volt	Ball Joint	Swing Axle	Collapsible safety steering column. Automatic Four lug wheels 3-point seat belt-Emission control.
1969	119-000-001 to 119-1-093-704	Series B	1500cc	57	12 volt	Ball Joint	IRS double jointed axle	Introduced combination steering wheel ignition lock.
1970	110-2000-001 to 110-3096945	Series B	1500cc	57	12 volt	Ball Joint	IRS double jointed axle	
1971	111-2000-001 to 112-3200-000	Series AE	dual port 1600cc	63	12 volt	Ball Joint	IRS double jointed axle	Increased horsepower
1972	112-2000-001 to 112-3200-000	Series AH (Cal.) Series AE	dual port 1600cc	63	12 volt	Ball Joint	IRS double jointed axle	Wiper switch on steering column, modified choke, lower compression ratio. Pistons have recessed crowns. Modified muffler for faster preheating.
1973	113-2000-001 to 113-3200-000	Series AH (Cal.) Series AK	dual port 1600cc	63	12 volt	Ball Joint	IRS double jointed axle	Safety interlock seat belts. Modified exhaust gas recirculation. TDC sensor flywheel.
1974	114-2000-001 to 114-3200-000	Series AH (Cal.) Series AK	dual port 1600cc	63	12 volt	Ball Joint	IRS double jointed axle	Alternator replaces generator. Energy absorbing bumpers. Improved transmission mounts.
1975	1152-000-001 to 1352-000-001	Series AJ	dual port 1600cc	63	12 volt	Ball Joint	IRS double jointed axle	Electronic fuel injection-Alternator with integral regulator-New heat exchangers. Single tailpipe. Larger exhaust valve stems.
1976	1162-000-001 to 1362-000-001	Series AJ	dual port 1600cc	63	12 volt	Ball Joint	IRS double jointed axle	Automatic stickshift discontinued.
1977	1172-000-001	Series AJ	dual port 1600cc	63	12 volt	Ball Joint	IRS double jointed axle	



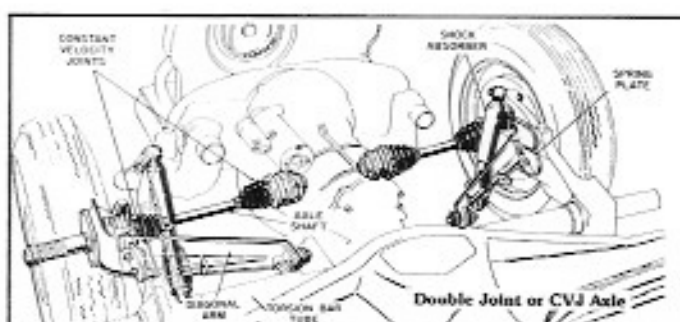
Front Suspension

King and Link Pin

In the king and link pin front suspension, the steering knuckles are fastened to the torsion bar trailing arms. Horizontal link pins locate the knuckle on the king pin. Though this system is durable, its roadholding ability leaves something to be desired, particularly in crosswinds.

Ball Joint Suspension

This arrangement uses horizontal torsion bars in two tubes to provide spring suspension. The steering knuckles are attached to the torsion arms by maintenance-free ball joints. These are pressed into the arms and have threaded pins which are secured to the knuckles by nuts. The upper ball joints fit in eccentric bushes with which the camber can be adjusted. The movement of the ball joint in the socket allows the wheel to more accurately follow the road surface.



Rear Suspension

Swing Axle

In a swing axle rear suspension, the rear wheels are sprung independently. Road shock is transmitted to the torsion bars by a trailing spring plate on either side of the rear axle. The drawback to this setup is that during hard cornering, the force against the outside wheel and the centrifugal force of the car causes the outside wheel to take on a great deal of positive camber. This force is relayed to the transmission where the axle pivots, causing the car to rise in the rear, resulting in oversteer and unstable handling. This flaw can be minimized by adding rear sway bars and diagonal trailing links (also called rear-axle locators).

Double Joint or CVJ Axle

In 1969 (1968 for automatics) VW sedans were first equipped with a double jointed rear axle. Both the drive shafts have two joints—one on the transmission case, one on the wheel. The rear wheels are

mounted on trailing and diagonal links which attach to and pivot on the frame. The lateral forces which previously acted on the gearbox are now taken up by the diagonal links and transmitted to the frame, eliminating the center jacking that occurred with the swing axle. Roadhandling is improved because the outer joint maintains proper rear wheel camber, regardless of vehicle loading.

The VW Engines

Both the 36 and 40 hp engines are identical except for displacement and compression ratios. The 1500cc was the first Beetle engine with the 12 volt electrical system which allowed better lighting and more accessories. This engine can be mated to the 6 volt transmission by installing a 12 volt starter bushing in the transmission case and slightly enlarging the inside of the bell housing to accommodate the 12 volt flywheel. Dual port cylinder heads, which improve the intake flow, can be installed on any engine ('66 or later) by adding dual port intake manifolds.

VW DISASSEMBLY

While disassembling VW, label and identify all parts to be saved for further use on your BCW Model 52. After parts are labeled ☒ check box.

These parts are:

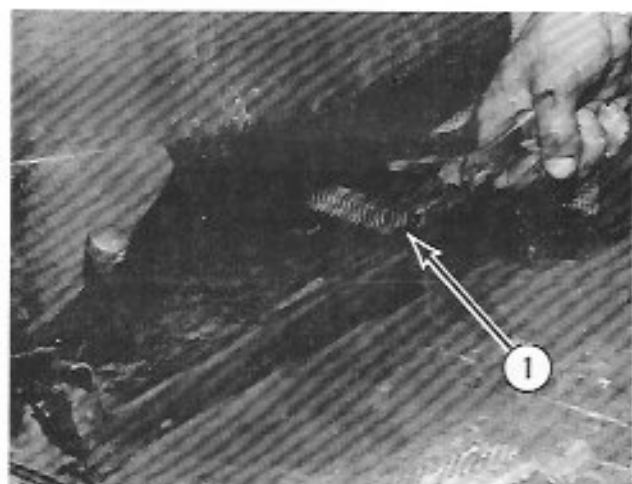
- | | |
|--|---|
| <input type="checkbox"/> 1. Battery | <input type="checkbox"/> 15. Windshield Wiper Motor and Assembly |
| <input type="checkbox"/> 2. Voltage Regulator and Attachment Screws | <input type="checkbox"/> 16. Headlight Dimmer Relay |
| <input type="checkbox"/> 3. (4) Body Bolts (under rear seat) | <input type="checkbox"/> 17. Headlight Switch |
| <input type="checkbox"/> 4. (1) Speedometer Cable Clip (front hub) | <input type="checkbox"/> 18. Hood Release Handle, Cable and Cable Clamps |
| <input type="checkbox"/> 5. Horn, Bolt and Washer | <input type="checkbox"/> 19. Windshield Wiper Switch |
| <input type="checkbox"/> 6. (4) Fuel Tank Clamps | <input type="checkbox"/> 20. Emergency Flasher Switch |
| <input type="checkbox"/> 7. Fuel Tank and Fuel Hoses | <input type="checkbox"/> 21. Hood Pin, Hood Latch and Hardware |
| <input type="checkbox"/> 8. (2) Front Body Bolts, Washers and (2) Rubber Pads (under fuel tank — front suspension) | <input type="checkbox"/> 22. Rectangular Body Pan Washers |
| <input type="checkbox"/> 9. Filler Neck (remove from body) | <input type="checkbox"/> 23. (5) Tires and Wheels |
| <input type="checkbox"/> 10. Brake Fluid Reservoir, Lines and Hoses | <input type="checkbox"/> 24. (2) Headlights |
| <input type="checkbox"/> 11. Steering Lock Plate Nut, Bolt and Clamp | <input type="checkbox"/> 25. Seat Belt |
| <input type="checkbox"/> 12. (2) Allen Head Bolts and Rectangular Nuts (at steering column and dash) | <input type="checkbox"/> 26. Ignition Key |
| <input type="checkbox"/> 13. Steering Column Assembly and (1) Rubber Grommet (at steering column and firewall) | <input type="checkbox"/> 27. Miscellaneous Rubber Grommets (wires through firewall) |
| <input type="checkbox"/> 14. (2) Wiper Arm Nuts, Metal Washers and Felt Washers | <input type="checkbox"/> 28. Engine, Transaxle Assembly |
| | <input type="checkbox"/> 29. Chassis |
| | <input type="checkbox"/> 30. Front Suspension Assembly |

TOOLS REQUIRED FOR DISASSEMBLY

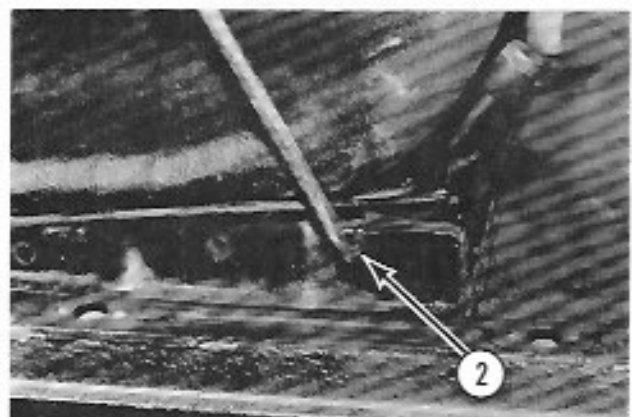
Pliers
Screwdriver
Metric Wrenches — Sockets and Combination
Phillips Screwdriver
Vice Grips
Hammer

Cold Chisel
Allen Head Wrenches
Power Drill — 1/4" or 3/8"
3/8" Drill Bit
Penetrating Oil
Tags for Part Identification

Seat Removal



- ① Remove spring located under front seat.

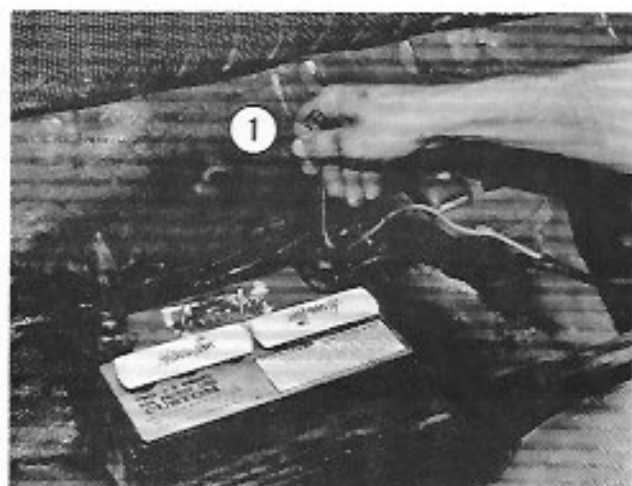


- ② Using a screw driver, depress seat rail lock located near seat adjustment handle and slide seat forward off the seat tracks.

Repeat same process on the front seat.

Lift out rear seat cushion to expose the battery, voltage regulator and rear body bolts.

Battery Removal

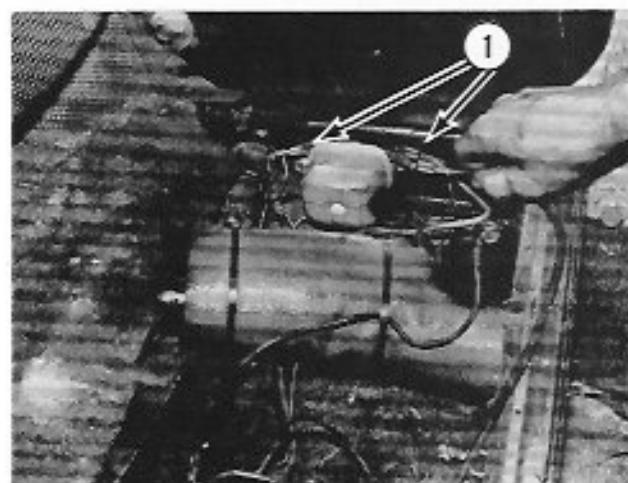


- ① Disconnect battery terminals and remove battery from car.

Save battery for use in your BCW Model 52.

Voltage Regulator Removal

- 1 Unplug electrical connections from voltage regulator.



- 2 Remove the attachment screws and voltage regulator.

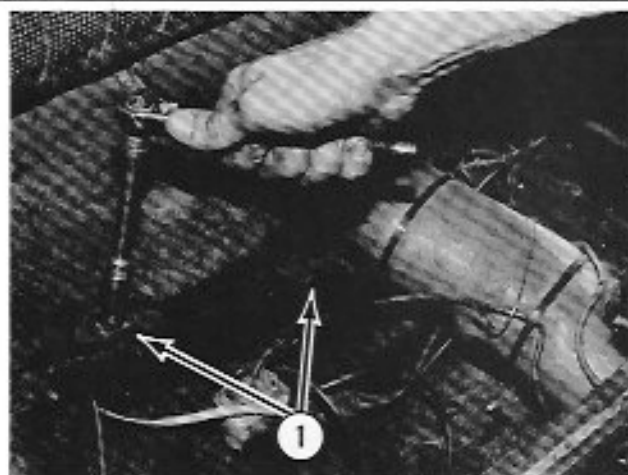
Save voltage regulator and screws for use in your BCW Model 52.



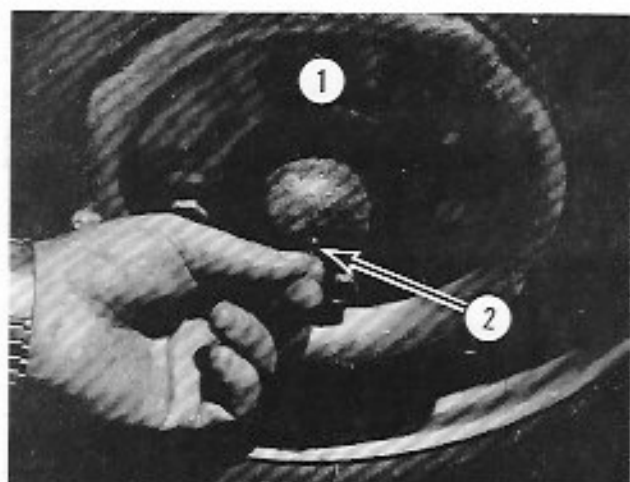
Body Bolts Removal

- 1 Remove four bolts, two per side, which secure body to chassis in the rear seat area.

Save bolts for use in your BCW Model 52.

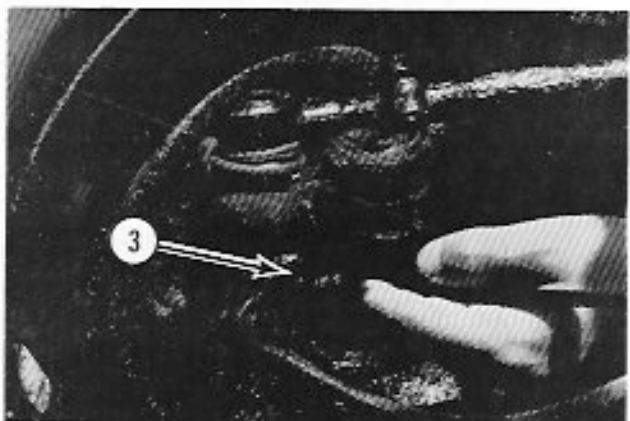


Speedometer Cable Removal



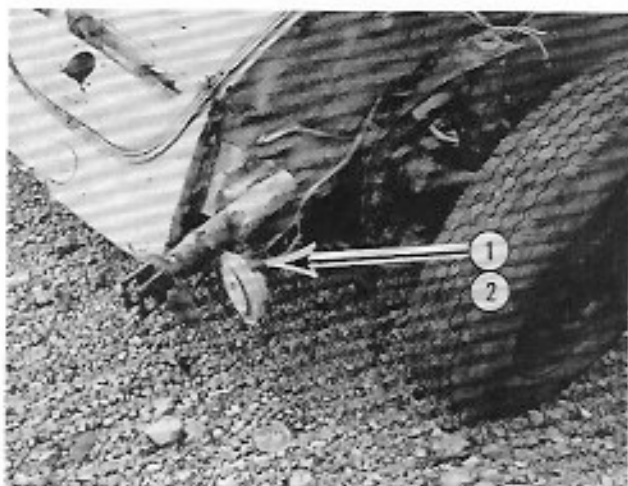
- 1 Remove hub cap from the driver's side front wheel.
- 2 Remove clip protruding from the wheel bearing cap.

Save clip for use in your BCW Model 52.



- 3 From behind wheel, pull speedometer cable completely out of the spindle.

Horn Removal



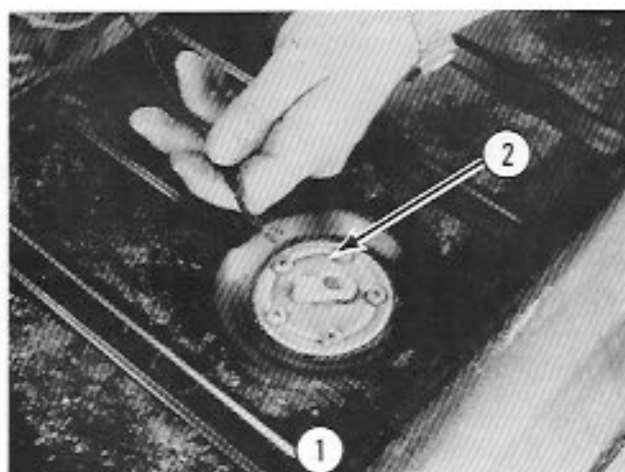
- 1 From underneath front fender on the driver's side, unplug electrical connections from horn.
- 2 Unbolt horn from body.

Save bolt, washer and horn for use in your BCW Model 52.

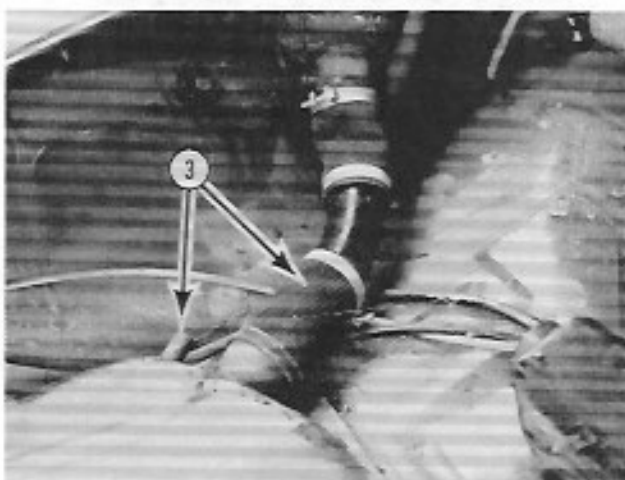
Fuel Tank Removal

CAUTION: No smoking or open flames.

- ① From underneath hood, remove the cardboard which covers the fuel tank and the rear of the dash.
- ② Unplug electric wire from fuel tank sending unit.

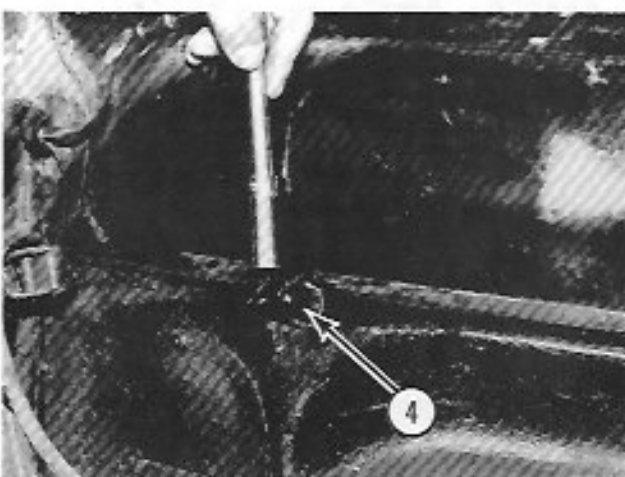


- ③ Remove filler and other hoses connected to the fuel tank.



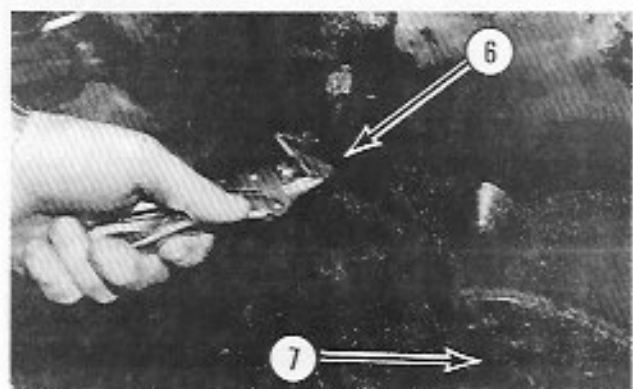
- ④ Remove four bolts and clamps near each corner of the fuel tank.

Save the four clamps for use in your BCW Model 52.



(Continued)

Fuel Tank Removal *(Continued)*

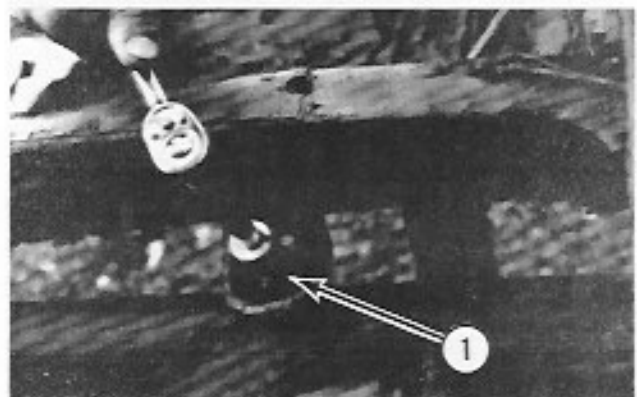


- 6 Lift the front of the fuel tank up and clamp the fuel hose to avoid spilling any fuel.
- 7 Disconnect the fuel hose from the chassis and remove the fuel tank.

Completely drain gasoline from fuel tank.

Save the fuel tank and all fuel hoses for use in your BCW Model 52.

Front Body Bolts Removal

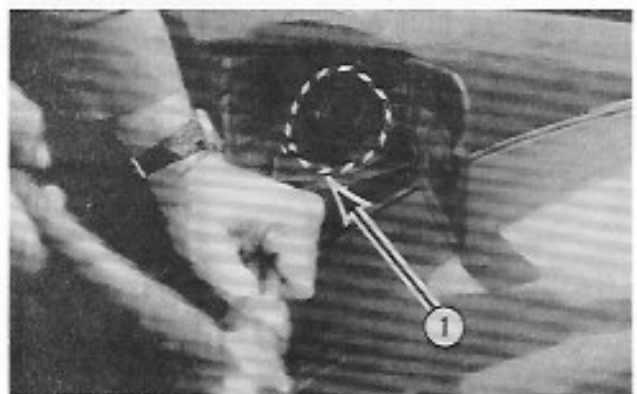


- 1 Remove two bolts securing body to front suspension located inside fuel tank saddle.

Save bolts and washers for use in your BCW Model 52.

NOTE: Also save two square rubber pads, accessible only after body removal.

Filler Neck Removal



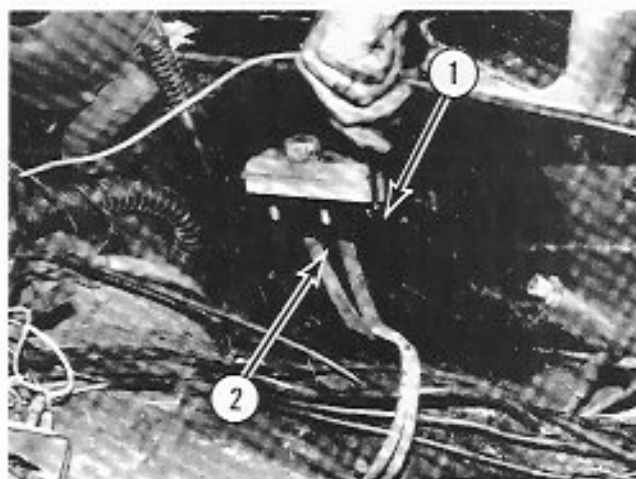
- 1 Using a cold chisel and hammer, cut sheet metal surrounding filler neck to remove from body.

Save filler neck for use in your BCW Model 52.

Brake Fluid Reservoir Removal

- ① From underneath hood, remove brake fluid reservoir attachment screw.
- ② Disconnect lines from reservoir and remove reservoir.

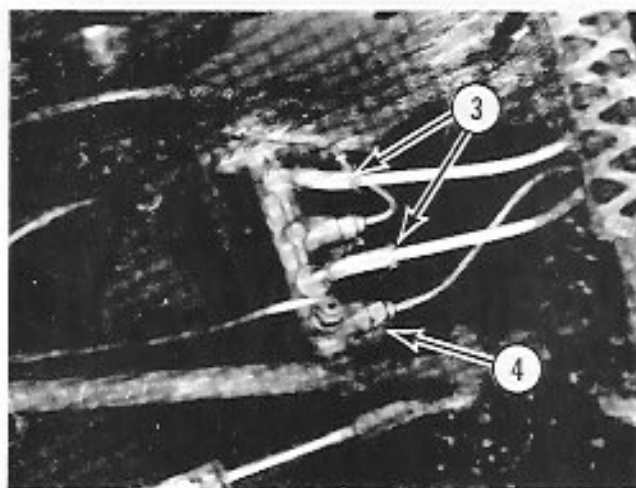
Save reservoir for use in your BCW Model 52.



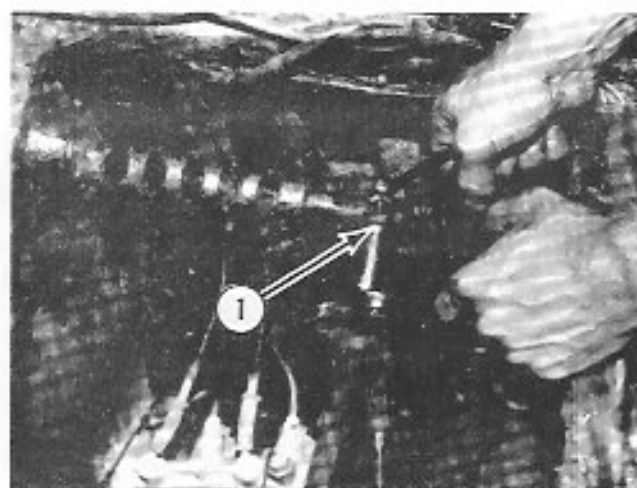
- ③ Disconnect reservoir lines from brake master cylinder and plug holes to keep out dirt.

Save lines and hoses for use in your BCW Model 52.

- ④ Unplug electrical wires from stop light switch on brake master cylinder.

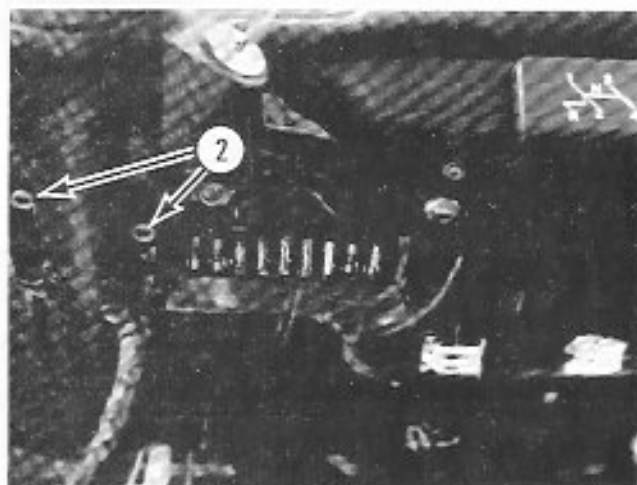


Steering Column Removal



- ① From underneath hood, remove lock plate, bolt, nut and clamp at steering coupling.

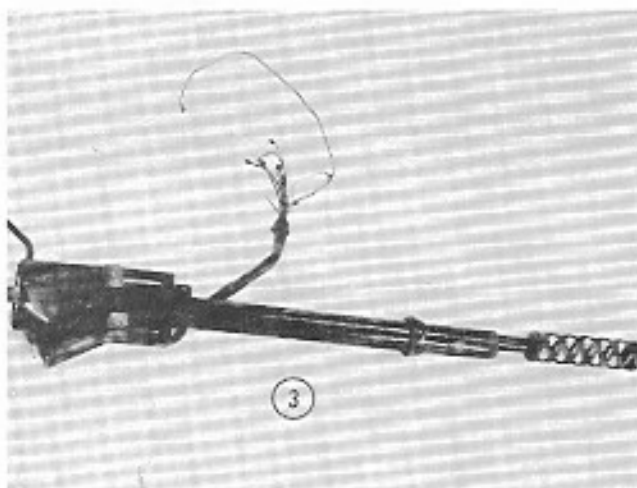
Save lock plate, bolt, nut and clamp for use in your BCW Model 52.



- ② From underneath dash, remove two allen head bolts securing steering column to dash.

Save two allen head bolts and two rectangular nuts for use in your BCW Model 52.

From underneath hood, unplug steering column electrical connection from wiring harness.

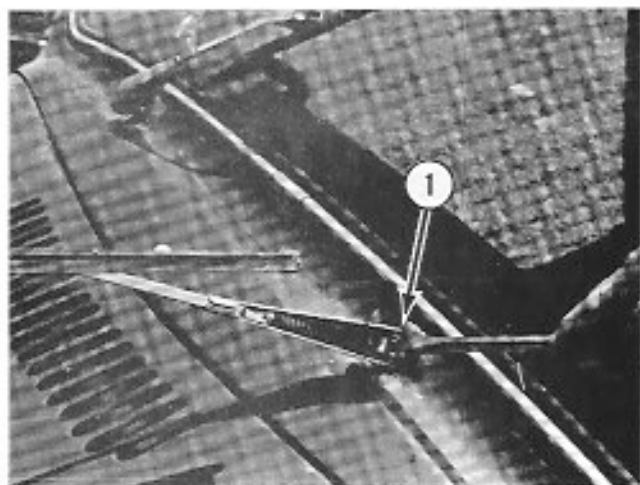


- ③ Remove steering column assembly from passenger compartment.

Save steering column assembly and rubber grommet where column passes through fire-wall for use in your BCW Model 52.

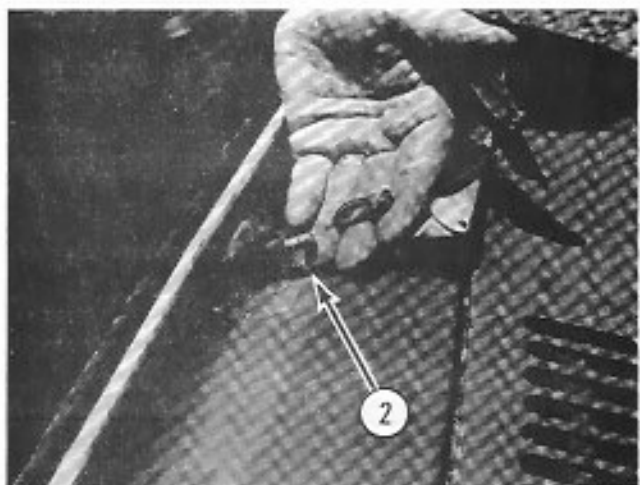
Windshield Wiper Assembly Removal

- ① Remove both wiper arms.



- ② Remove nut, metal washer and felt washer from each shaft.

Save two nuts, two metal washers, and two felt washers for use in your BCW Model 52.

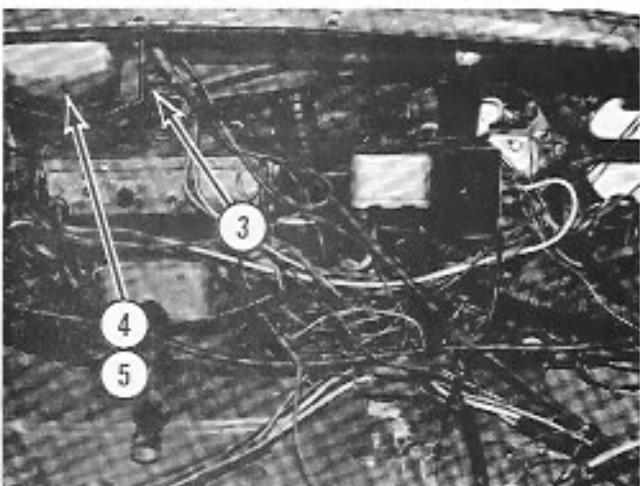


- ③ From underneath hood, unplug electrical connections from windshield wiper motor.

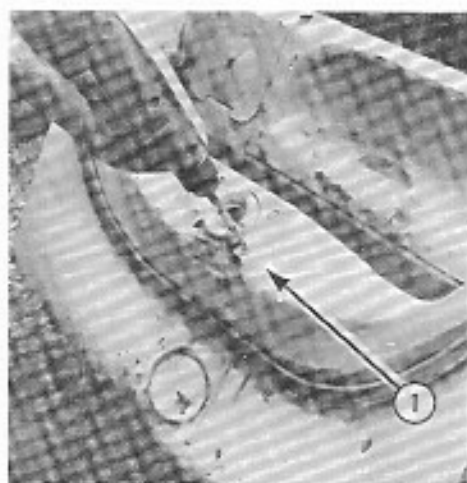
- ④ Unbolt windshield wiper assembly brackets.

- ⑤ Remove windshield wiper assembly.

Save windshield wiper assembly for use in your BCW Model 52.

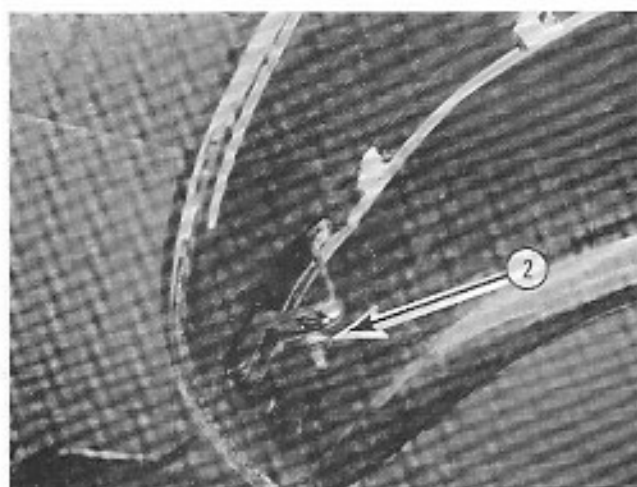


Hood Latch Removal



- ① From underneath hood, remove latch assembly by drilling out the four attachment rivets.

Save latch for use in your BCW Model 52.

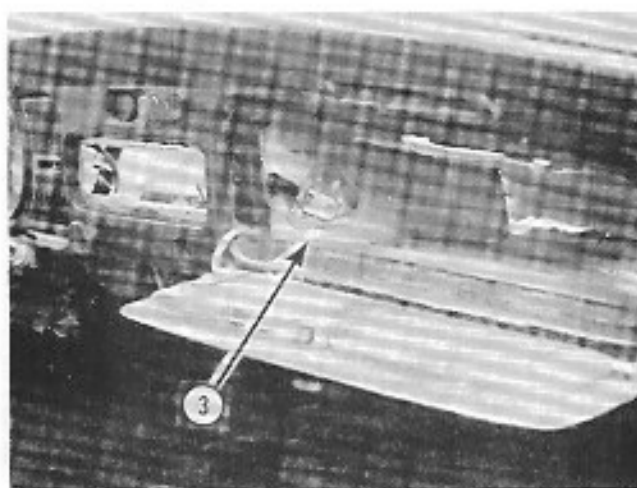


- ② Remove hood pin.

Save hood pin and hardware for use in your BCW Model 52.

Remove hood release cable and clamps.

Save cable and clamps for use in your BCW Model 52.



- ③ From inside glove compartment remove hood release handle.

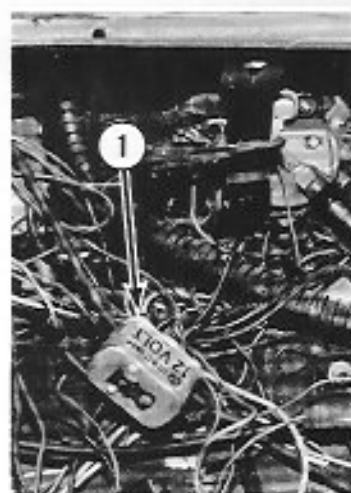
Save hood release handle for use in your BCW Model 52.

Headlight Dimmer Relay Removal

- 1 From underneath hood, locate headlight dimmer relay which is near speedometer.

Unplug electrical connections and remove relay.

Save relay for use in your BCW Model 52.

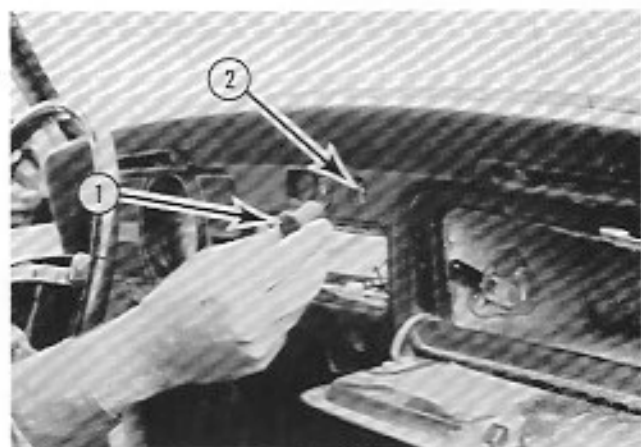


Accessory Switches Removal

- 1 Unscrew counter-clockwise the dash knobs for the headlight switch, windshield wiper switch and emergency flasher switch.

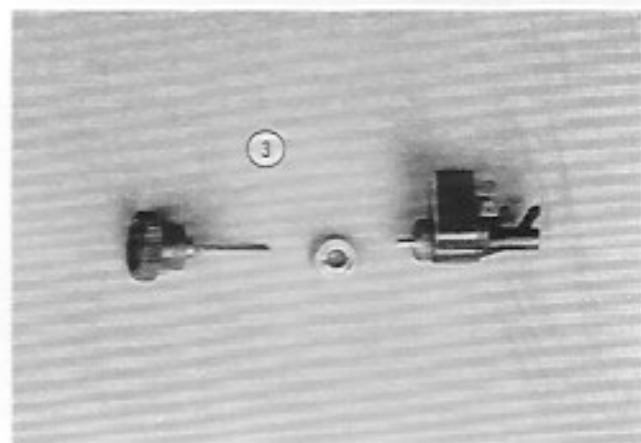
- 2 Unscrew counter-clockwise, the round nut that secures each switch to the dash.

From behind dash, unplug the electrical connections for each switch.

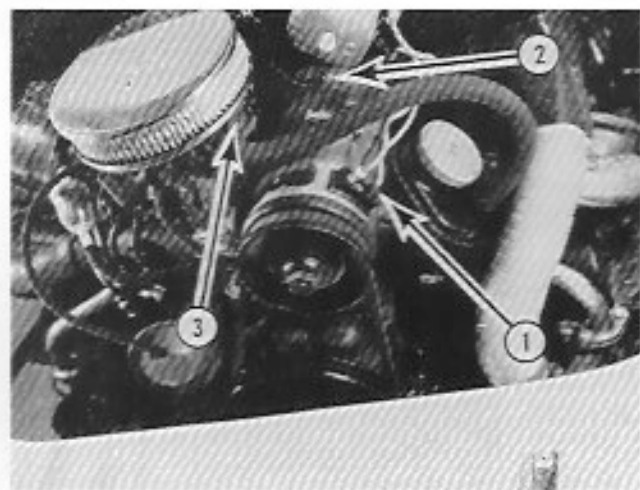


- 3 Remove switches.

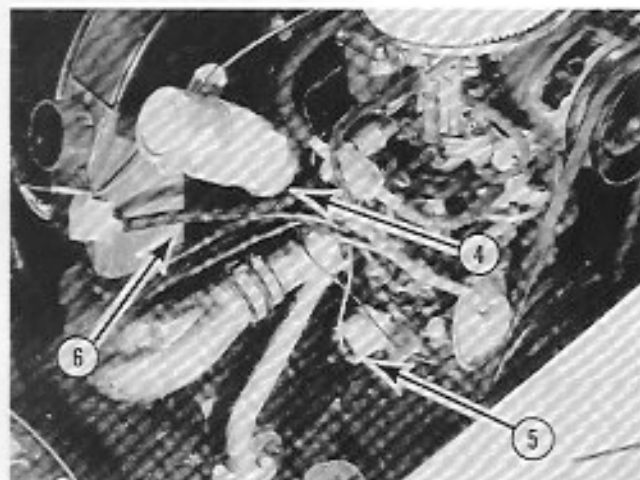
Reassemble switches and save for use in your BCW Model 52.



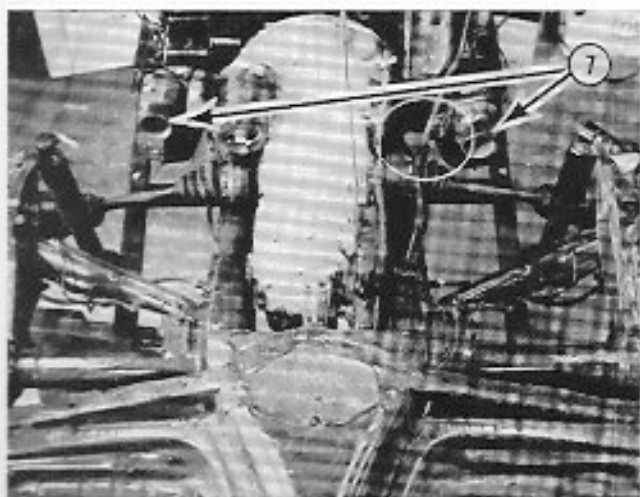
Engine Compartment Removal



- ① Lift the rubber boot covering on the generator and disconnect the two electrical connections from the generator.
- ② Unscrew the ground wire connection on the rear of the generator.
- ③ Unplug the electrical connections from the carburetor choke.



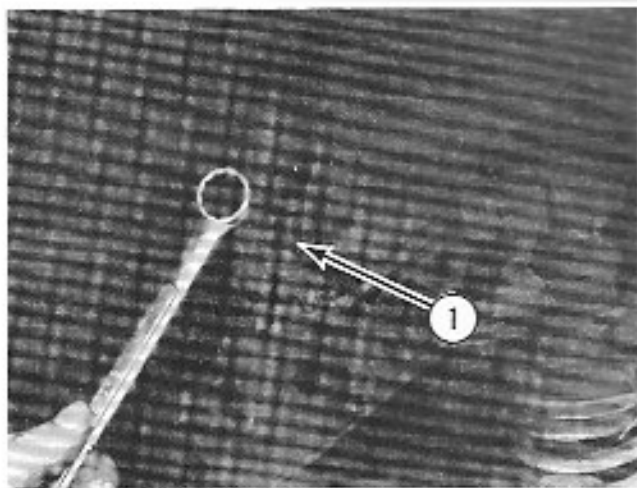
- ④ Disconnect the dark wire from the positive (+) side of the coil.
- ⑤ Disconnect the electrical wire from the oil pressure sending unit.
- ⑥ Remove wiring harness from engine air shroud.



- ⑦ From underneath, disconnect the heater hoses from the heat exchangers on each side of the car, by loosening the clamps and sliding off the hoses.

Body Bolts Removal

- 1 From underneath the rear fender and behind the rear wheel, remove body bolt from each side of the car and discard.



- 2 From underneath chassis, remove body bolts from the chassis on each side of the car.

Save rectangular body pan washers for use in your BCW Model 52.



Body Removal

Lift body from the chassis with a chain hoist or the help of at least four strong friends. Have one at each corner of the body and one coordinating the effort. Lift the body to one side of the chassis and not over the front or the rear.

CHASSIS PREPARATION

1. **Chassis Inspection** — Now that the body is removed, the chassis should be inspected for possible damage or excess wear. Measure the chassis from corner to corner to check for squareness. Future enjoyment of owning and driving your classic will depend on the quality of the chassis and running gear.
2. **Chassis Cleaning** — Remove tar paper type material from the floor pan. Clean chassis using degreasers available at part stores or have chassis steam cleaned. **CAUTION:** If using high pressure water spray, avoid spraying water directly into bearings, transaxle or engine. The high pressure can force the dirt into these components causing more harm than good.
3. **Chassis Repair** — All chassis, suspension and running gear repair should be done at this time. Refer to the VW service manual for all specifications.

TOOLS REQUIRED FOR CHASSIS PREP

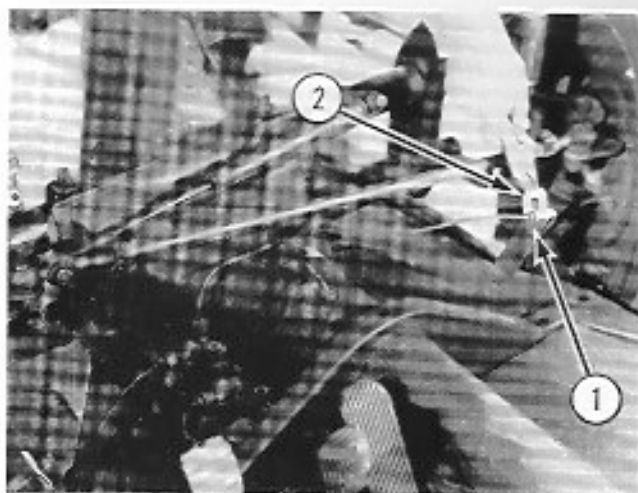
Putty Knife
Wire Brush
Degreaser
Sandpaper — 80 grit
Metric Sockets and Open End Wrenches
Vice Grips
Two Jack Stands
Hammer
Cold Chisel
Tape Ruler
Hacksaw Fine Metal Cutting Blade
Scribe

Center Punch
Power Drill — $\frac{1}{4}$ " or $\frac{3}{8}$ "
Drill Bits — $\frac{1}{8}$ ", $\frac{3}{8}$ ", $\frac{1}{2}$ "
Wire Cutters
Masking Tape
Holesaw — Metal Cutting — 2", 2 $\frac{1}{8}$ "
Pry Bar or Large Screwdriver
Scissors
Phillips Head Screwdriver
Grease — General Purpose
Loc Tite
Propane Torch

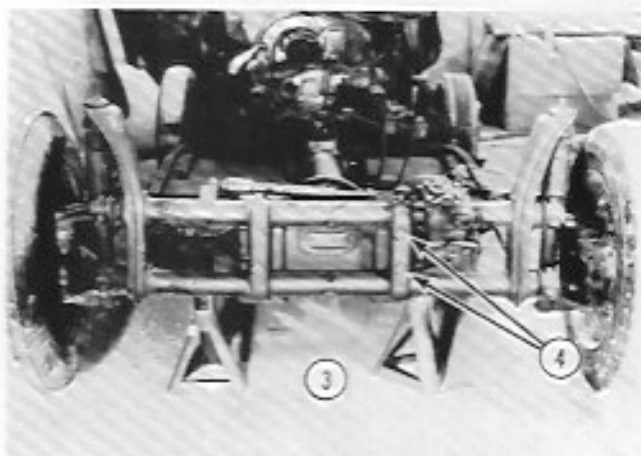
FRONT SUSPENSION REMOVAL

NOTE: ALL PARTS TO BE REUSED

- ① Unscrew both front brake lines from brake hoses.
- ② Disconnect the front brake hoses from the chassis by pulling the holding clips off with vise grips.

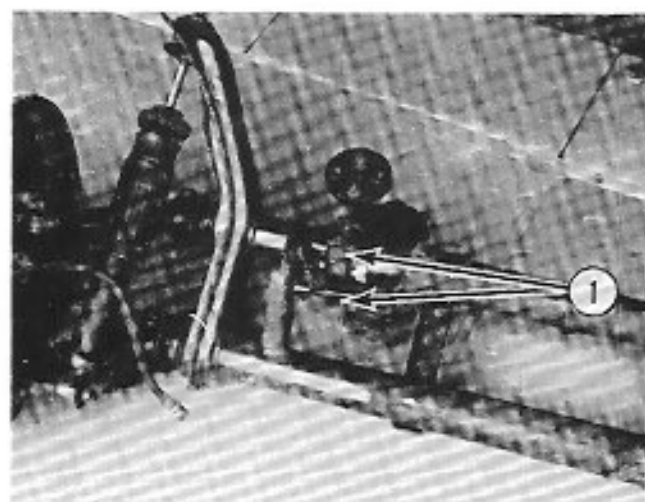


- ③ Place blocks or jack stands under front of floor pan (not under front axle).
- ④ Disconnect the front suspension from the chassis, by removing the four attachment bolts.

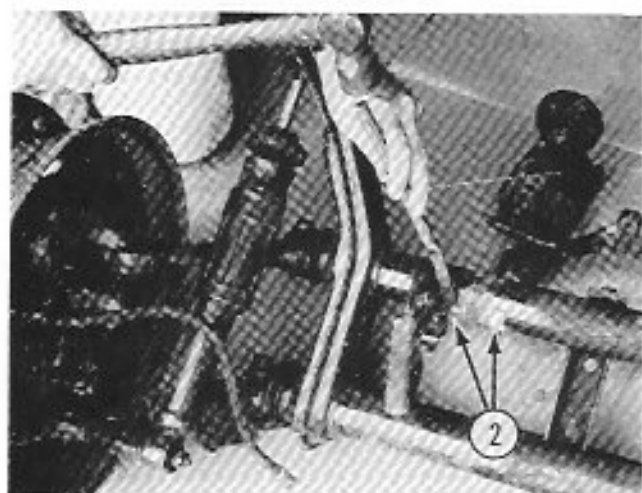


STEERING BOX

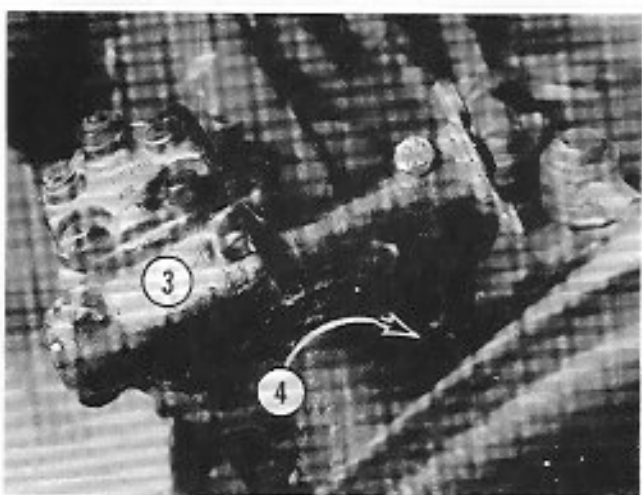
NOTE: ALL PARTS TO BE REUSED



- ① Remove steering box from front suspension by removing the two bolts from the clamp.



- ② Using a cold chisel and hammer, remove factory locator tabs from the tube housing.



- ③ Loosely reinstall steering box in the original position on the front suspension.
- ④ Looking from the driver's side of the front suspension, rotate steering box on the torsion tube housing clockwise approximately $1/4$ ". Tighten both mounting bolts.

FRONT SUSPENSION SOFTENING

This must be done to compensate for the lighter weight fiberglass body.

- 1 Scribe two lines around the lower torsion bar tube housing, 2" to the right of the center bolt and 2" to the left.
- 2 Using a hacksaw or tubing cutter, cut on the scribed lines completely around the torsion bar tube housing.

CAUTION: ONLY CUT THROUGH HOUSING. DO NOT CUT TORSION BARS WHICH ARE ENCLOSED IN THE HOUSING.

Temporarily bolt front suspension onto chassis.

Lower chassis to the floor.

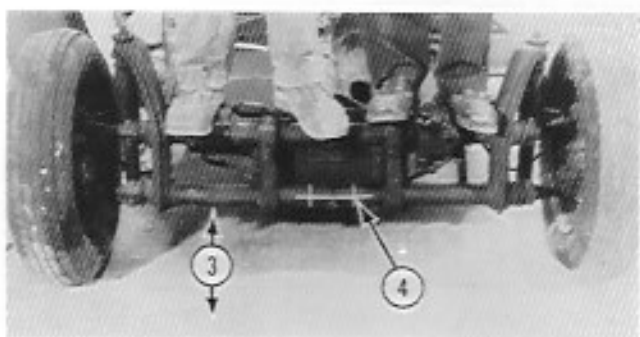
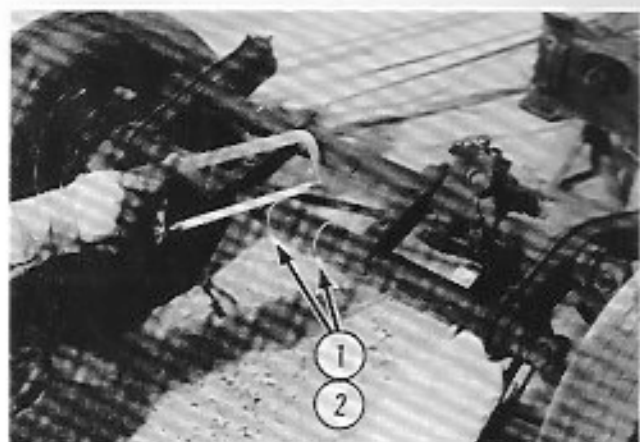
- 3 Load weight on the front of the chassis (one or two people) until the lower torsion bar tube housing is 8" from the floor.

NOTE: The 4" center section which was previously cut, should move independently of the outer portion of housing.

- 4 With weight still on chassis tack, weld center section to outer portion of housing or if welding is not within your capabilities, scribe line on the tube from the left side across the 4" center section and onto the right side of housing.

Reblock front of chassis and remove front suspension.

Front suspension can be easily transported to local welding source. (Body Shop, Mechanical Repair Shop, Welding Shop)

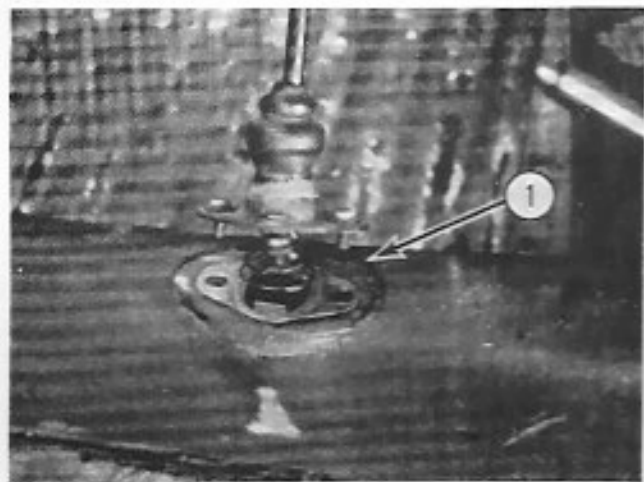


*Align scribe marks and weld center section of housing to outer portion of housing. Weld joints completely around tube housing on both cuts.

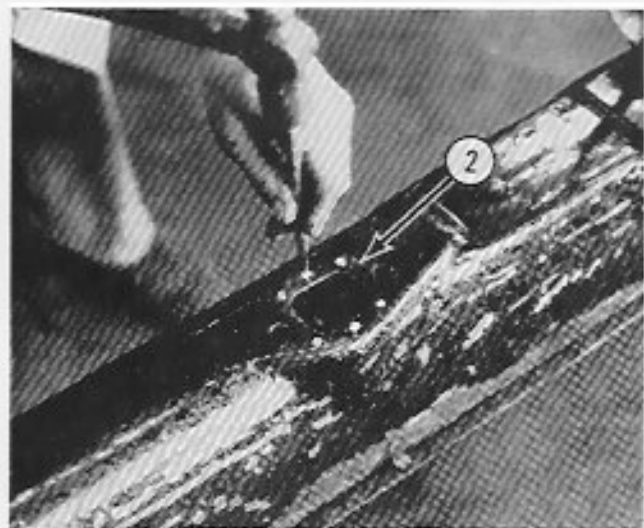
***NOTE:** Welding will also be necessary on shifter rod and fuel tank.

SHIFTER ROD REMOVAL

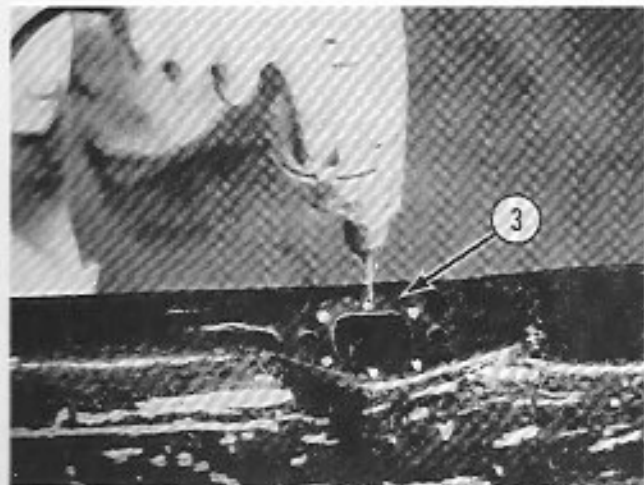
NOTE: ALL PARTS TO BE REUSED



- ① Place gear shift lever into neutral position. Remove two bolts attaching the gear shift lever to the tunnel. Pull out the shift lever, the plate and the spring. Note the sequences of parts for reassembly.



- ② Scrape the paint and tar to expose the six spot welds under shifter plate. Center punch each of the spot welds.



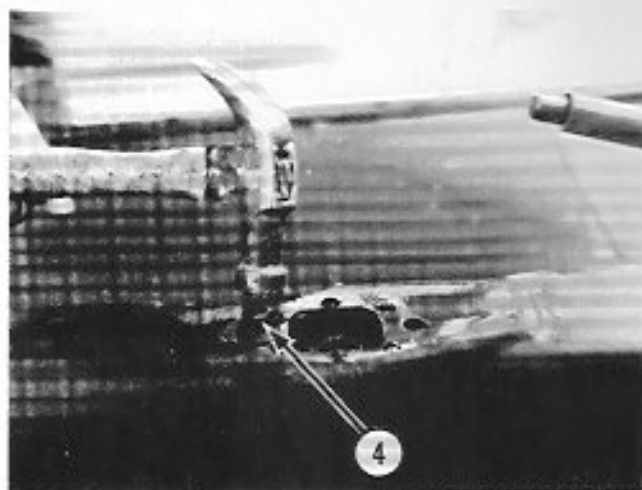
- ③ Drill a 1/8" hole in the center of each spot weld, then enlarge each hole with a 3/8" drill bit.

(Continued on Following Page)

SHIFTER ROD REMOVAL *(Continued)*

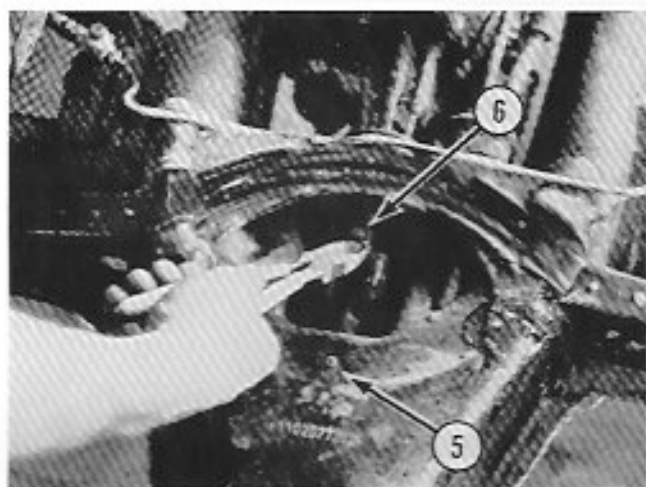
NOTE: ALL PARTS TO BE REUSED

- ④ Reinsert shifter plate bolts (four to five hand turns) and tap bolts with hammer to free shifter rod guide from tunnel.



- ⑤ Remove attachment screw and access cover from the rear of chassis.

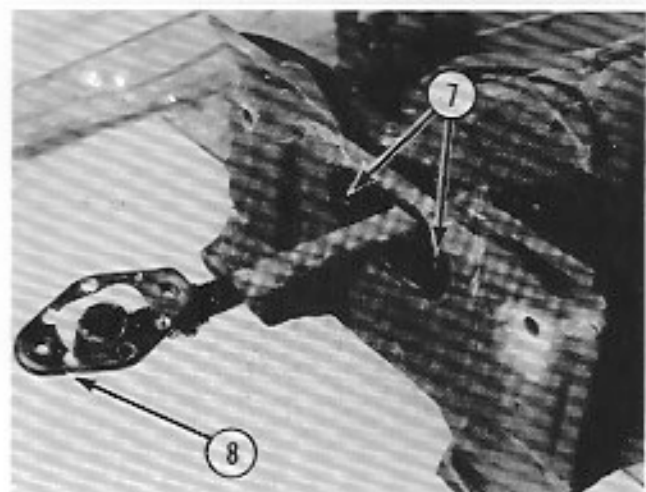
- ⑥ Cut safety wire and unbolt shifter rod from shifter coupler assembly.



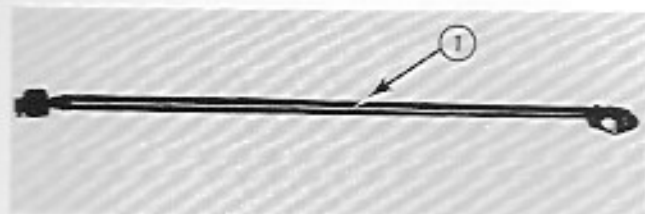
- ⑦ Remove two screws from the access cover in front of the chassis. Remove access cover.

- ⑧ Feed a piece of wire (coathanger) through the front tunnel access hole and hook onto shifter rod guide. Pull shifter rod and guide through tunnel and out of front access hole.

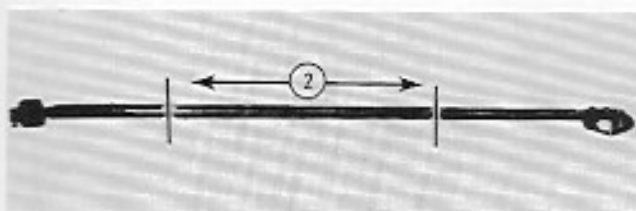
Reinstall front access cover.



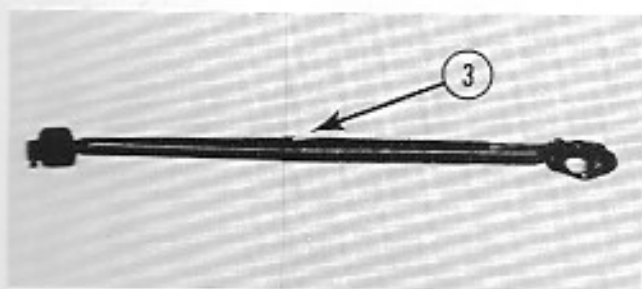
SHIFT ROD MODIFICATION



- ① Scribe parallel line the length of shift rod.



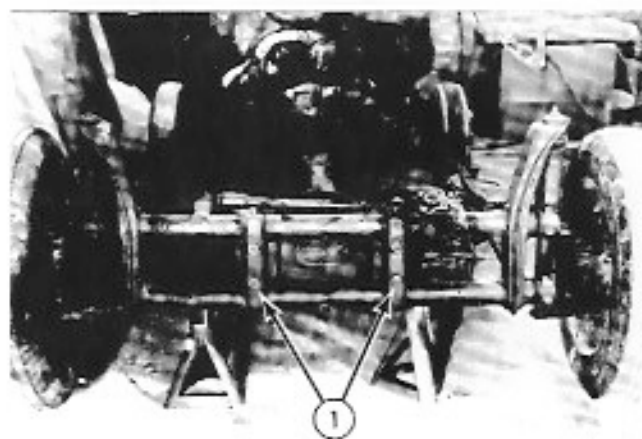
- ② Using tubing cutter or hacksaw, cut 21-1/4" section from the approximate center of the shift rod.



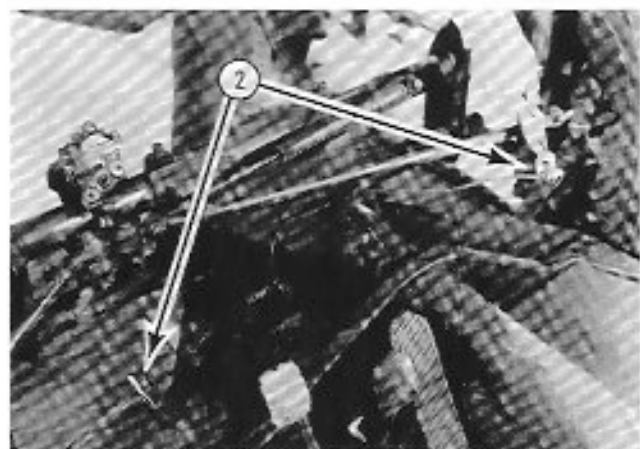
- ③ Align scribe line and weld or braze the end sections of the shift rod together.

REINSTALL MODIFIED FRONT SUSPENSION

- 1 Connect the modified front suspension to the chassis by inserting the four original bolts. Tighten bolts.

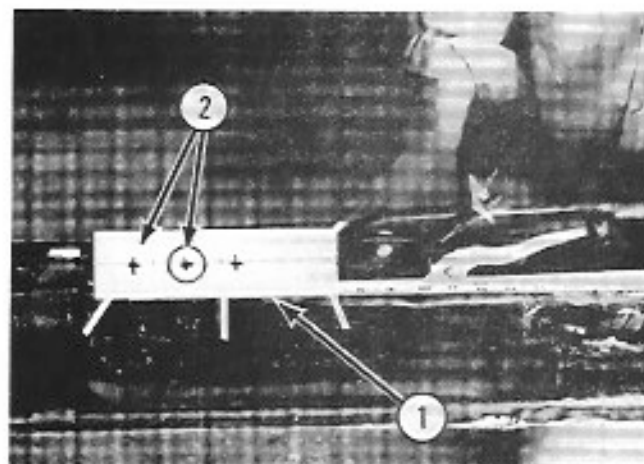


- 2 Connect brake lines and install clips.
Remove jack stands.

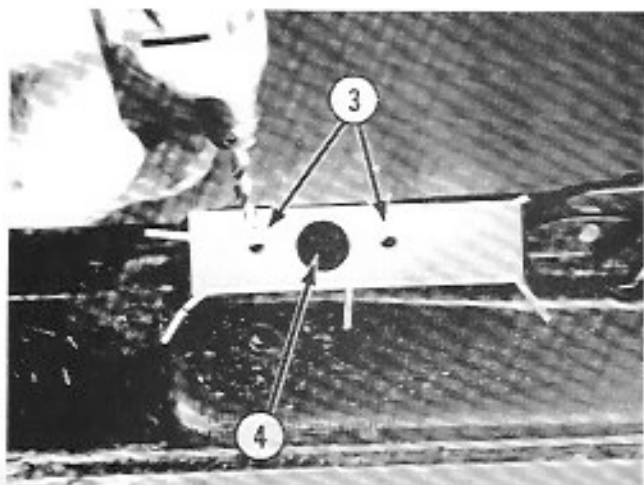


NOTE: We do not recommend heavy duty shock absorbers. The softer, original type shock absorbers are better for this application.

GEAR SHIFT RELOCATION

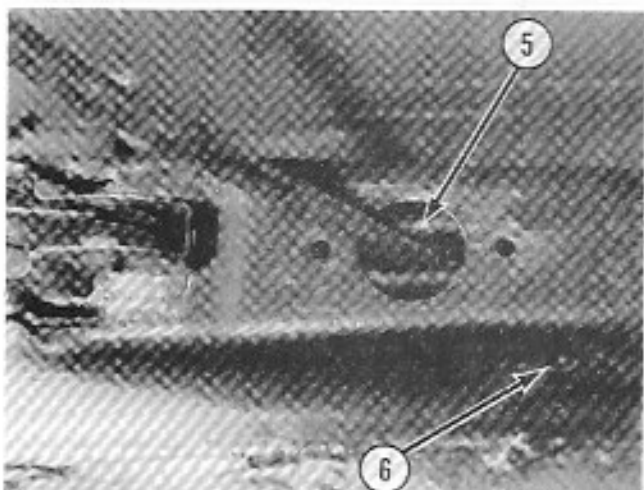


- 1 Place shifter template* in the center of the tunnel and hold template in position with tape. The center of the new gear shift hole will be 4" behind the emergency brake.
- 2 Center punch shifter hole and two attachment bolt hole locations.



- 3 Drill two 3/8" holes in the tunnel for the attachment bolts.
- 4 Using a 2-1/8" hole saw, cut hole in the center for the gear shift.

CAUTION: DO NOT DRILL INTO EMERGENCY BRAKE CABLE TUBES LOCATED INSIDE TUNNEL.

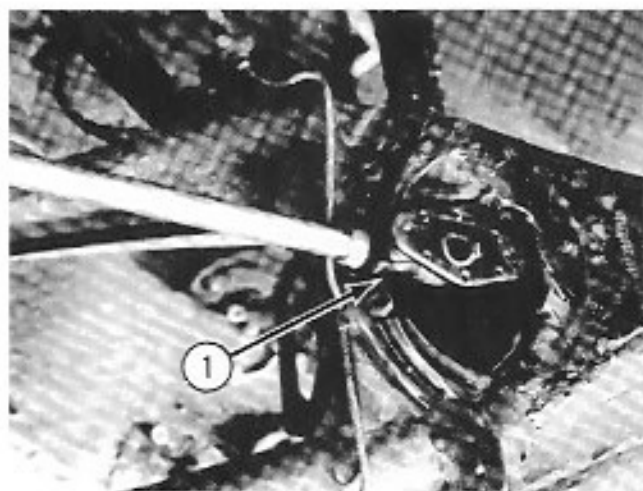


- 5 Using bar, carefully pry emergency brake cable tubes towards either side of tunnel and slightly downward making room for new shifter location.
- 6 Some late model chassis may require removing seat belt nuts from inside tunnel for more room.

**Templates are in the rear portion of this manual.*

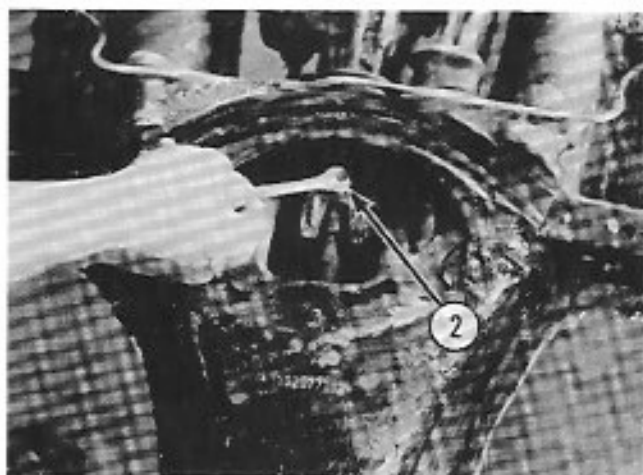
MODIFIED SHIFT ROD INSTALLATION

- ① Install modified shift rod and shift rod guide through rear chassis access hole.

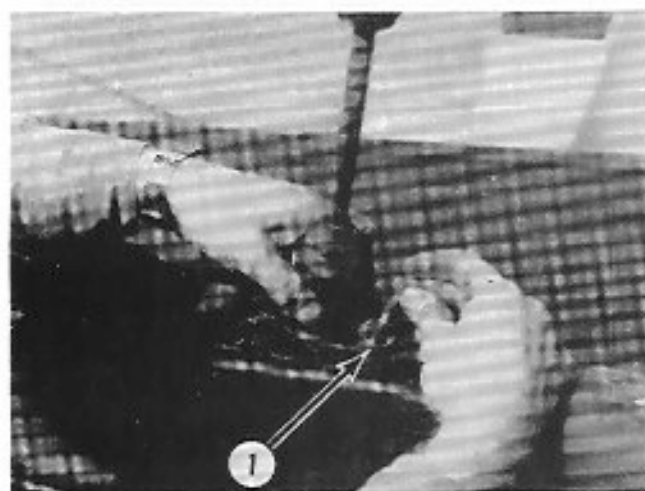


- ② Slip shift rod onto transmission shaft. Align set screw with hole in shaft and tighten.

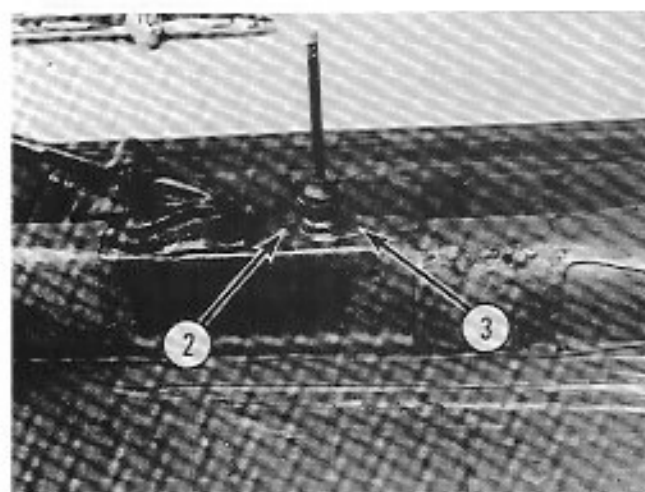
Replace safety wire through set screw. Re-install rear access cover.



GEAR SHIFT LEVER INSTALLATION



- ① While placing gear shift lever assembly (lever, spring and plate) over repositioned shifter opening, insert 5/16" X 3" hex head bolt finger tight through rear bolt hole in plate and gear shift lever. Guide gear shift lever into shift cup by pulling 3" long bolt upward keeping gear shift lever in "neutral" position.



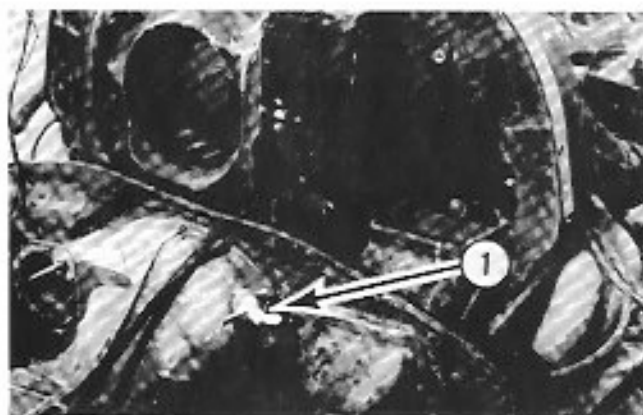
- ② Insert VW shift mount bolt into front hole. Finger tighten.
- ③ Remove 3" long bolt and insert VW bolt in rear hole. Finger tighten. Slide plate so when in neutral position shifter stands straight up. Tighten bolts. Test shifter for proper movement.

(1) 5/16" X 3" Hex Head Bolt

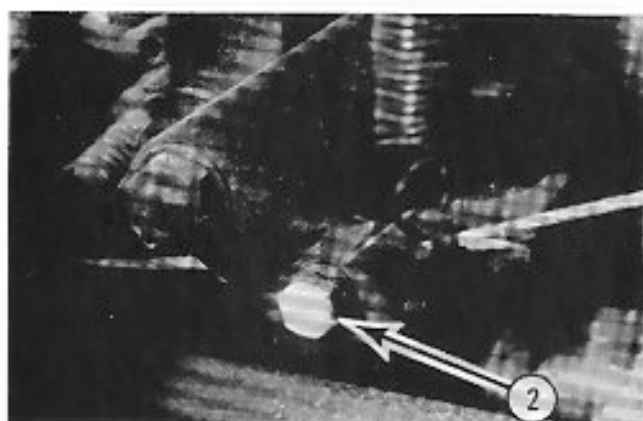
CABLE REMOVAL

NOTE: ALL PARTS TO BE REUSED.

- ① Remove wing nut from rear of clutch cable.



- ② Loosen nut to disconnect throttle cable from carburetor.



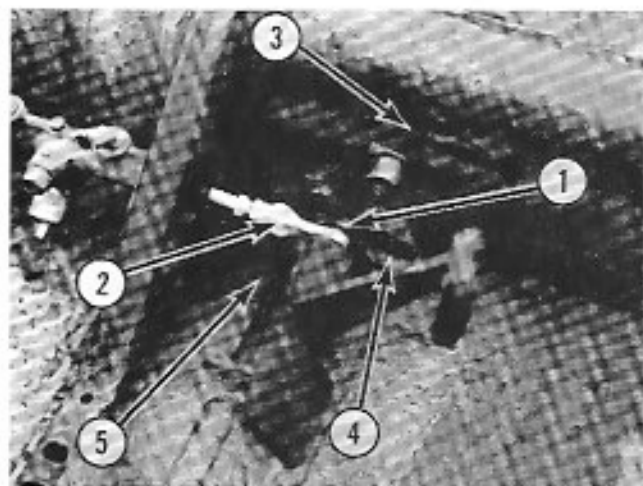
PEDAL ASSEMBLY

NOTE: ALL PARTS TO BE REUSED.

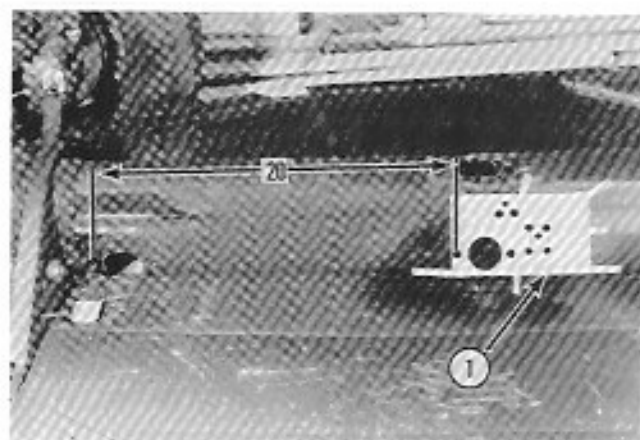
- ① Remove brake return spring clip. Release return spring.
- ② Remove brake master cylinder plunger.
- ③ Disconnect throttle cable. Pull cable out of tube.
- ④ Remove both pedal assembly bolts from tunnel and remove pedal assembly.

Disconnect clutch cable and pull clutch cable out of tube.

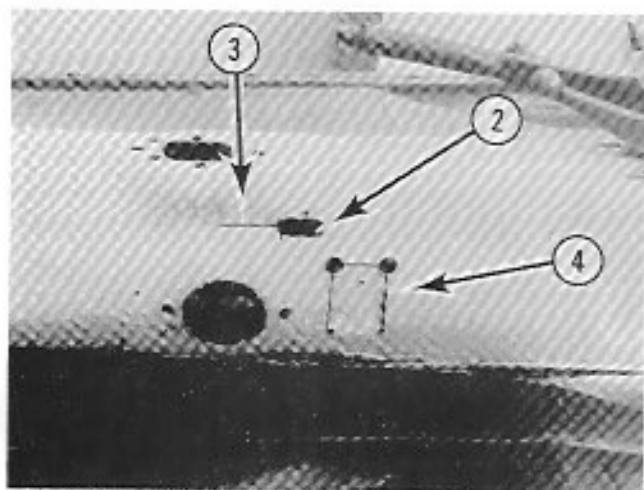
- ⑤ Remove brake and clutch pedal stop.



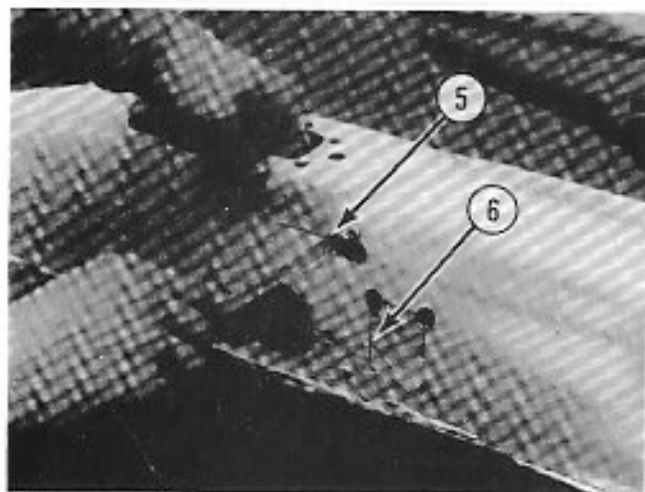
PEDAL ASSEMBLY RELOCATION



- 1 Place pedal relocation template* on the driver's side of the tunnel and hold template in position with tape. The new pedal assembly location is 20" behind original position. Center punch all holes and drill according to template.



- 2 Using a hacksaw blade, cut throttle opening.
- 3 Hammer in tunnel approximately 1/4" for throttle clearance.
- 4 Using a hacksaw blade, cut rectangular opening.

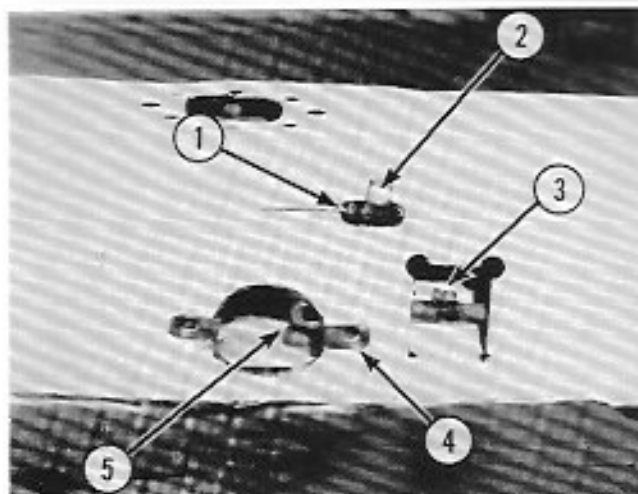


- 5 Using a hacksaw blade, cut throttle cable tube (top tube inside tunnel) while holding through original gear shift hole.
- 6 Using a hacksaw blade, cut clutch cable tube (middle tube inside tunnel) in front of rectangular opening.

**Templates are in the rear portion of this manual.*

PEDAL ASSEMBLY - CABLE INSTALLATION

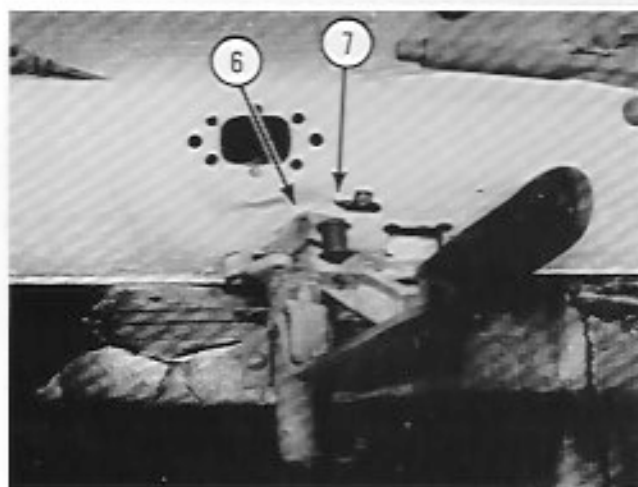
- 1 Using phillips head screwdriver, bend throttle cable tube out and form to shape as in original location.
- 2 Attach clamp with #10 sheet metal screw to hold throttle tube in position.
- 3 Bend flap back 45° and slip clutch cable tube over flap. Attach clutch cable tube to flap using clamp and #10 sheet metal screw.
- 4 Slip "J" nuts over both pedal assembly mounting holes.
- 5 Grease clutch cable and insert through clutch cable tube from the repositioned pedal assembly hole. Place clutch cable eyelet over pedal hook and insert pedal assembly into new hole location.



NOTE: Keep clutch pedal vertical to prevent cable eyelet from slipping off pedal.

Fasten pedal assembly with two 5/16" X 1-1/2" hex bolts and washers.

- 6 Check for free movement of throttle pedal. Bend throttle lever away from tunnel if necessary.
- 7 Grease cable and insert into throttle tube and attach to pedal and carburetor. Adjust cable according to VW service manual. Leave approximately 1" of cable protruding from carburetor and cut off excess.

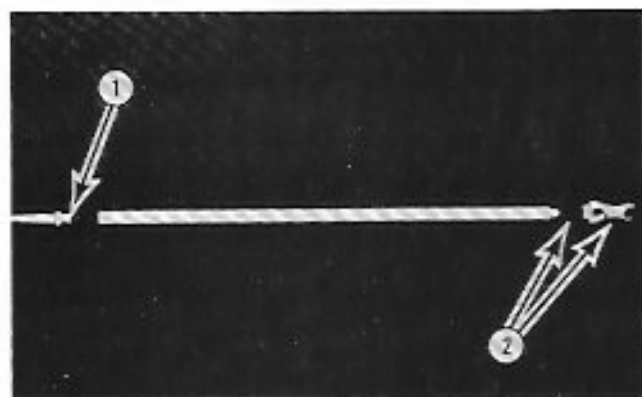


REMOVED 19 1/4" FROM OLD CABLE

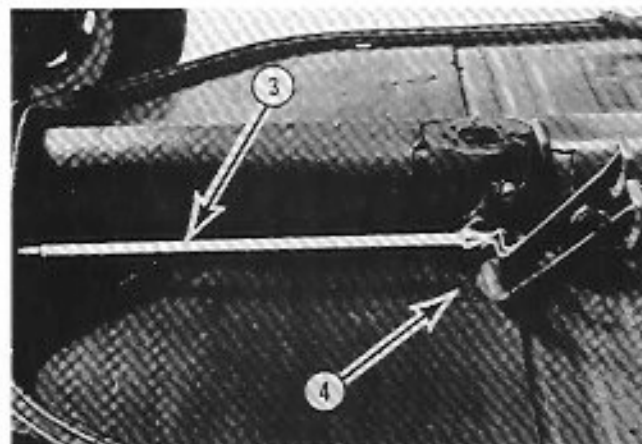
(2) #10 X 3/4" Sheet Metal Screws, Clamps

(2) "J" Nuts, 5/16" X 1-1/2" Hex Head Bolts, 5/16" Flat Washers

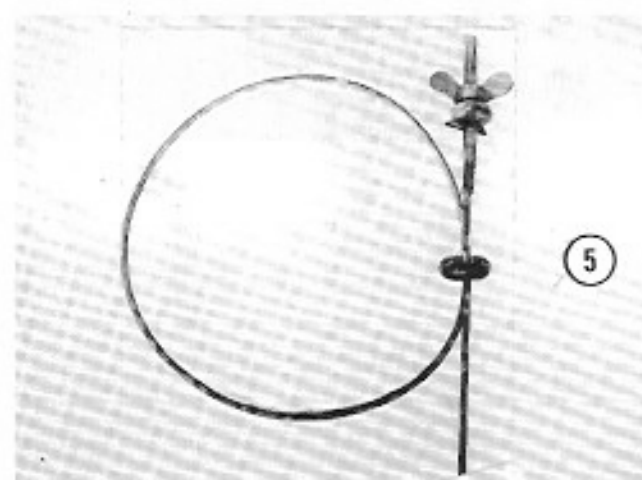
BRAKE EXTENDER-PEDAL STOP PLATE



- ① Apply LOC TITE to threads on VW brake master cylinder plunger and thread into BCW brake extender until tight.
- ② Thread VW lock nut onto BCW brake extender and then thread VW brake eyelet onto the BCW brake extender.



- ③ Install BCW brake extender assembly by inserting plunger end into brake master cylinder and connecting eyelet end to brake pedal. Reattach brake return spring and clip. Adjust brake plunger according to VW service manual.
- ④ While pedals are in the upright position, align VW pedal stop plate behind clutch and brake pedals. Trace stop plate slot onto the VW pan. Center punch and drill 5/16" hole. Attach stop plate to pan with 1/4" X 1" carriage bolt. Secure with fender washer, lock washer and nut.



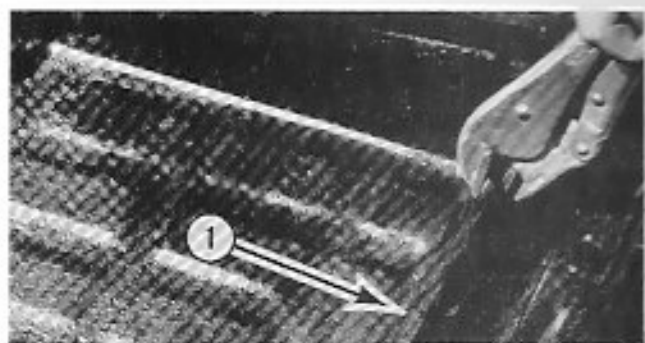
- ⑤ Insert opposite end of clutch cable through clutch arm eyelet and thread adjustment wing nut on cable four to five turns. By hand, pull cable tight, loop cable and install cable clamp. Tighten clamp and adjust clutch cable according to VW service manual.

(1) 1/4" X 1" Carriage Bolt, Flat Washer, Lock Washer, Nut

(1) Cable Clamp

CHASSIS DETAILS

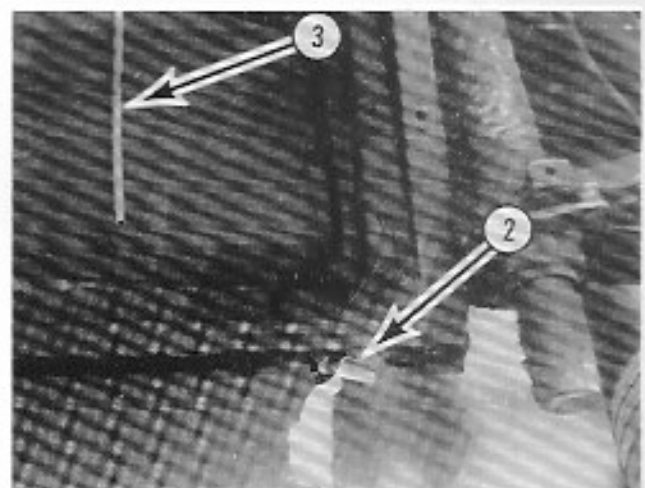
- 1 Remove front seat tracks from the floor pan using vise grips to bend tracks back and forth breaking spot welds.



- 2 Using hacksaw, cut off the sockets for the VW jack.

- 3 Using a hammer and cold chisel, remove rear seat heater control cable tubes.

Prepare chassis and paint black with a rust preventive type paint.

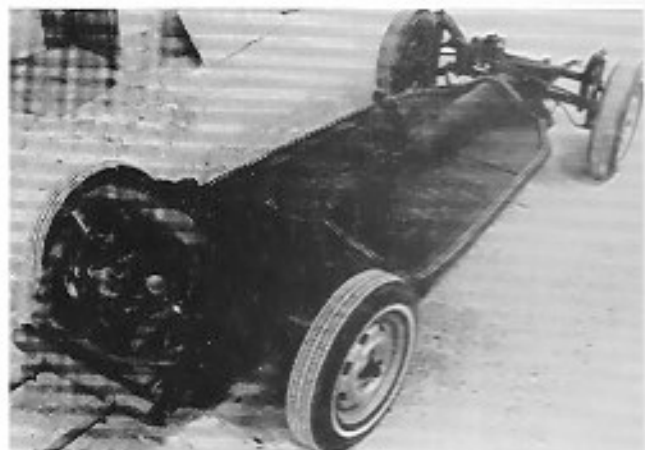


WHEELS AND TIRES

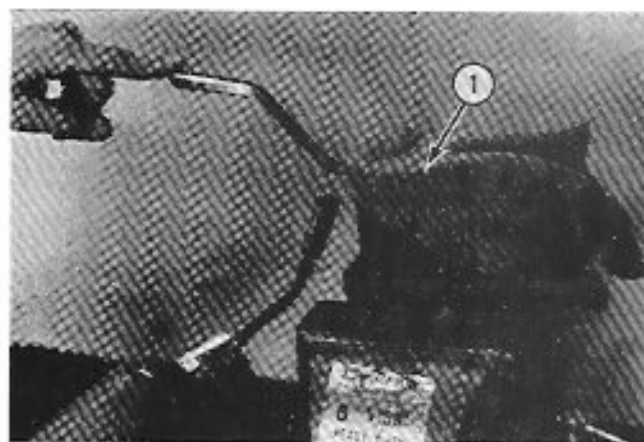
The VW wheels are very close in appearance to the original TD wheels. The TD was not available from the factory with wirewheels. Inspect five wheels for straightness and trueness. Wire brush or sand blast clean. Prime with rust preventive paint. Paint wheels silver grey or to match the color of your BCW body.

We recommend installing five new 600 X 15 tires. Bias belt for the classic look or radial for better handling characteristics. Balance wheels and tires. Inflate tires approximately 35 psi, rear, and approximately 12 psi, front.

NOTE: These tire pressures are intended to be a reference point only. Tire pressure will depend on type of tires, along with the ride and handling characteristics desired.

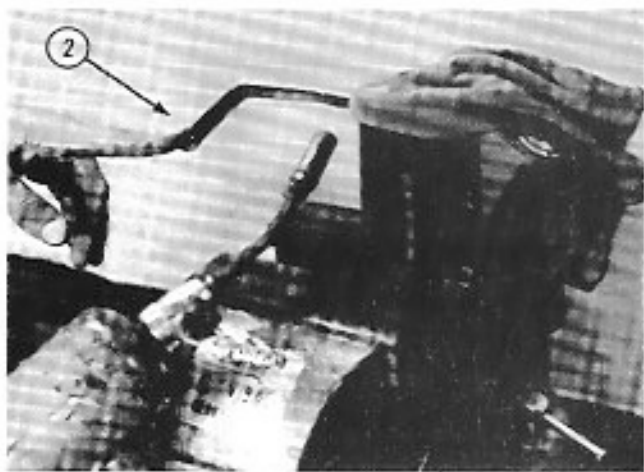


TURN INDICATOR LEVER

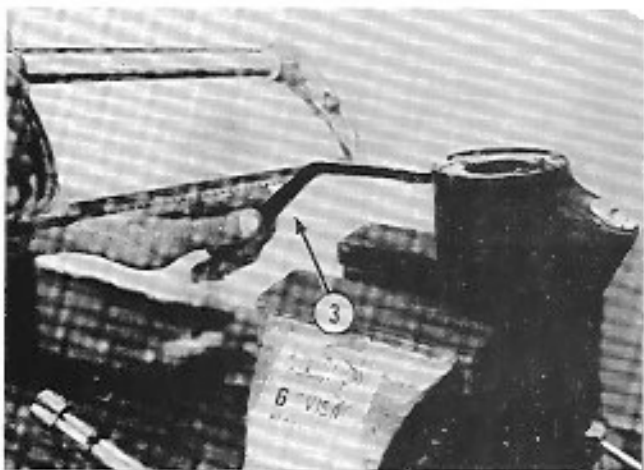


THIS OPERATION IS NECESSARY TO ELIMINATE INTERFERENCE BETWEEN THE STEERING WHEEL AND THE TURN SIGNAL LEVER.

- ① Wrap a wet towel around steering column to protect the internal mechanisms from the heat.



- ② Carefully heat lever with a propane torch while applying pressure to bend indicator toward the dashboard. **NOTE:** Once indicator begins to bend under your pressure, remove heat at once.



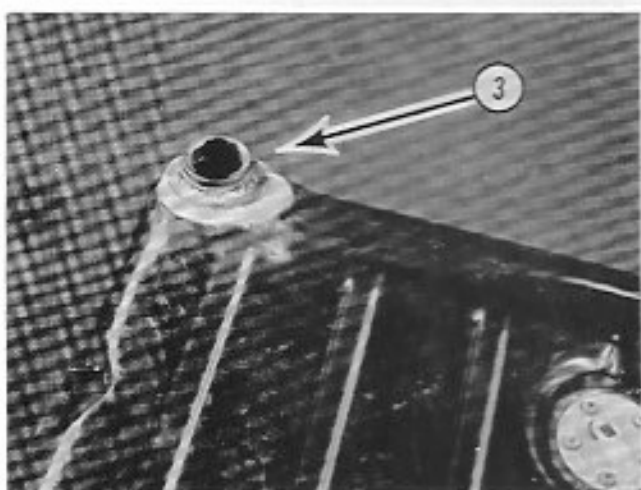
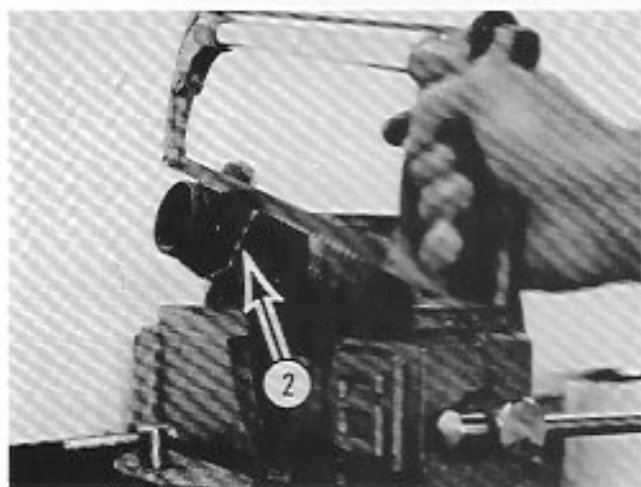
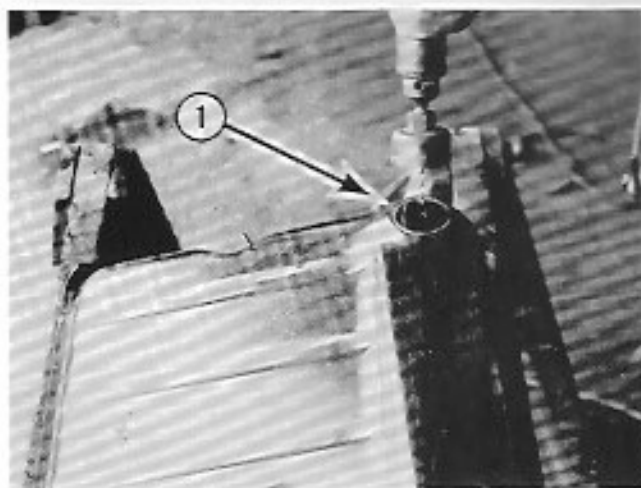
- ③ Use hacksaw to cut approximately 1" off the end of the indicator.

FUEL TANK MODIFICATION

CAUTION:

Before proceeding with any fuel tank operations, the following precautions must be taken for your safety:

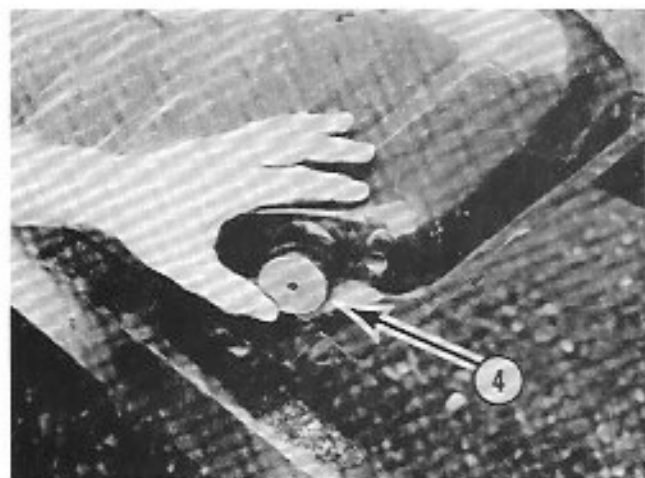
1. Completely drain tank of any fuel.
2. Fill tank with warm water and detergent.
3. Slosh water and detergent around inside tank.
4. Completely drain tank.
5. Again, fill tank with warm water and detergent.
6. Again, slosh water and detergent around inside tank.
7. Drain tank.
8. Flush tank with warm water and drain.



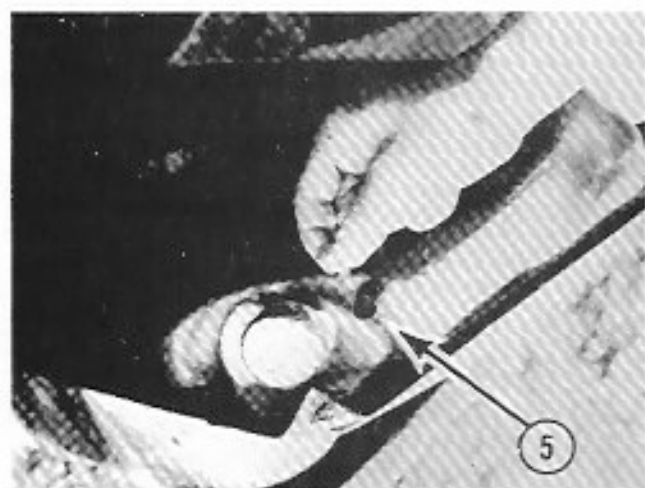
- 1 Using a holesaw, cut a 2" hole in the raised, flat corner of fuel tank, diagonally opposite from original filler neck. Save 2" cut out for step 4 (next page).
- 2 Saw "cap end" of filler neck, which was previously salvaged from VW, flush at body joint.
- 3 Install "cap end" of filler neck into the 2" hole and weld or braze neck to tank.

Continued on following page.

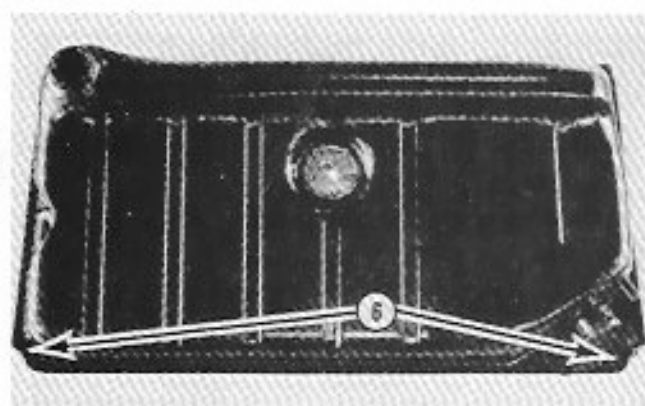
FUEL TANK MODIFICATION *(Continued)*



- ④ Plug original filler neck with 2" cut out saved from step ① (previous page) and weld or braze closed.



- ⑤ Plug smaller neck with carriage bolt and weld or braze closed. Plug and weld all other fuel tank openings. (Tank breather locations vary from year to year.)



- ⑥ Bend the corners of the front fuel tank flange upwards as shown in photo.

Check tank for leaks.

MUST USE VENTED GAS CAP.

(1) 1/4" X 3/4" Carriage Bolt

Parts Identification

BODY ASSEMBLY

- 1. Front Fender — LH — Fiberglass
- 2. Front Fender — RH — Fiberglass
- S ✓ 3. Rear Fender — LH — Fiberglass
- ✓ 4. Rear Fender — RH — Fiberglass
- ✓ 5. Running Board — LH — Fiberglass
- ✓ 6. Running Board — RH — Fiberglass
- 7. Door — LH — Fiberglass
- 8. Door — RH — Fiberglass
- I ✓ 9. Hood — Fiberglass
- 10. Hood Side Panel — LH — Fiberglass
- 11. Hood Side Panel — RH — Fiberglass
- ✓ 12. Front Body Section — Fiberglass
- I ✓ 13. Rear Body Section — Fiberglass
- 14. Body Side Panel — LH — Fiberglass
- 15. Body Side Panel — RH — Fiberglass
- I ✓ 16. Cowl — Fiberglass
- ✓ 17. Firewall — Fiberglass
- ✓ 18. Inner Body Liner — LH — Fiberglass
- ✓ 19. Inner Body Liner — RH — Fiberglass
- ✓ 20. Inner Body Liner — Center — Fiberglass
- NG ✓ 21. Front Splash Apron — Fiberglass
- ✓ 22. Rear Splash Apron — Fiberglass
- BCW ✓ 23. Simulated Gas Tank End — LH — Fiberglass
- S ✓ 24. Simulated Gas Tank End — RH — Fiberglass
- ✓ 25. Engine Cover — Fiberglass
- ✓ 26. Inner Door Sill — LH — Fiberglass
- ✓ 27. Inner Door Sill — RH — Fiberglass
- ✓ 28. Luggage Compartment Floor — Wood
- 29. Clip Angles (4) — Steel
- 30. Sound Deadening Package — (Not Shown) *Insulation*
- 31. Fastener Kit — Assembly — Plated — (Not Shown)

CHASSIS AND ENGINE COMPONENTS

- ✓ 40. Front Bumper Bracket — LH — Fabricated Steel
- ✓ 41. Front Bumper Bracket — RH — Fabricated Steel
- ✓ 42. BCW Steering Shaft — Fabricated Steel — (Not Shown)
- ✓ 43. Brake Extension Rod — Fabricated Steel — (Not Shown)
- ✓ 44. Running Board Support — Fabricated Steel
- ✓ 45. Rear Sub-Frame — Fabricated Steel
- ✓ 46. Steering Column Angle — Steel
- 47. Stabilizer Bar Material — Steel
- 48. Belly Pan Gasket — Rubber — (Not Shown)
- 49. Air Filter
- 50. Heater Hose — 10'
- 51. Hardware Kit — Chassis Prep — (Not Shown)

RADIATOR GRILL ASSEMBLY

- 60. Radiator Shell — Chrome/Brass
- 61. Radiator Grill Slats — Stainless Steel
- 62. Octagon Radiator Cap — Chrome

- 63. Bull Nose — Chrome
- 64. Radiator Emblem (BCW) — Chrome/Enamel
- 65. Radiator Core — Fiberglass
- 66. Grill Shell Grommet (2) — Rubber

EXTERIOR COMPONENTS

- 70. Fender Mirror — RH — Chrome with Rubber Pad
- 71. Fender Mirror — LH — Chrome with Rubber Pad
- 72. Door Hinge — LH Upper — Aluminum
- 73. Door Hinge — LH Lower — Aluminum
- 74. Door Hinge — RH Upper — Aluminum
- 75. Door Hinge — RH Lower — Aluminum
- 76. Running Board Treads (12 pcs.) — Aluminum and Rubber
- 77. Hood Molding Strip — Aluminum
- 78. Hood Molding Ends (2) — Chrome
- 79. Cowl Rubber — (Not Shown)
- 80. Hood Handle Set — LH — Chrome — (Not Shown)
- 81. Hood Handle Set — RH — Chrome
- 82. Simulated Gas Filler — Aluminum
- 83. Wiper Arms (2) — Windshield
- 84. 12" Wiper Blades (2) — Windshield — (Not Shown)
- 85. 9" Wiper Blades (2) — Windshield
- 86. Fender Welting — Black — (Not Shown)
- 87. Hubcaps (5) — Chrome
- 88. BCW Emblems — Hubcaps (5) — Chrome
- 89. Gas Tank Beauty Strips (2) — Stainless Steel
- 90. Door Weatherstripping — Rubber — (Not Shown)
- 91. Hood Hinge (Factory Installed) — Stainless Steel — (Not Shown)
- 92. Engine Cover Hinge (Factory Installed) (2) — Stainless Steel — (Not Shown)

BUMPER ASSEMBLY

- 100. Front Bumper — Chrome
- 101. Rear Bumper — Chrome
- 102. Bumper Overriders (4) — Chrome
- 103. Packing Set (Bumper) (8) — Rubber — (Not Shown)
- 104. Packing (Bumper to Back Bar) (9) — Aluminum — (Not Shown)
- 105. Back Bar (Front Bumper) — Steel
- 106. Back Bar (Rear Bumper) — Steel
- 107. "S" Bracket (Front Bumper) (2) — Steel
- 108. "S" Bracket (Rear Bumper) (2) — Steel
- 109. Spacer (Front Bumper) (2) — Aluminum
- 110. Spacer (Rear Bumper) (2) — Aluminum
- 111. Bumper Bolts (5) — Chrome — (Not Shown)
- 112. Bumper Fastener Kit — (Not Shown)

LIGHTING AND ELECTRICAL PACKAGE

- 120. Positive Cable Battery — (Not Shown)
 - Grommet — 3/4" (3) — Rubber — (Not Shown)
 - Grommet — 3/16" — Rubber — (Not Shown)
- 121. Battery Cable Clips (5) — (Not Shown)
- 122. Ground Strap Battery — (Not Shown)
- 123. Wire Harness — (Not Shown)
- 124. Headlight Shells (2) — Chrome
- 125. Headlight Cradle — LH — Cast Aluminum
- 126. Headlight Cradle — RH — Cast Aluminum

- 127. Pad — Headlight Cradle
- ✓ 128. Headlight Tie Bar — Fab
- 129. Parking Lamp (2) — Chr
- 130. Tail Lamp Rim (2) — Ch
- 131. Tail Lamp Lens (2) — G
- 132. Tail Lamp Reflector (2) —
- 133. Sockets and Bulbs (Tail
- 134. Sockets and Bulbs (Brak
- 135. Tail Lamp Boot (2) — Ru
- 136. License Plate Lamp — C
- 137. Horn Adaptor — Chrome

REAR SPARE TIRE RACK

- ✓ 150. Spare Tire Carrier — Sta
- ✓ 151. Spare Tire Carrier — Piv
- ✓ 152. Spare Tire Carrier — Piv
- 153. Spare Tire Carrier — Ny
- 154. Spare Tire Latch (2) — C
- ✓ 155. License Plate Holder —

WINDSHIELD ASSEMBLY

- 160. 9" Windshield Frame —
- 161. 12" Windshield Frame —
- 162. Windshield Side Bracket
- 163. Windshield Side Bracket
- 164. Windshield Cowl Bracke
- 165. Windshield Cowl Bracke
- 166. Pad — Windshield Brack
- 167. Pad — Windshield Brack
- 168. Windshield Cowl Rubber
- 169. Wing Bolt Set (Windshie
- 170. Cone Washer (Windshie

INTERIOR COMPONENTS

- 176. Wood Dash — Walnut
- 177. Dash Instrument Cluster
- 178. Dash Grab Handle — Ch
- 179. Latch/Striker/Door Hand
- 180. Latch/Striker/Door Hand
- 181. Shifter — Chrome/Leath
- 182. Wood Rim Steering Whe
- 183. Rearview Mirror — Chro

CLASSIC INSTRUMENTS

- 190. Speedometer
- 191. 8' Speedometer Cable —
- 192. 6000 RPM Tachometer
- 193. Fuel Gauge
- 194. Fuel Sender Unit — (Not
- 195. Dynamo Gauge
- 196. High Beam Indicator (Bl
- 197. Turn Signal Indicator (G
- 198. Oil Pressure Indicator (R

der (2) — Rubber
ted Steel
e with Rubber Pad
e

stainless Steel
nts) (2)
nd Turn) (2)
er
me

ary Upright — Fabricated Steel
Upright — (3 pcs.) — Fabricated Steel
Arm and Tire Mount — Fabricated Steel
Bearings — (4) — (Not Shown)
me — (Not Shown)
ricated Steel

dized Aluminum
odized Aluminum — (Not Shown)
LH — Cast Brass — Chromed
RH — Cast Brass — Chromed
- LH — Cast Brass — Chromed
- RH — Cast Brass — Chromed
Cowl — LH — Rubber
Cowl — RH — Rubber

(2) — Chrome
(2) — Chrome — (Not Shown)

ne
- LH — (3 pcs.) — Chrome
- RH — (3 pcs.) — Chrome

with Rubber Pad

ON PACKAGE

ot Shown)

own)

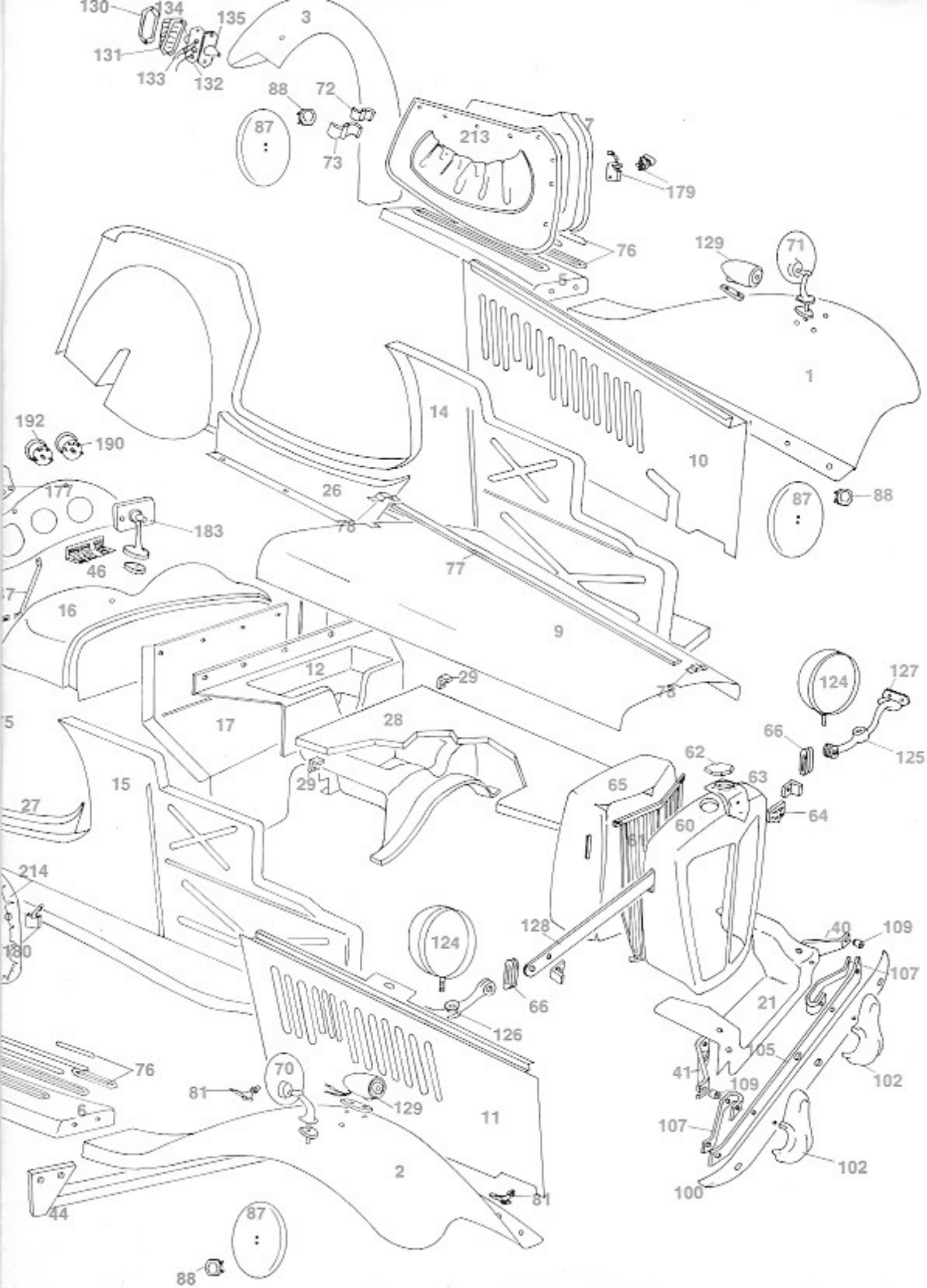
n)

INTERIOR TRIM PACKAGE

- 205. Upholstery Windlace — (Not Shown)
- 206. Carpet Set — (11 pcs.) — (Not Shown)
- 207. Upholstered Seat Back
- 208. Seat Brackets (2) — Plated Steel — (Not Shown)
- ✓ 209. Seat Box (2) — Fiberglass
- 210. Seat Hinges (2) — Stainless Steel — (Not Shown)
- 211. Upholstered Seat Bottom — LH
- 212. Upholstered Seat Bottom — RH
- 213. Door Upholstery — LH
- 214. Door Upholstery — RH
- 215. Door Restraint (2) — (Not Shown)

CONVERTIBLE TOP PACKAGE

- 220. Convertible Top with Bows
- 221. Side Curtains — LH
- 222. Side Curtains — RH
- 223. Boot — (Not Shown)
- 224. Convertible, Side Curtain and Boot Hardware
— Stainless Steel — (Not Shown)



1. **Caulking** — To insure weatherproof, rattle-proof driving, you should caulk all joined, lapped or butted panel surfaces with silicone caulking compound (available at all better hardware stores).
2. **Alignment** — Since you are constructing an automobile from the ground up, you should always hand tighten bolts and check alignment and gaps between panels before securing bolts.
3. **Fastening Procedure** — Unless otherwise noted in the text, all bolts should be inserted through the fiberglass panels to be joined and then secured with a fender washer, lock washer and nut. We also recommend using LOC TITE on all threads.

SUPPLIES REQUIRED FOR ASSEMBLY

Duct Tape — 1 roll
Silicone Caulk — 3 tubes
Paint — 3 black spray cans
Primer — 3 spray cans
Undercoat — 3 (16 oz.) spray cans
Paint (color of your BCW) — 3 spray cans

Contact Cement — 2 qts.
Spray Adhesive — 16 oz.
Lubricating Oil
Loc Tite
Sandpaper — 220 grit
Paint Brush — 2"

TOOLS REQUIRED FOR ASSEMBLY

Caulking Gun
Pop Rivet Gun — 1/8", 3/16"
Razor Blade Knife
USA Socket Set — 3/8" and Open End Wrenches
Metric Sockets
Allen Head Wrenches
Pencils
Chalk
Power Drill — 1/4" or 3/8"

Drill Bits — 1/8", 3/16", 5/16", 3/8"
Tape Ruler
Wire Cutters
Phillips Head Screwdriver
Screwdriver
Two "C" Clamps
Flat File
Wire Crimper

MATCHING PAINT

To match supplementary paint to the color of your BCW Model 52, take a piece of the fiberglass to your auto parts store and match to your dealers color chart for spray painting with aerosol paint. We recommend acrylic enamel paint.

Paint to match color of your Model 52 BCW.

Steel Preparation

Aluminum Preparation

- | | |
|----------------------------------|-------------------------------------|
| ① Spare Tire Carrier* | ⑤ Door Hinges (4) |
| ② Headlight Tie Bar | ⑥ Carriage Bolts (4)
1/4" X 3/4" |
| ③ BCW Steering Shaft | ⑦ Headlight Cradles |
| ④ VW Steering
Column Assembly | |

All metal parts should be prepared before painting as follows:

NOTE: Aluminum requires special preparation. Ask your auto paint dealer for recommendation. Headlight cradle castings should be smoothed with a file.

Rust, scale, oil and grease must be removed.

Roughen with 220 grit sandpaper.

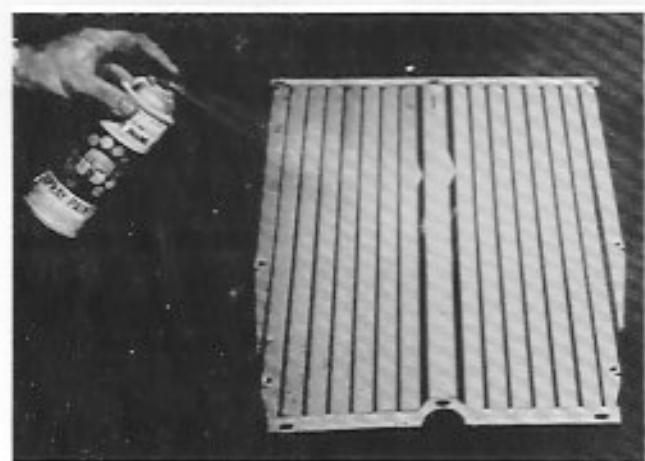
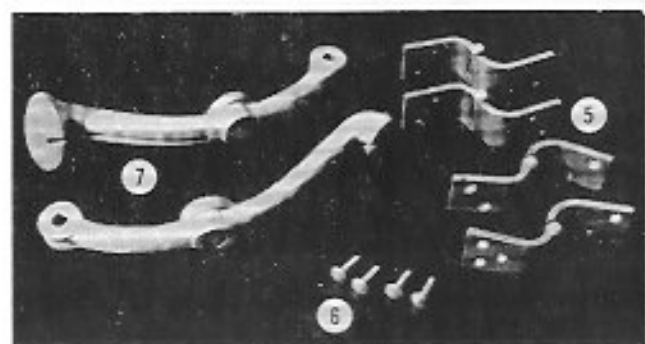
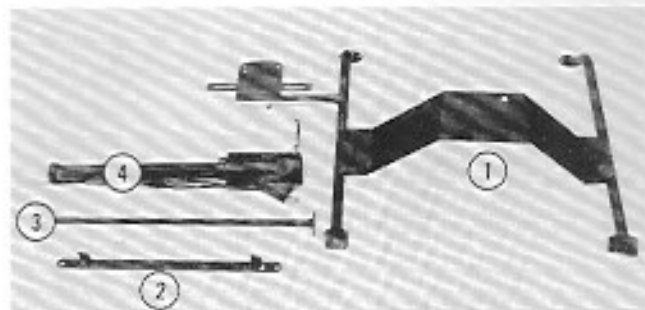
Prime, with a rust preventive paint.

Paint. For a finish coat BCW recommends an acrylic enamel paint.

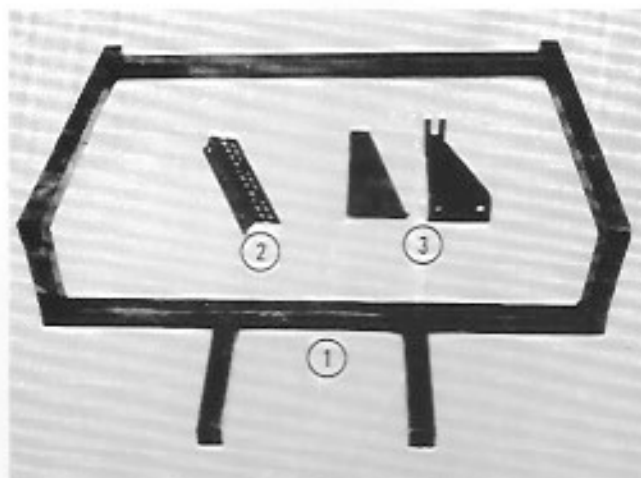
GRILL SLATS

The original MG-TD grill slats were usually painted to match the upholstery color. However, some were painted to match the exterior color of the car. Only the late TD Mark II grill slats were chrome. Remove grill slats from chrome grill shell before preparing and painting.

**Patent Pending*



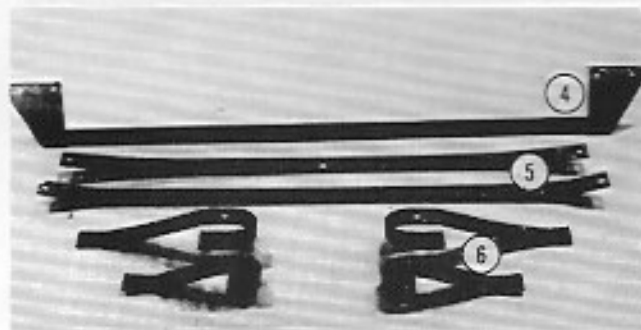
PAINT



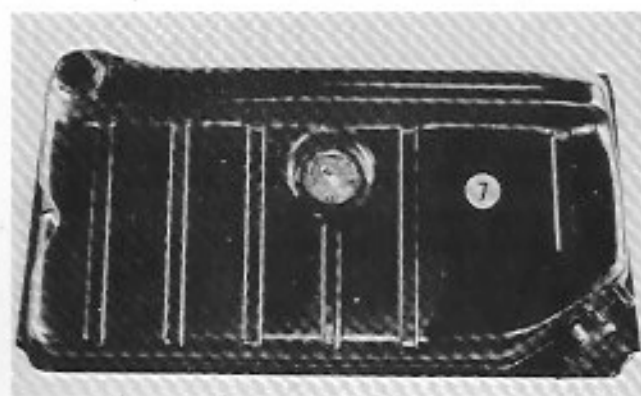
PAINT BLACK

Steel Preparation

- ① Sub-frame
- ② Steering Column Angle
- ③ Front Bumper Brackets (2)



- ④ Running Board Support
- ⑤ Bumper Back Bars (2)
- VW Horn (not shown)
- ⑥ Bumper "S" Brackets (4)



- ⑦ Modified VW Fuel Tank

REAR SUB-FRAME

Sub-frame is attached to the VW chassis engine mounting forks with four U-bolts.

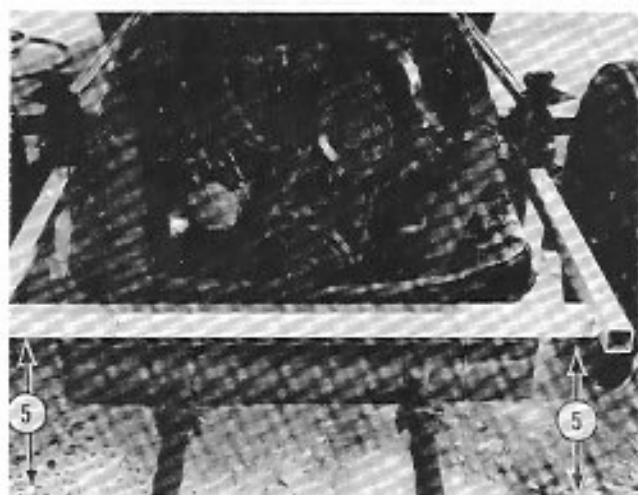
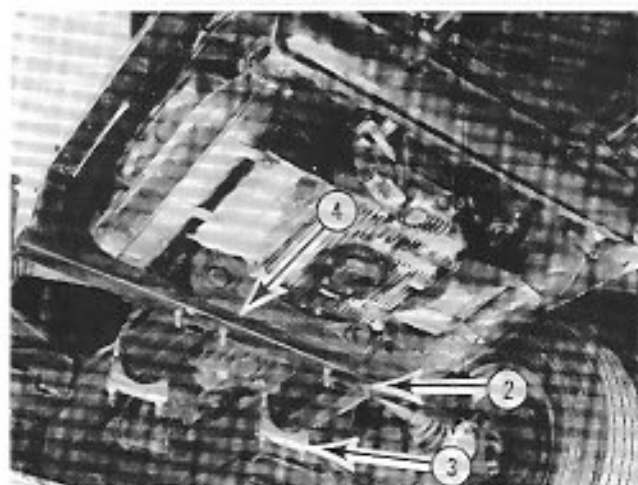
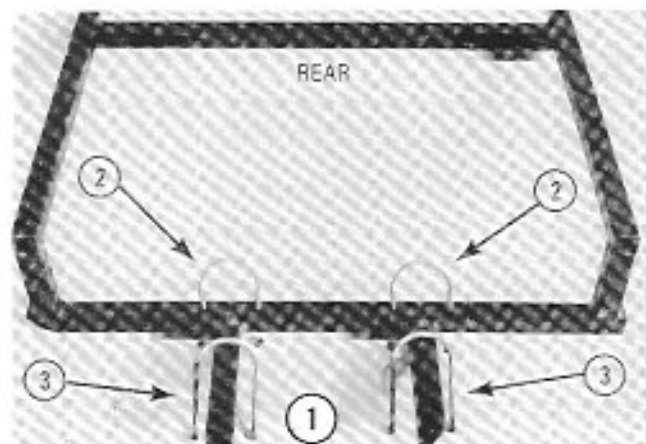
- 1 Face sub-frame forks toward the front of the car under the VW chassis engine mounting forks.
- 2 Install two rear U-bolts over chassis forks and insert through sub-frame.
- 3 Install two front U-bolts over chassis forks and insert through sub-frame.

IMPORTANT: Use lock washers on all U-bolts.

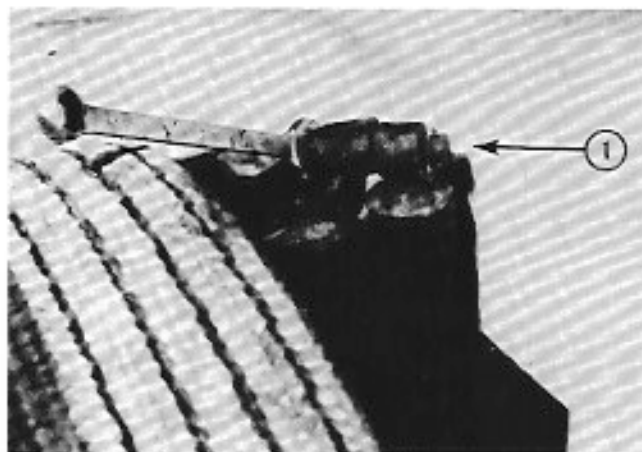
- 4 Pull sub-frame flush against bellhousing toward the rear of the car before tightening U-bolts.

- 5 Measure at several points to be sure the chassis is parallel to the floor and that the sub-frame is parallel to the chassis.

(4) U-Bolts
(8) Lock Washers, Nuts



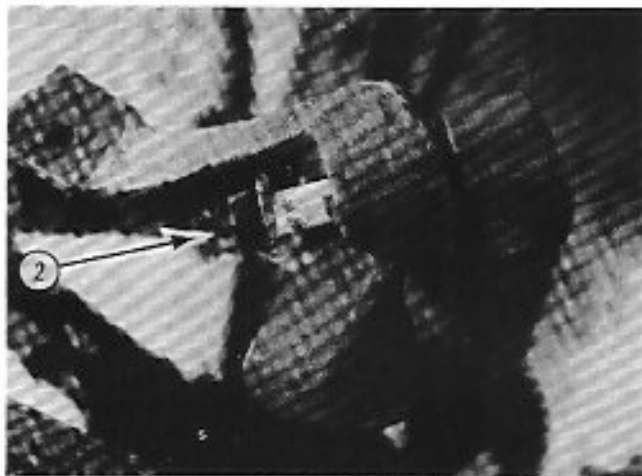
SHOCK ABSORBERS



Rear Shock Absorbers Mounts — Top Bolt

This process will allow later access to the rear shock absorbers.

- 1 Remove bolt on top rear shock absorber mount.

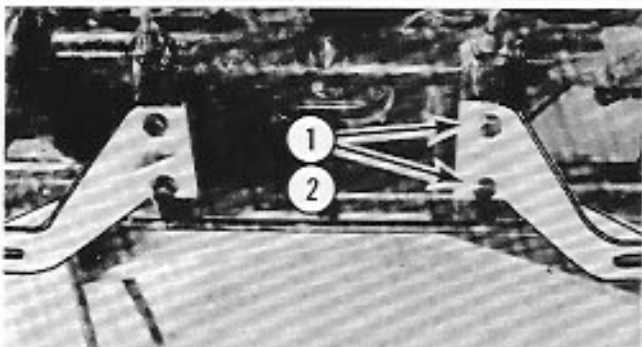


- 2 Reverse bolt and reinstall.

Repeat bolt reversal on opposite rear shock absorber mount.

NOTE: Use standard type VW shock absorbers. We do not recommend heavy duty or air shock absorbers.

BUMPER BRACKETS



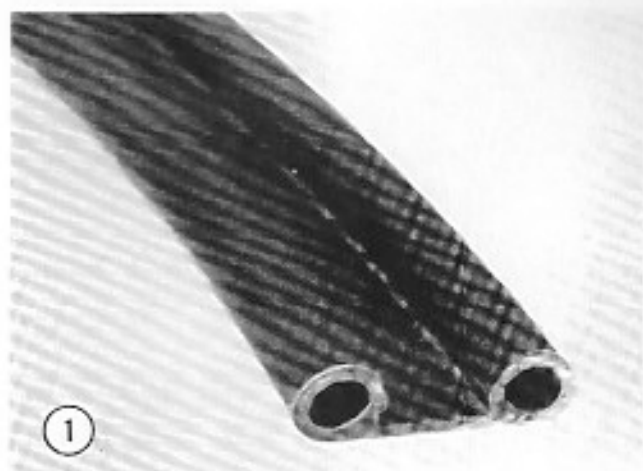
Front Bumper Brackets

Four bolts attach front axle beam to the floor pan. These bolts will also be used to attach the bumper brackets to the chassis.

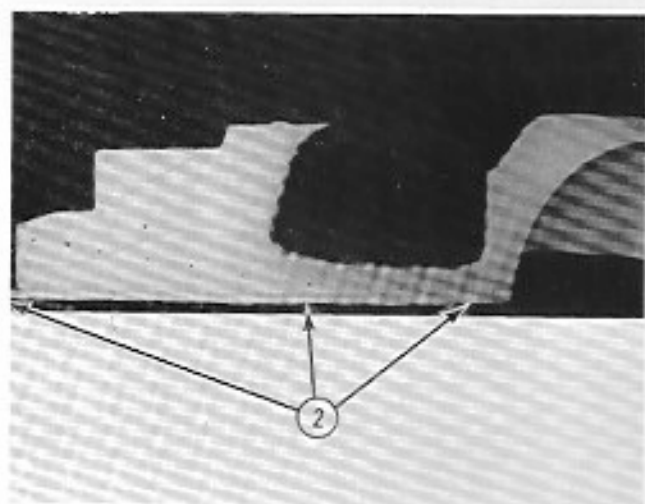
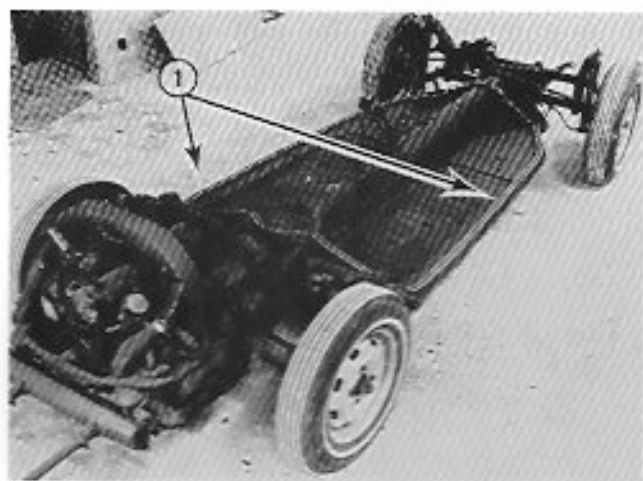
- 1 On driver's side remove both bolts.
- 2 Install bumper bracket. Reinstall and tighten bolts to VW specifications.

Repeat same process on passenger side.

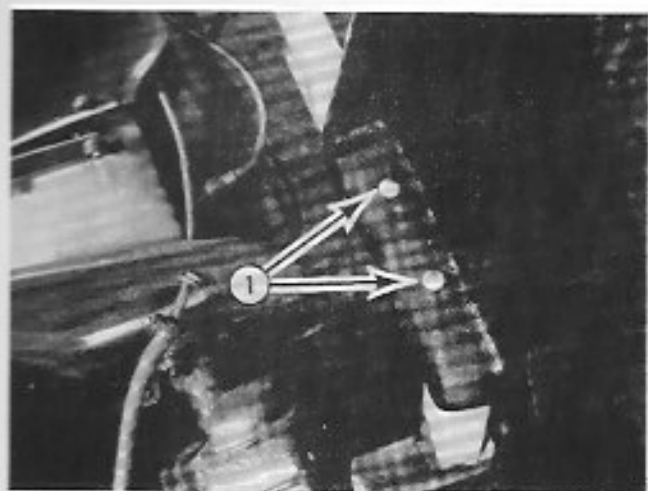
BELLY PAN GASKET



- 1 Cut, fit and glue new belly pan gasket around perimeter of chassis.
- 2 Caulk belly pan gasket where it will meet side panel.

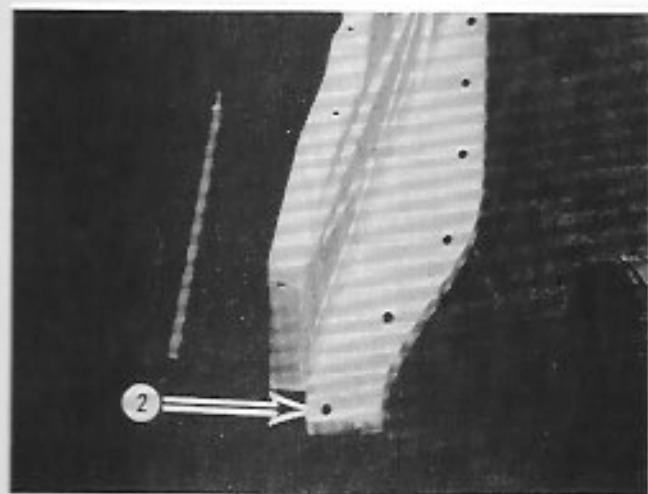


BODY SIDE PANELS



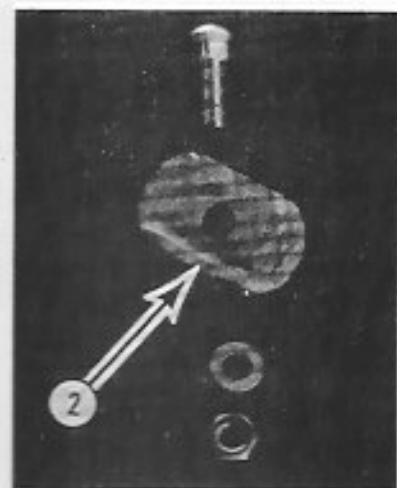
The side panel is attached to the floor pan and the rear sub-frame. The rear section of the panel is recessed to fit around the rear sub-frame and is also molded to fit around the perimeter of the chassis.

- 1 Attach side panel to sub-frame. Insert two $\frac{1}{4}$ " X $2\frac{1}{2}$ " carriage bolts down through the side panel and through the rear sub-frame. Secure with lock washers and nuts.



- 2 Attach side panel to chassis. Begin at the front of the car. Skip the first hole, then insert $\frac{5}{16}$ " X $1\frac{1}{4}$ " large head carriage bolts down through the second, third, fourth, fifth, sixth and seventh holes. Place stock VW washers underneath the chassis, then a lock washer and nut.

Install opposite side using the procedure described above.



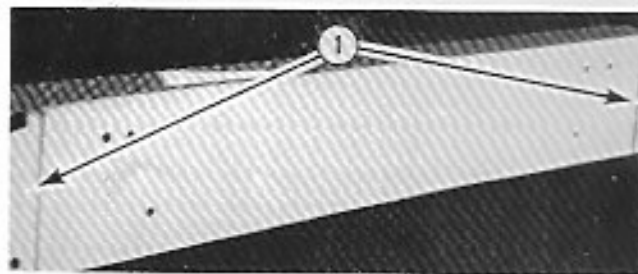
(2) $\frac{1}{4}$ " X $2\frac{1}{2}$ " Carriage Bolts, Lock Washers, Nuts per panel

(6) $\frac{5}{16}$ " X $1\frac{1}{4}$ " Large Head Carriage Bolts, Lock Washers, Nuts per panel

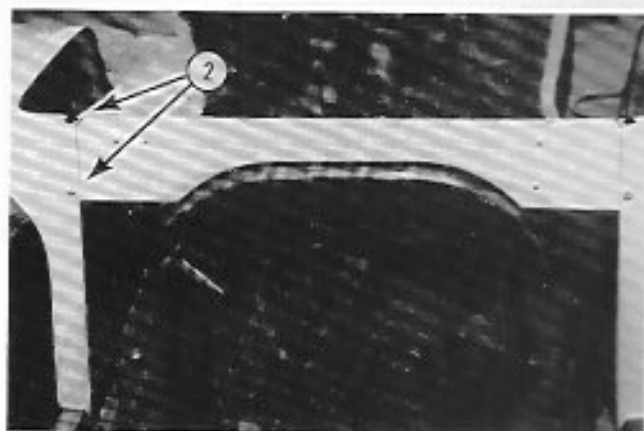
REAR BODY SECTION

The rear body section is attached to body side panels by four carriage bolts — two bolts per side. Note that the rear body section is indented to allow it to slide underneath the side panels. The gap where the side panel meets the rear body section should be even and approximately 1/8" to 1/4" wide.

- ① Caulk overlapping bolting areas before assembly.



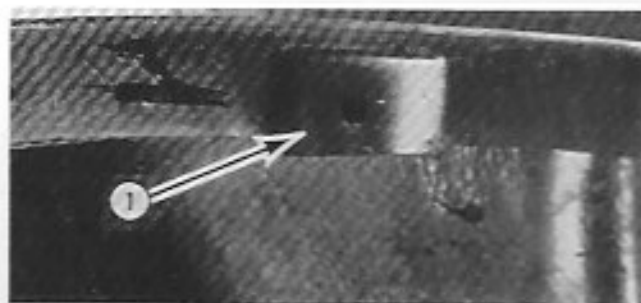
- ② Insert four 1/4" X 3/4" carriage bolts from the outside of the body side panels through the side and rear body section. Secure with fender washers, lock washers and nuts.



(4) 1/4" X 3/4" Carriage Bolts, Fender Washers,
Lock Washers, Nuts

COWL

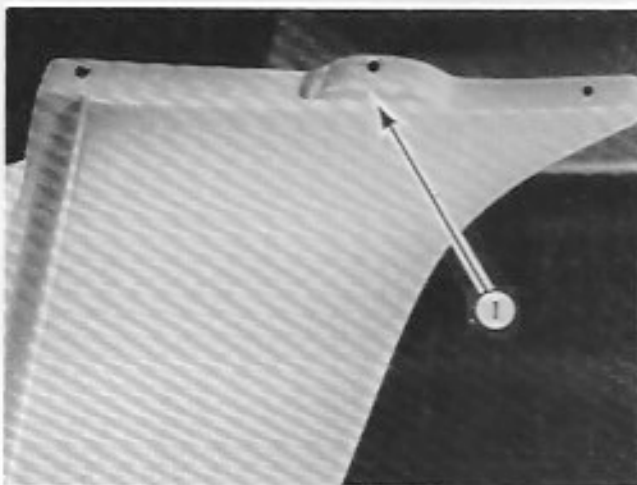
Each side of the cowl is attached to the body side panel with three carriage bolts.



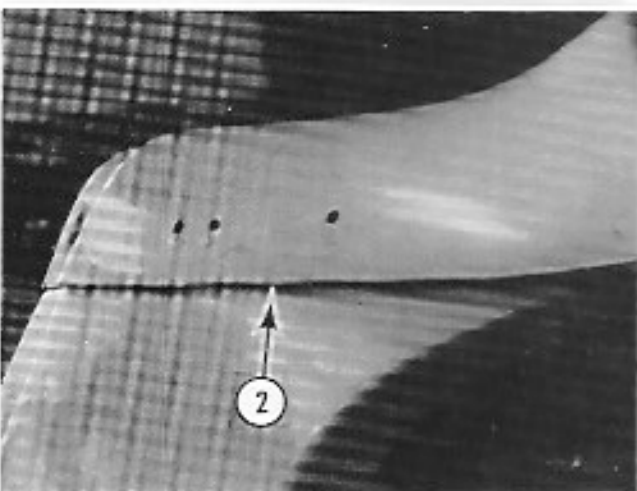
- ① Set the cowl on the left and right body side panels. Make sure that the locator tabs line up on both sides.

Before actual installation, caulk the bolting flanges on each side of the cowl.

Insert three 1/4" X 3/4" carriage bolts down from the underside of the cowl into the side panel on each side. Secure with fender washer and nut.



- ② Check alignment on both sides. Properly installed, the cowl will have 1/4" off set from the body side panels.

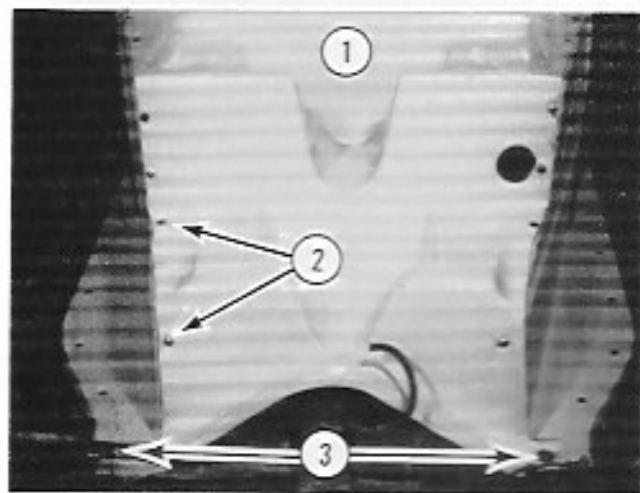


- (6) 1/4" X 3/4" Carriage Bolts, Fender Washers, Lock Washers, Nuts

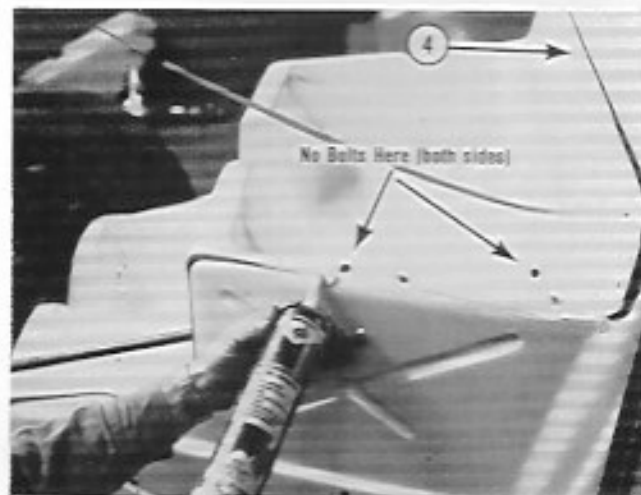
FRONT BODY SECTION

The front body section is attached to the side panels with twelve 1/4" X 3/4" carriage bolts and to the VW chassis with two 1/4" X 2" large head carriage bolts through the foremost hole in the panel.

- ① Slide the front body panel down on top of the two side panels flush against the cowl panel.
- ② Line up the holes and insert the 1/4" X 3/4" carriage bolts from the outside of the car. This step is more easily accomplished with two people — one outside inserting the carriage bolts and one inside securing them with fender washers, lock washers and nuts.
- ③ Insert 1/4" X 2" large head carriage bolts down through the foremost hole in each panel and secure with flat washers, lock washers and nuts to tie assembly to VW chassis.



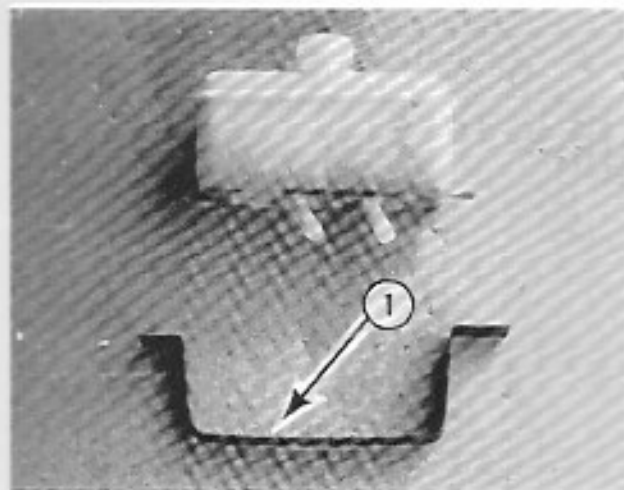
- ④ Caulk all joints, except top joint.



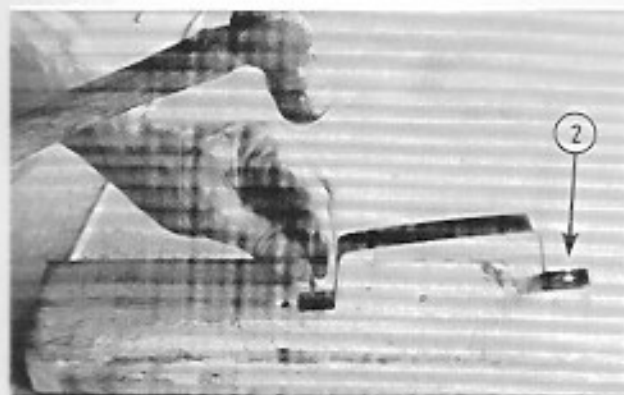
(12) 1/4" X 3/4" Carriage Bolt, Fender Washers, Lock Washers, Nuts

(2) 5/16" X 2" Large Head Carriage Bolts, Fender Washers, Lock Washers, Nuts

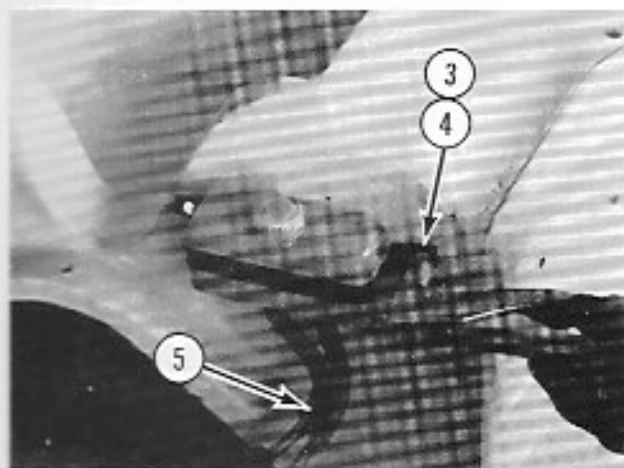
MASTER CYLINDER RESERVOIR



- (1) Bend metal strap to shape of VW brake fluid reservoir as shown.



- (2) Punch hole in each end of strap.



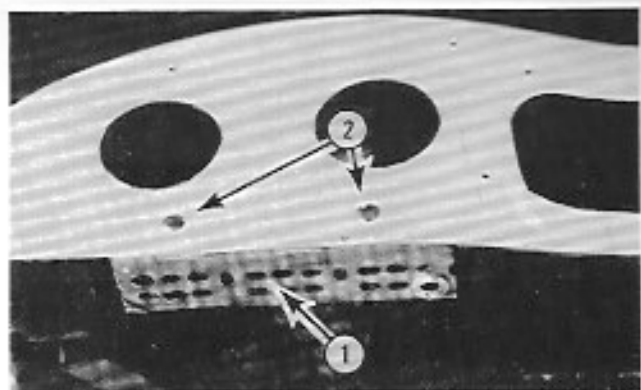
- (3) While holding reservoir and strap in position, drill two 1/8" holes through front body section.
(4) Attach with rivets.
(5) Connect lines.

Bleed and adjust brakes according to VW service manual.

(2) 1/8" X 1/4" Pop Rivets
(1) Metal Strap

STEERING COLUMN ANGLE

- 1 Place the steering column angle under the dashboard section of the cowl panel.
- 2 Insert two 1/4" X 3/4" carriage bolts down through the dashboard and through the steering column angle.
Secure with fender washers, lock washers and nuts.

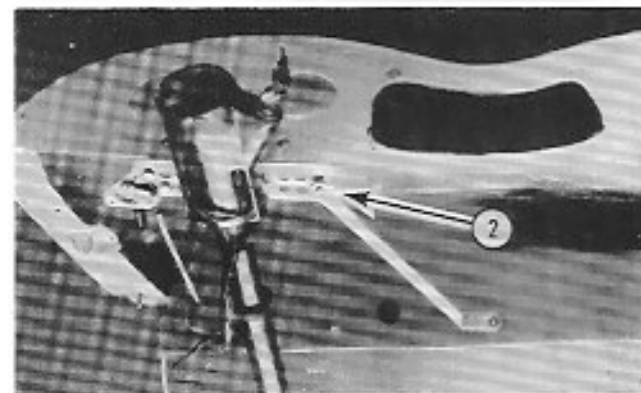
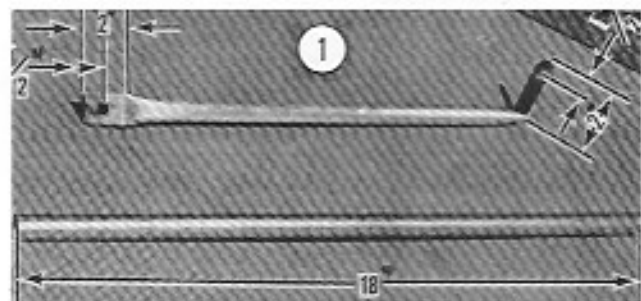


(2) 1/4" X 3/4" Carriage Bolts, Fender Washers, Lock Washers, Nuts

DASH STABILIZER BAR

The dash stabilizer bar will tie the steering column angle to the cowl and firewall. In this step of the process, the bar will be constructed and attached to the steering column angle.

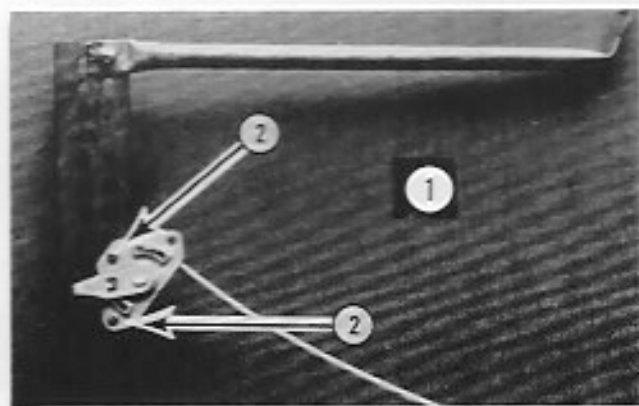
- 1 Construct dash stabilizer bar from the 18" piece of tubing supplied in kit. Flatten 2" of each end of tubing by inserting in vise. Drill a 5/16" hole, 1/2" from each end, and then bend one end tubing as shown.
- 2 Attach straight end of bar to steering column angle. Insert 1/4" X 3/4" carriage bolt through stabilizer bar and steering column angle.
Secure with fender washer, lock washer and nut.



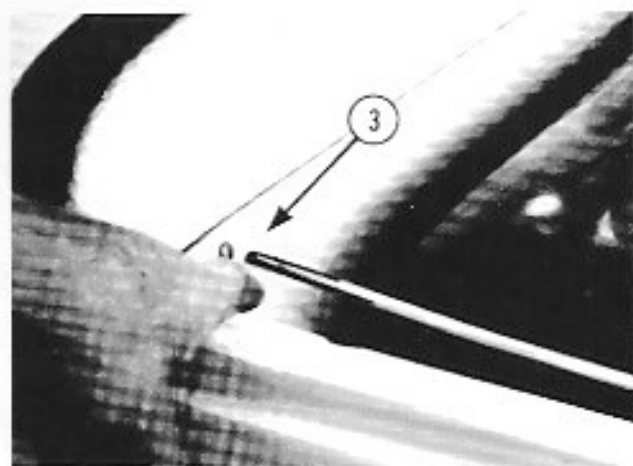
(1) 1/4" X 3/4" Carriage Bolt, Fender Washer, Lock Washer, Nut

HOOD RELEASE HANDLE

VW hood release handle is also mounted on the steering column angle.



- ① Align hood release handle on steering column angle.
- ② Insert two 3/16" X 1/2" round head bolts. Secure bolts with flat washers, lock washers, and nuts. (In order to obtain a better view of this installation, the steering column angle was not mounted to dash in this photo.)

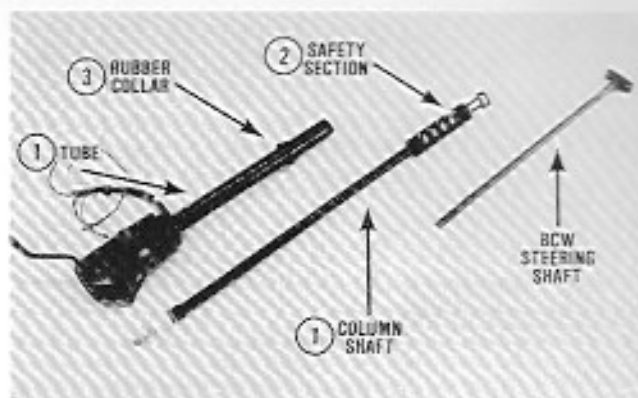


- ③ Push the hood release cable forward through the hole in the cowl on the passenger side.

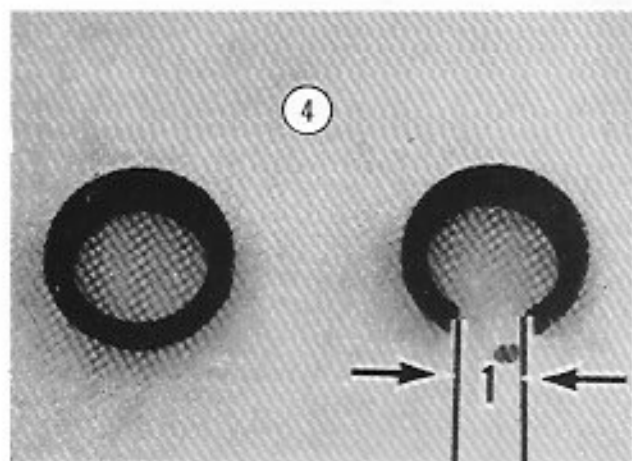
(2) 3/16" X 1/2" Round Head Bolts, Flat Washers, Lock Washers, Nuts

STEERING COLUMN

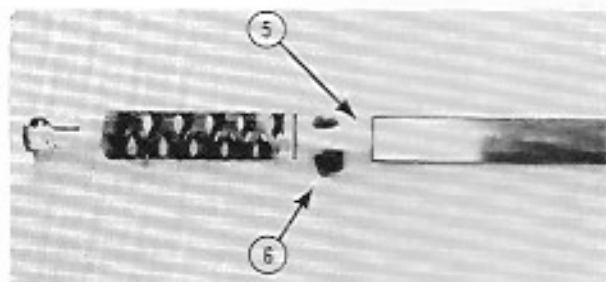
- ① Remove steering column shaft from tube.
- ② Closely inspect steering column safety section for damage. This section must be thoroughly checked for cracks and deformation. Even if the safety section is only slightly damaged, the complete steering shaft must be replaced.
- ③ Remove rubber collar from the steering column tube.



- ④ Cut 1" from rubber collar as shown.

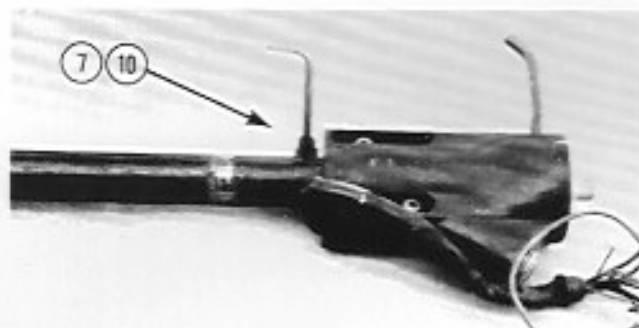


- ⑤ Reassemble steering column shaft in tube.
- ⑥ Slip rubber collar over steering column shaft as shown.



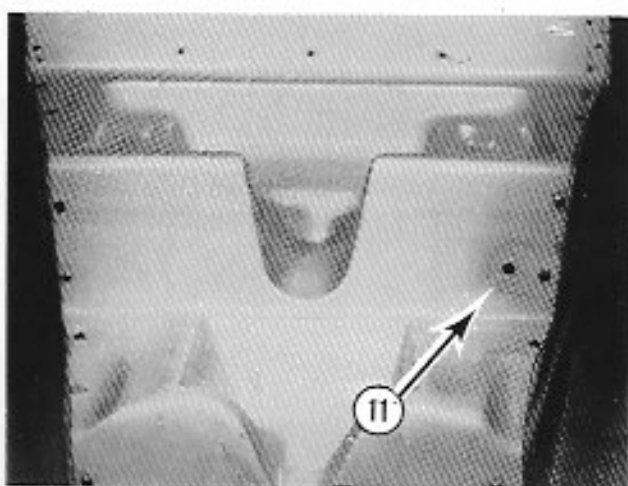
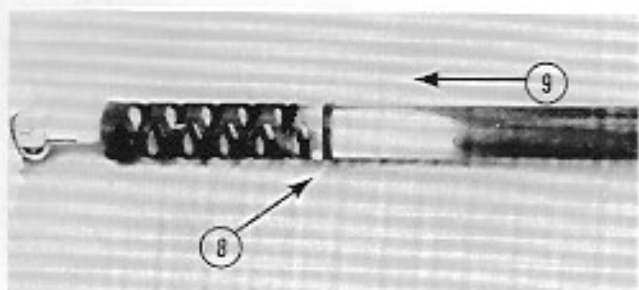
(Continued on the following page)

STEERING COLUMN *(Continued)*



Steering Column *(Continued)*

- ⑦ Using an allen head wrench, loosen clamp near the top of the tube.
- ⑧ Slide rubber collar into the bottom of tube.
- ⑨ Pull tube toward safety section of the shaft. Allow approximately 1/16" of clearance between rubber collar and safety section.
- ⑩ Using allen head wrench, retighten clamp at top of tube.
Place the steering column assembly in the passenger compartment.



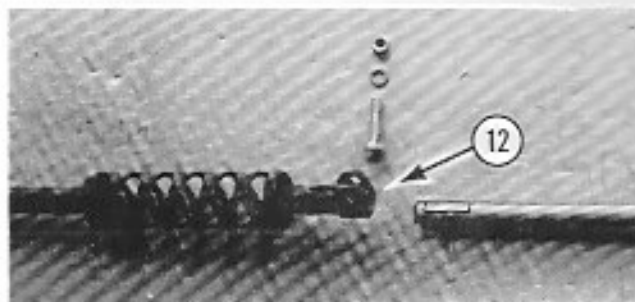
- ⑪ From the front of car, pass the BCW steering shaft through hole in front body section.

(Continued on following page)

STEERING COLUMN (Continued)

Steering Column (Continued)

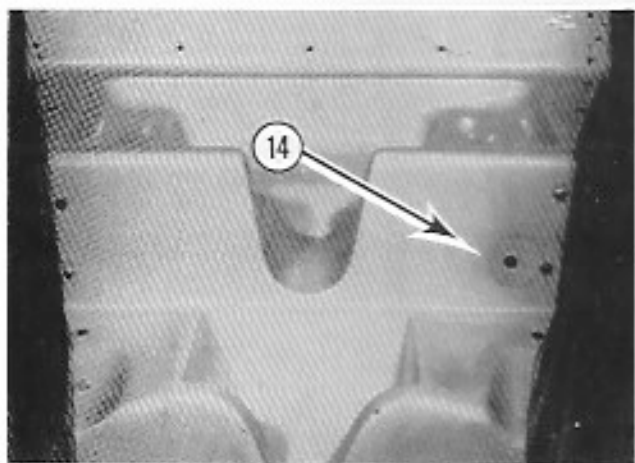
- 12 From inside the passenger compartment, slip the BCW steering shaft into the bottom portion of the VW steering column shaft. Reassemble using the original VW clamp, bolt, nut and lock plate.



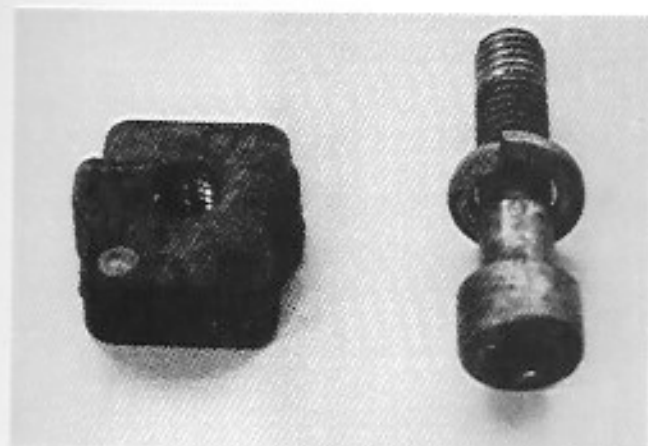
- 13 Remove the short VW steering shaft from VW rubber flex joint. Replace with the longer BCW steering shaft. Use the original VW hardened bolts, lock washers and nuts. After this connection is made, peen the ends of the bolts over the nuts as a safety precaution.



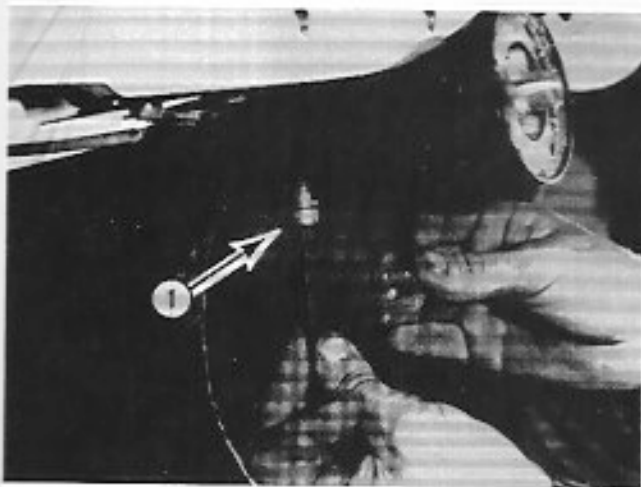
- 14 Grease the BCW steering shaft where it passes through front body section.



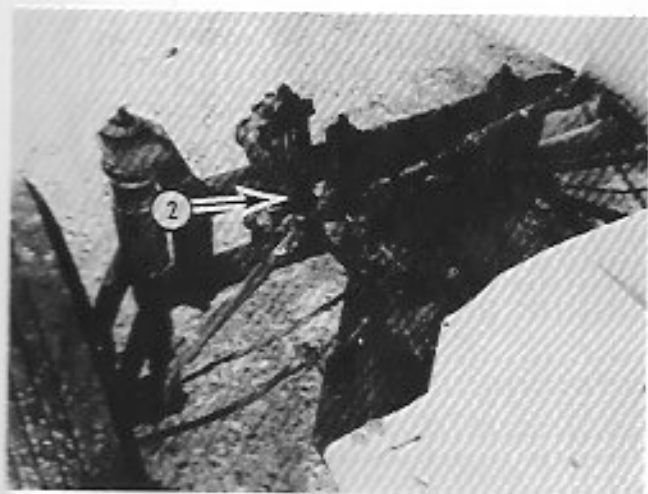
STEERING COLUMN MOUNT



The upper end of the steering column assembly is attached to the steering column angle, underneath the dashboard and allen head bolts and rectangular nuts from the VW.



- 1 Attach steering column to the steering column angle.

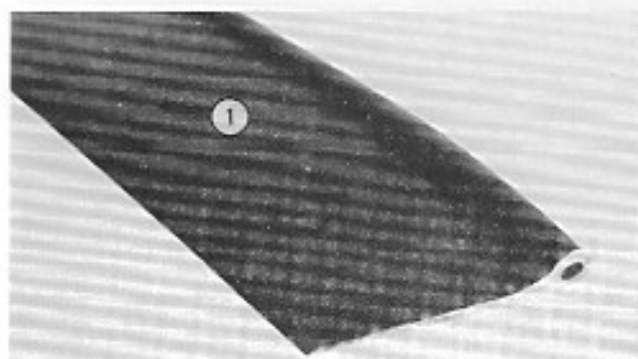


- 2 Check to make sure that the steering column is perfectly straight from the steering box up to the steering wheel. If necessary, loosen the steering box on the front axle beam and rotate it up or down to make the column straight. If it is not straight, it might damage the safety section of the steering column.

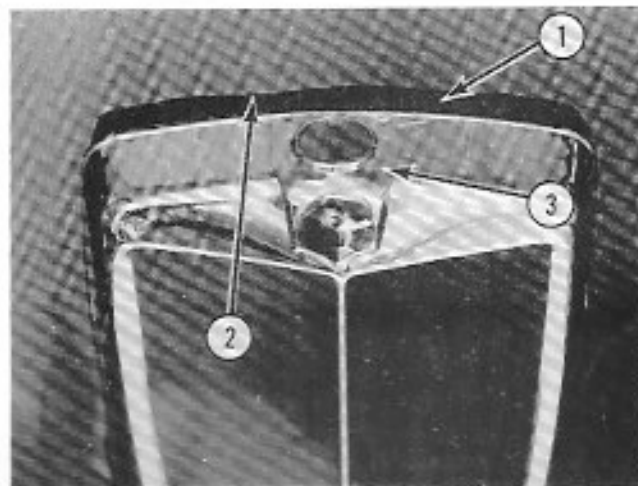
After the steering column is perfectly aligned, retighten the steering box.

RADIATOR SHELL ASSEMBLY

- 1 Cut 53" of fender welt and contact cement it to rear edge of the chrome radiator shell. The fender welt bead will be placed next to the chrome bead on the shell.

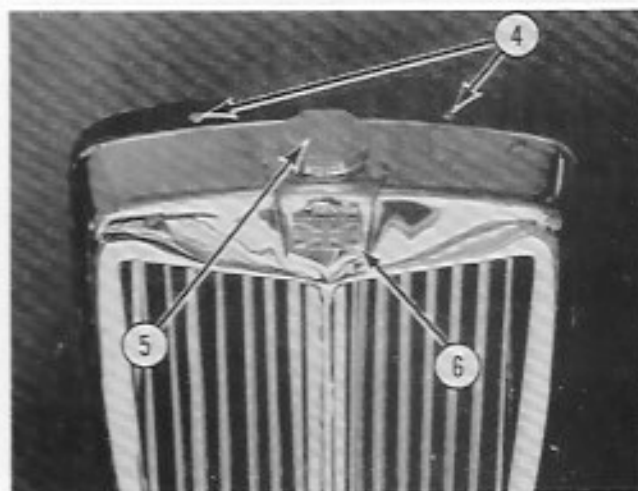


- 2 Trim excess fender welt from rear of shell.
- 3 Place the chrome bullnose on top of the chrome radiator shell and bend tabs tightly against underside of shell.
- 4 Place chrome radiator shell and slats over the black radiator core and attach with two carriage bolts inserted through the fender welt, the shell and the fiberglass core. Secure with fender washers, lock washers, and nuts.



CAUTION: Do not overtighten. This may distort chrome radiator shell.

- 5 Place octagon radiator cap on top of bullnose while inserting cap studs through bullnose, radiator shell and radiator core. Secure with lock washers and nuts.

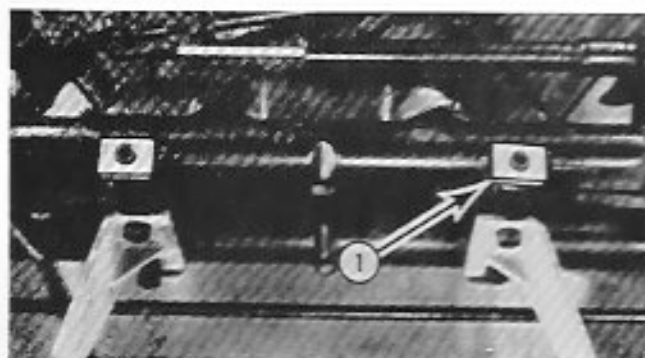


CAUTION: Do not overtighten. This may distort chrome radiator shell.

- 6 Apply a small amount of contact cement to the back side of the BCW emblem and insert the emblem stud through the bullnose. Secure with sheet metal nut.

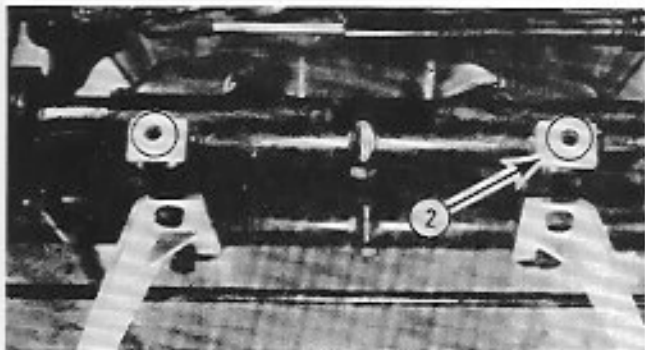
(2) 1/4" X 3/4" Carriage Bolts, Fender Washers, Lock Washers, Nuts

RADIATOR ASSEMBLY ATTACHMENT

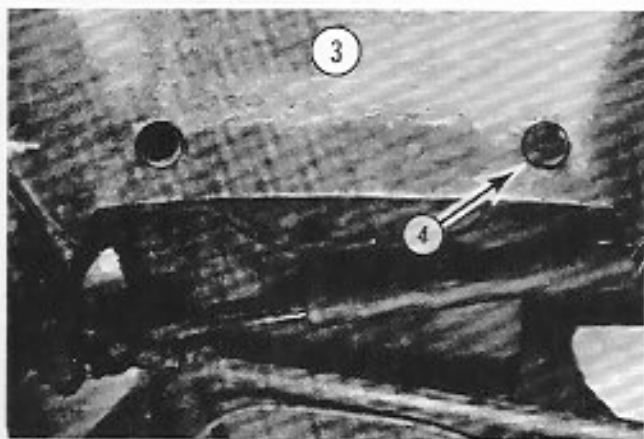


The radiator shell and core assembly is attached to the VW chassis on top of the front axle beam using two original VW body bolts, washers, and rubber pads.

- 1 Install the original VW rubber pads over each boss located on the top of the axle to act as a spacer.



- 2 Install one 3/4" flat washer over each rubber pad.

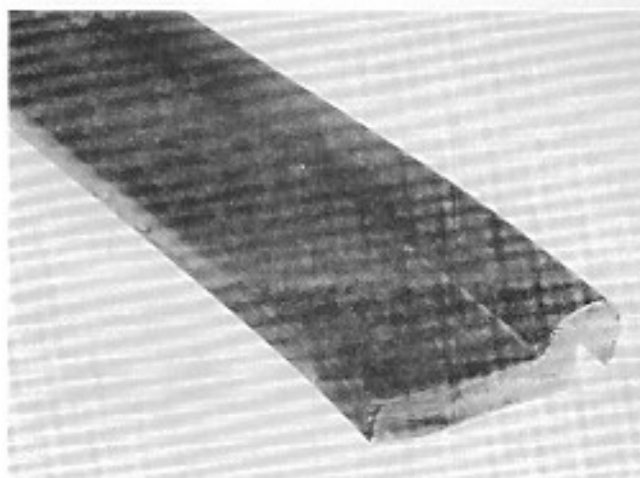


- 3 Install radiator assembly over flat washers.
- 4 Attach each side with 5/16" flat washer, VW bolt and VW washer.

(2) 3/4" Flat Washers (2) 5/16" Flat Washers

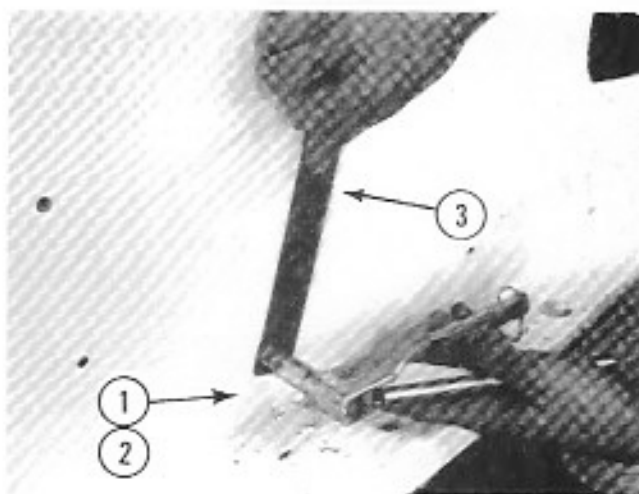
COWL RUBBER

The rubber is a reproduction of the original TD cowl rubber. The bead of the rubber should face the rear of the car and butt against the edge of cowl.



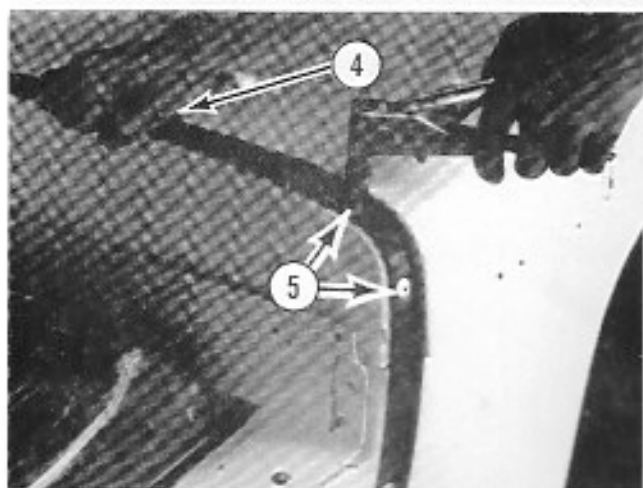
- ① Start approximately 1" from the bottom of one side of the car.
- ② Drill 3/16" hole. Insert 3/16" pop rivet.
- ③ Bring cowl rubber up the side.

Drill 3/16" holes every 11" and insert 3/16" pop rivets.



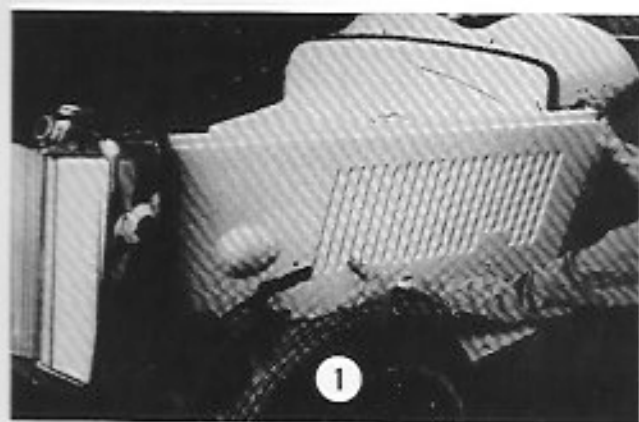
- ④ Stretch rubber around corners.
- ⑤ Drill holes and install two pop rivets at corners and continue over and down other side.

Cut off excess rubber and save for future assembly step.

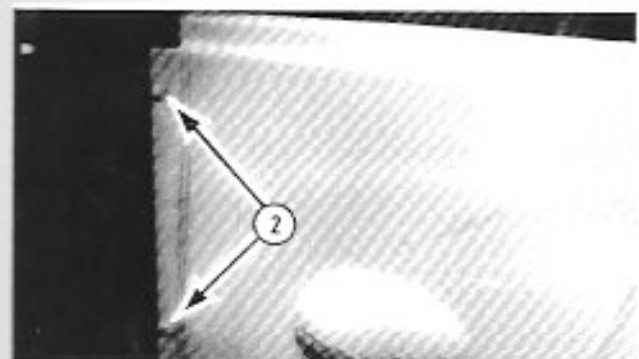


(12) 3/16" X 1/2" Pop Rivets

HOOD SIDE PANELS

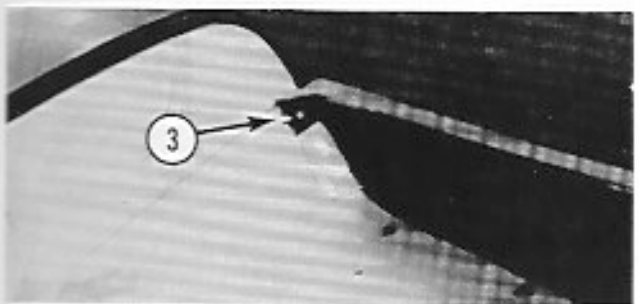


- ① Set the hood side panel over the steering extension and align the factory pre-drilled holes with two holes on the chrome grill shell.



- ② Insert two painted carriage bolts and secure with fender washer, lock washer and nut.

Align rear portion of hood side panel with body.



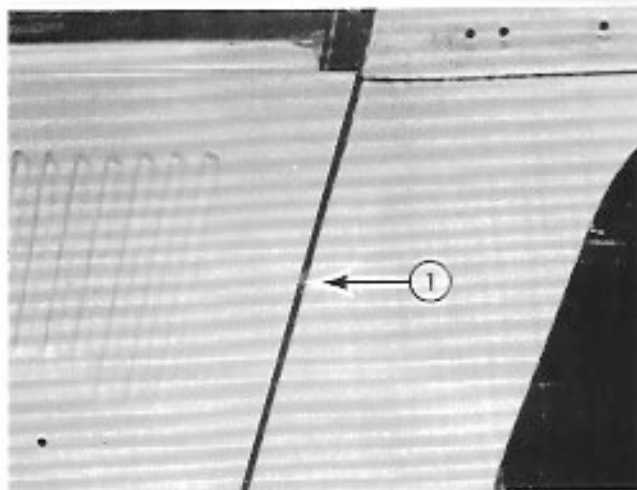
- ③ From passenger compartment insert 1/4" X 1" carriage bolt through cowl, front body section, and hood side panel mounting tab. Secure with lock washer and nut.

Install the opposite side hood side panel by repeating the process described above.

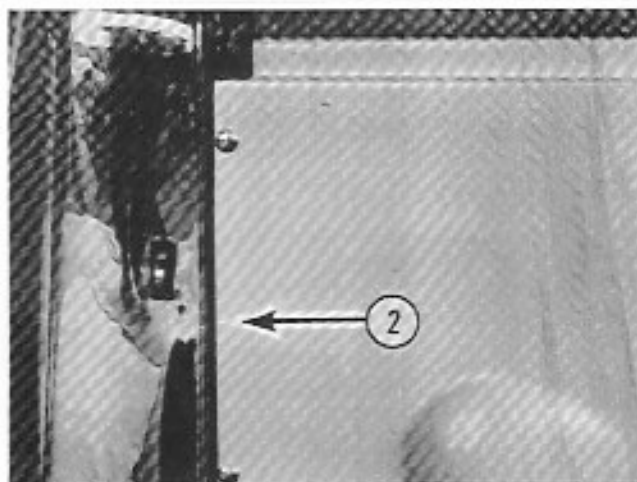
- (2) (Painted) 1/4" X 3/4" Carriage Bolts, Fender Washers, Lock Washers, Nuts per panel
(1) 1/4" X 1" Carriage Bolt, Lock Washer, Nut per panel

CHECK POINTS

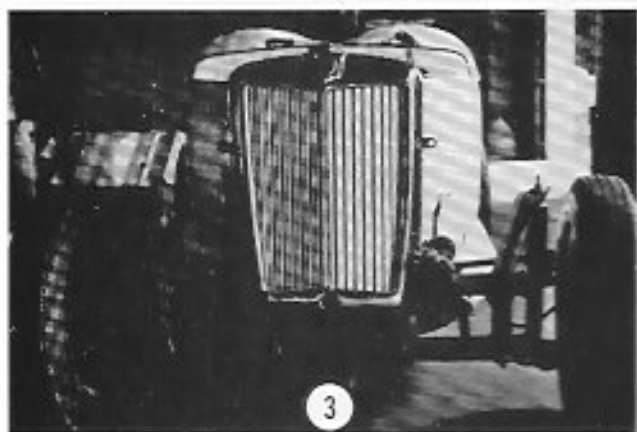
- ① Make certain that the gap between the hood side panel and the body is even.



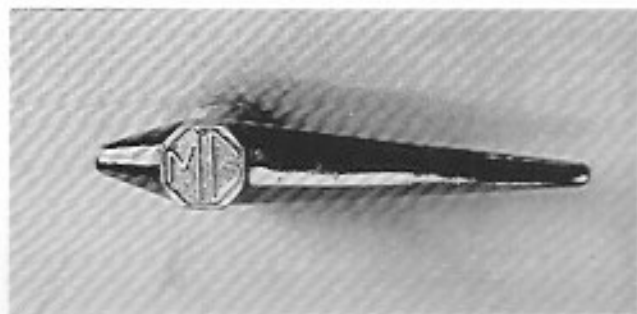
- ② The gap between the hood side panel and the chrome radiator shell must also be even. Remember to check both sides of the car. Any necessary adjustments can be made by elongating the pre-drilled bolt holes (using a fine tooth, round file) and by shimming the mounting tab where it attaches to the cowl.



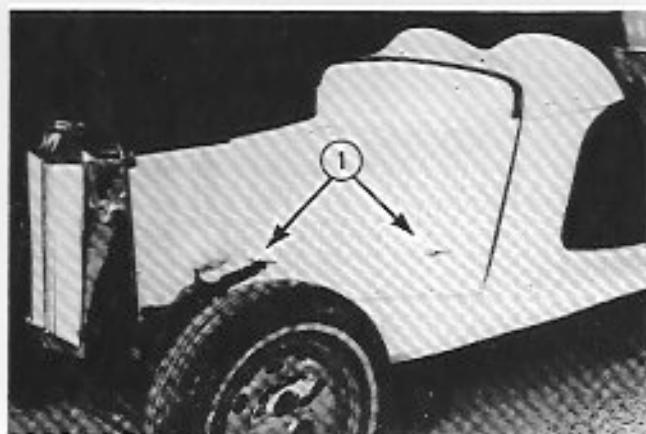
- ③ View the radiator grill assembly from the front of the vehicle to be certain that it is perpendicular to the front axle beam. It can be adjusted by placing spacers or shims between the radiator core and the front axle beam.



HOOD HANDLES



These reproduction TD handles are another authentic detail for your BCW Model 52. However, they are non-functional.



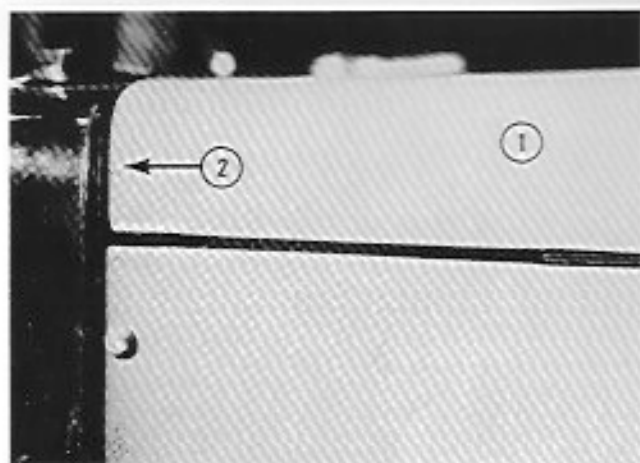
- 1 Insert the stem of the TD type hood handle through the factory pre-drilled holes in the hood side panels.

Use four 3/8" flat washers on the inside of each handle as spacers to make sure handle is snug against the hood side panel. Secure with lock washer and nut.

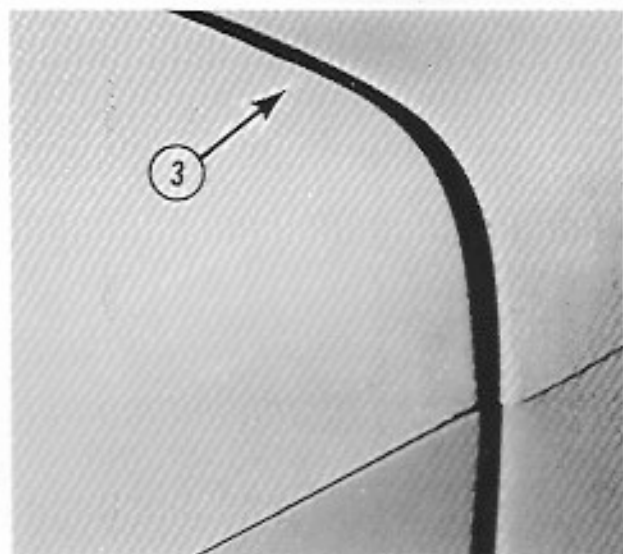
(16) 3/8" Flat Washers

The hood hinge is pre-attached to the hood at the factory.

- ① Place hood on vehicle.
- ② The gap between the chrome grill shell and the front edge of hood must be equal at all points.



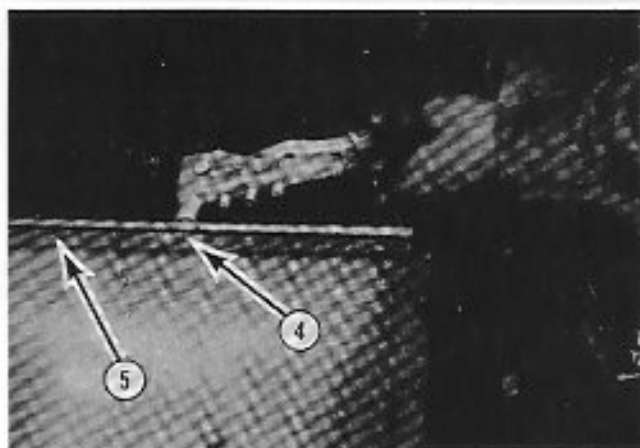
- ③ The gap between the rear edge of the hood and the cowl must be equal at all points.
- ④ Hold hood open while inserting a pop rivet through the front and rear holes of the factory installed hinge and into the holes in the driver hood side panel.



Again check fit. It may be adjusted following the procedure described in the preceding Check Point on page 58.

- ⑤ Install six remaining rivets.

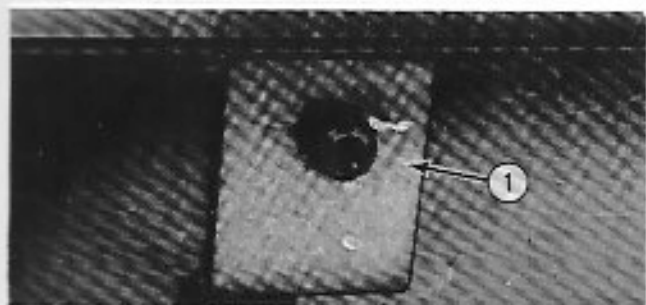
(8) 1/8" X 1/4" Pop Rivets



UPPER HOOD LATCH PIN



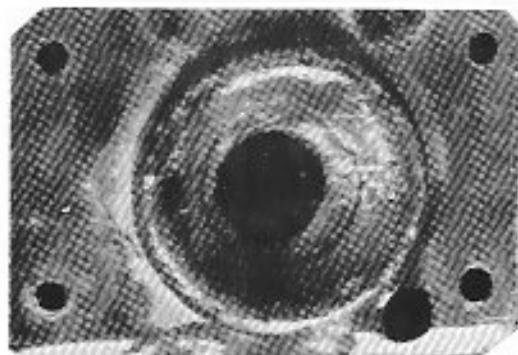
VW Hood Latch Pin



- 1 Attach the original VW hood latch pin to the bracket located under side of the hood as shown in the photograph. The hole in the bracket is oversize to allow for adjustment.

HOOD RELEASE

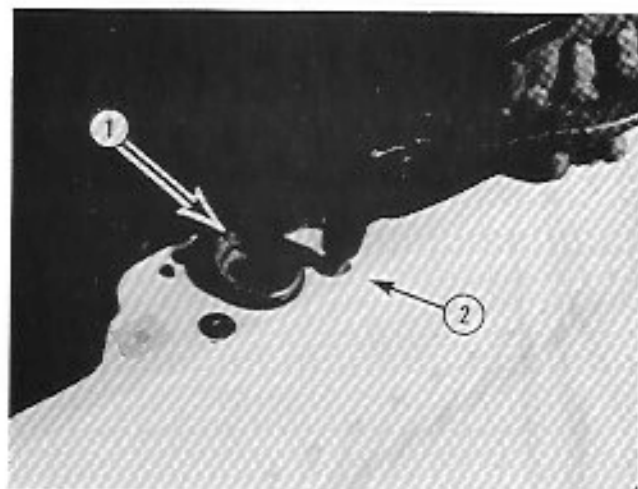
VW Hood Release



- 1 Align lower half of VW hood release on passenger hood side panel.

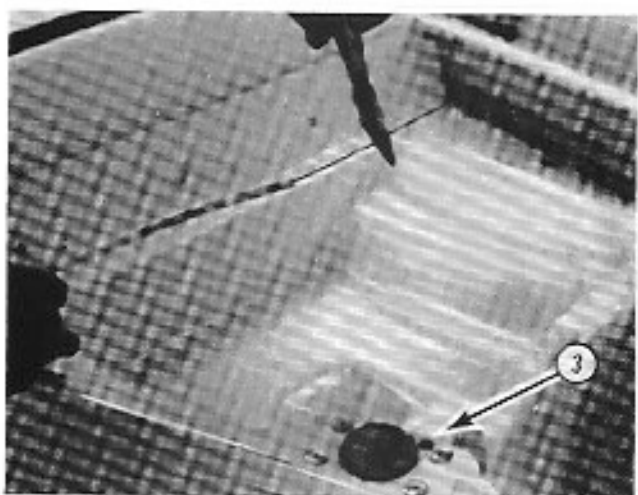
- 2 Insert four 3/16" pop rivets through side panel into the hood release.

Secure hood release cable to front body section using VW hood release cable clamps.



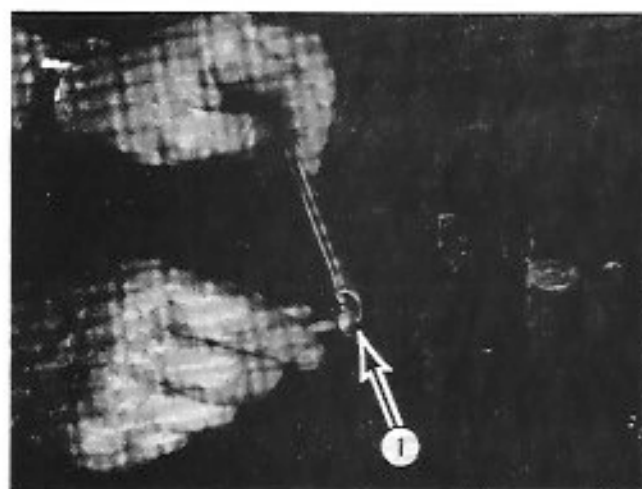
- 3 Attach hood release cable end to lower half of hood release and adjust cable through extra hole in side panel. When properly adjusted, the hood will automatically lock when closed.

Cut hood release cable to length.

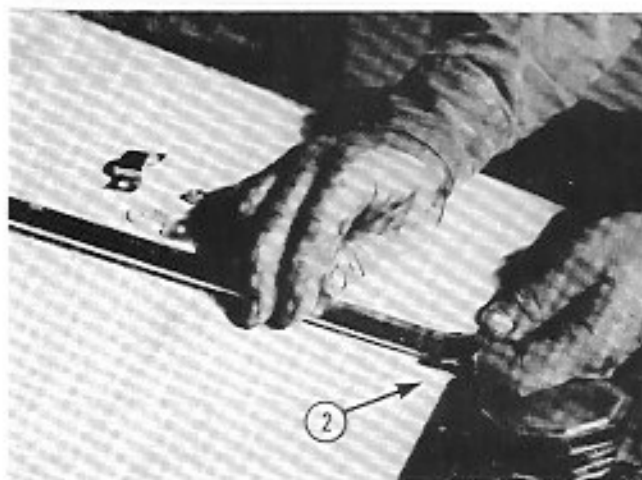


(4) 3/16" X 1/2" Pop Rivets

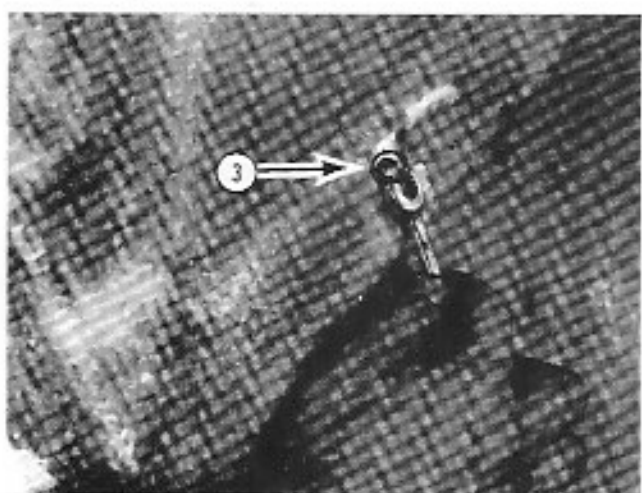
HOOD MOLDING STRIP



- ① Slide three 1/4" X 1" carriage bolts into the underside of the hood molding strip. Place hood molding strip on the center of the hood. Insert these bolts into the three factory pre-drilled holes in the hood.



- ② Install hood molding ends at each end of hood molding strip.

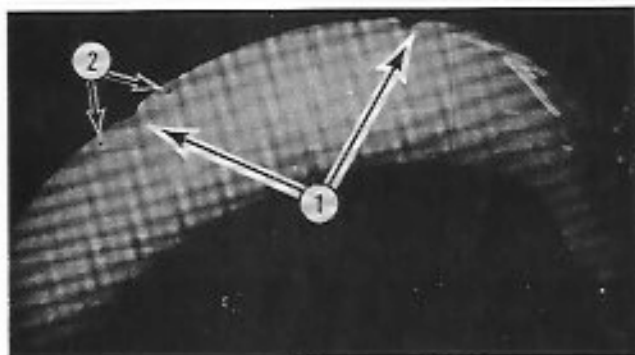


- ③ Install fender washers, lock washer and nuts. The hood molding ends will be held on by the tension of the hood molding strip.

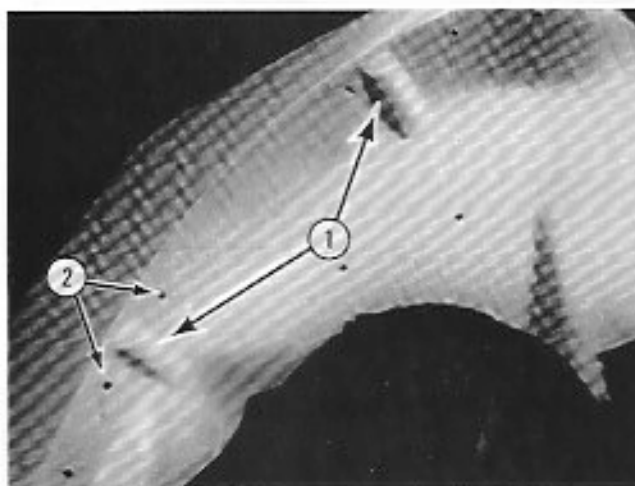
(3) 1/4" X 1" Carriage Bolts, Fender Washers, Lock Washers, Nuts

REAR FENDER

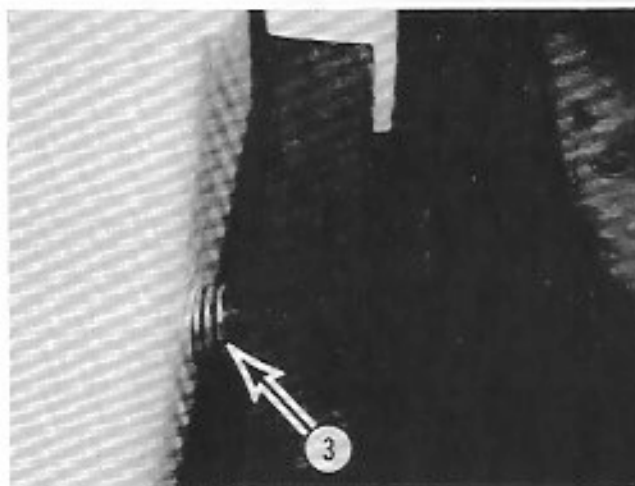
- ① Align the two index marks on the rear fender with the two index marks on the body.



- ② Align the factory pre-drilled holes and insert nine 1/4" X 3/4" carriage bolts through the underside of the fender to the interior of the car. Use fender washers, lock washers and nuts. **Finger tighten only.**



- ③ Insert one 2-1/2" carriage bolt through fender and sub-frame. Use three fender washers as spacers between fender and sub-frame. Use lock washer and nut. **Finger tighten only.**

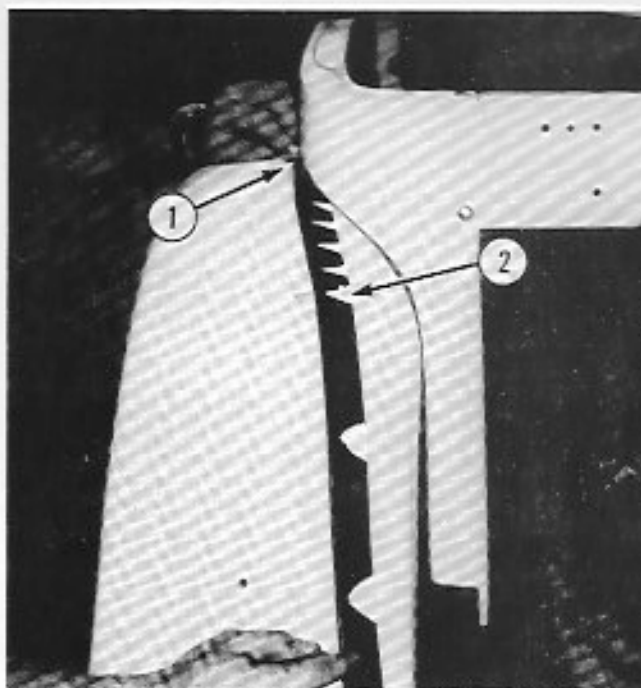
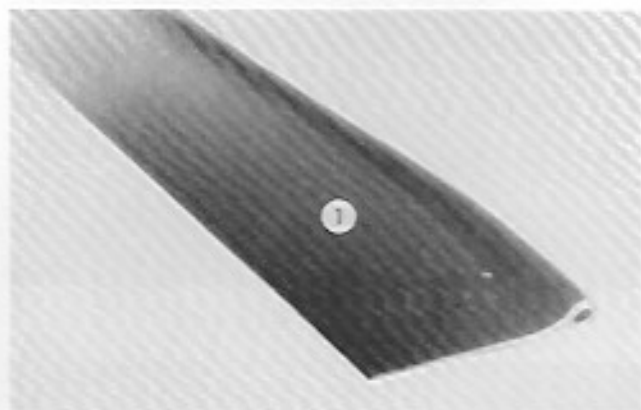


(10) 1/4" X 3/4" Carriage Bolts, Fender Washers, Lock Washers per fender

(1) 1/4" X 2-1/2" Carriage Bolt, Lock Washer, Nut per fender

(3) 1/4" Fender Washers per fender

REAR FENDER WELT



① Cut fender welt 57" long and insert it beginning at the front of the fender between fender and body.

② V-cut the fender welt to allow it to fit around bolts and curve around body contours.

When properly fitted, only the bead (the round part) of the welt is exposed.

Tighten all fender bolts.

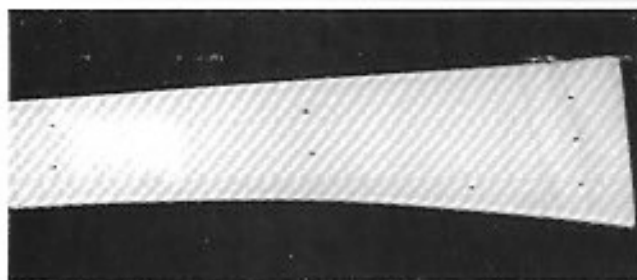
Install opposite side rear fender by repeating same process.

FRONT FENDER & RUNNING BOARD ASSEMBLY

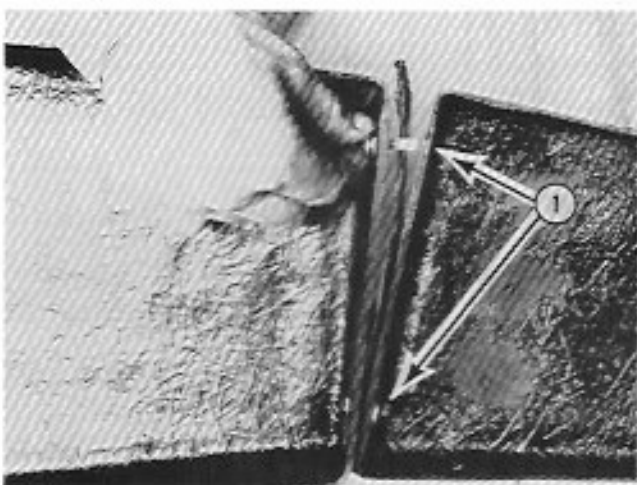
Front Fender



Running Board



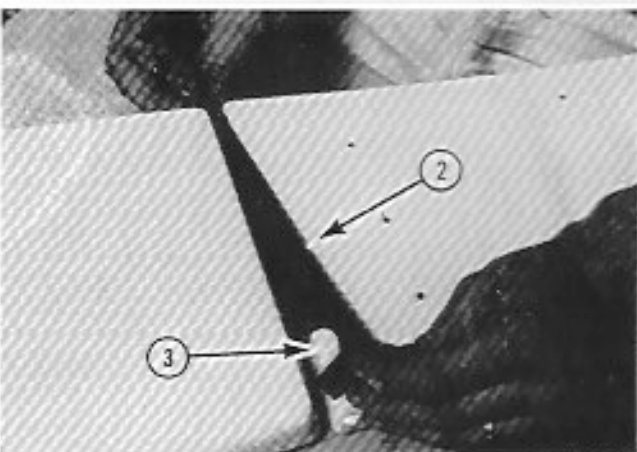
- 1 Insert two 1/4" X 1" carriage bolts through factory pre-drilled holes in front fenders, then through factory pre-drilled holes in running boards. Install fender washer, lock washer and nut, but finger tighten only.



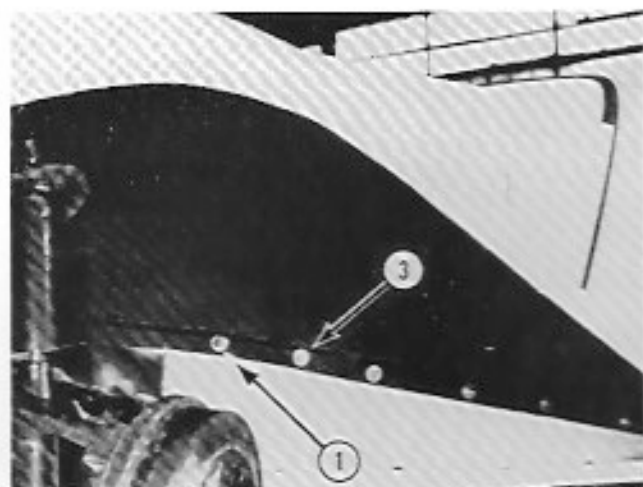
- 2 Cut fender welt 9" long and insert between fender and running board.
- 3 V-cut welt to allow it to fit around bolts and curve around body contours.

Tighten bolts.

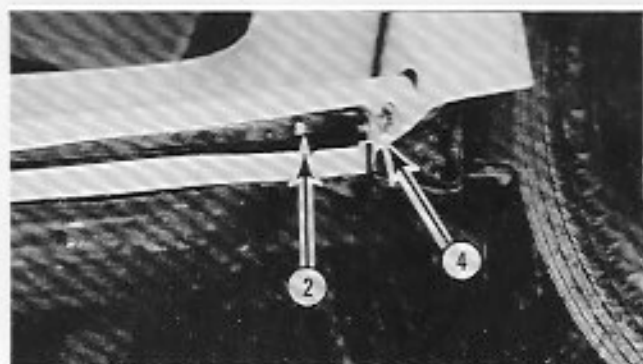
- (2) 1/4" X 1" Carriage Bolts, Fender Washers, Lock Washers, Nuts per side



FRONT FENDER & RUNNING BOARD INSTALLATION



- ① Starting at the front, insert one 1/4" X 1" carriage bolt through hood side panel and front fender from inside vehicle. Install fender washer, lock washer and nut, but **finger tighten only**.

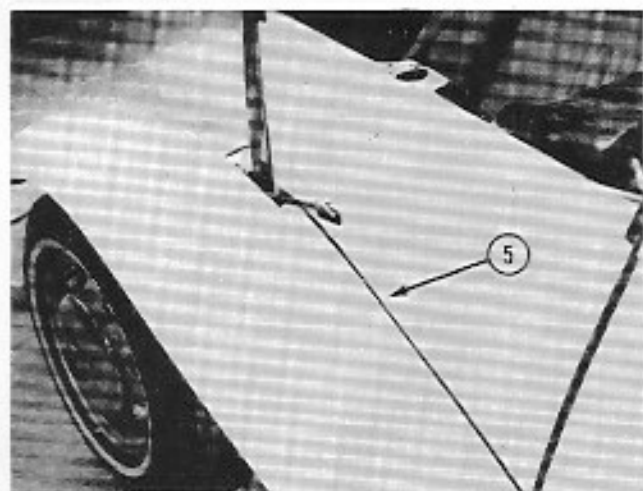


- ② Starting at the rear of the running board, insert one 1/4" X 1" carriage bolt through main body into running board from inside vehicle. Install fender washer, lock washer and nut, but **finger tighten only**.

- ③ Finish attaching front fender by inserting six 1/4" X 1" carriage bolts from inside vehicle through factory pre-drilled holes in body and front fender.

Insert two 1/4" X 1" carriage bolts from inside the vehicle through factory pre-drilled holes in the body and running board. Install fender washers, lock washers and nuts, but **finger tighten only**.

- ④ Insert two 1/4" X 1-1/4" carriage bolts through factory pre-drilled holes in running board and rear fender. Install fender washer, lock washers and nuts, but **finger tighten only**.



- ⑤ Cut fender welt 8 feet long.

V-cut fender welt to allow it to fit around bolts and curve around body contours.

Insert fender welt until only the bead of the welt is exposed.

(Continued Next Page)

FRONT FENDER & RUNNING BOARD INSTALLATION

(Continued)

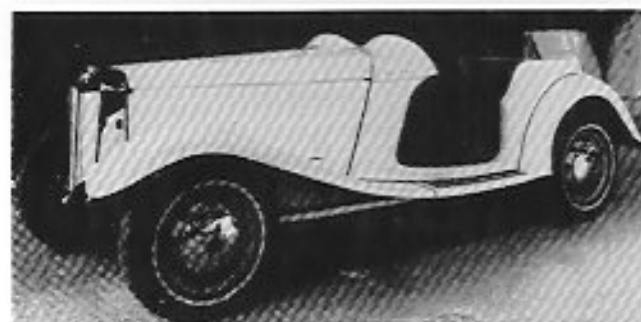
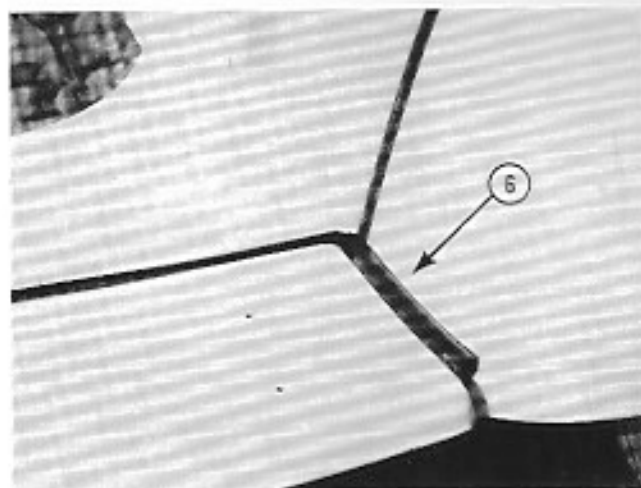
- ⑥ Using excess cowl rubber which was saved from earlier installation step (Cowl Rubber Installation) V-cut it to fit around bolts. Insert rubber between rear fender and running board.

Tighten bolts while keeping fender well aligned.

Install the passenger side front fender and running board by repeating the same process.

NOTE: Skip second bolt hole in step ③ on passenger side — this hole will be used later for the horn installation.

From under vehicle, caulk all fender joints.



(13) 1/4" X 1" Carriage Bolts, Fender Washers, Lock Washers, Nuts per side

RUNNING BOARD SUPPORT BRACKET

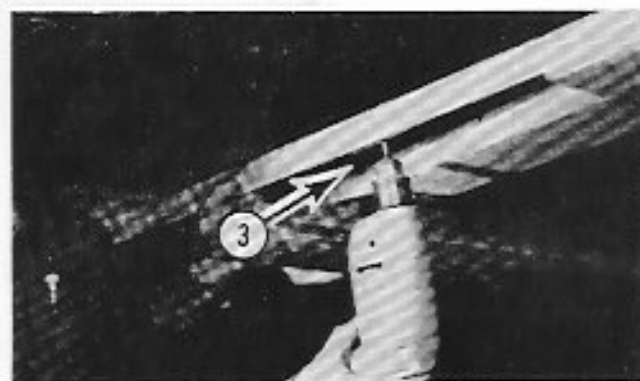


This bracket is designed to reinforce the running boards and to tie them to the VW floor pan.



- 1 Remove the nuts and lock washers from the bolts connecting the front fenders to the running boards on the driver and passenger sides.
- 2 Place running board bracket under the running boards and slide it over these four bolts.

Reinstall lock washers and nuts.



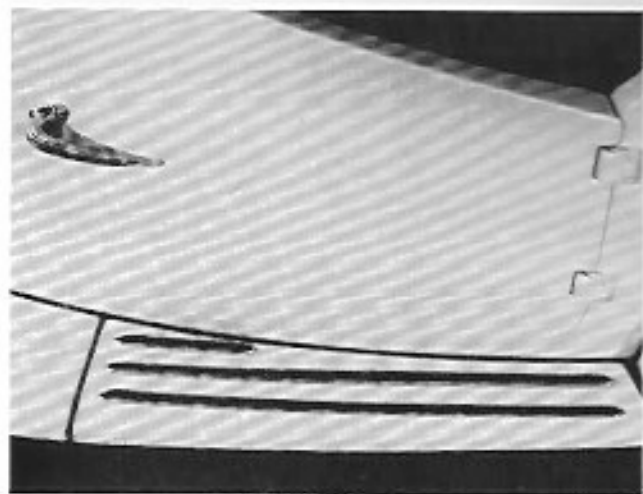
- 3 From beneath the vehicle, drill four 5/16" holes through the floor pan using factory pre-drilled holes in the running board support bracket as a guide.

From the top side of the floor, place fender washers over the holes, insert carriage bolts through washers, floor pan and running board support bracket. Secure with lock washers and nuts.

- (4) 1/4" X 3/4" Carriage Bolts, Fender Washers, Lock Washers, Nuts

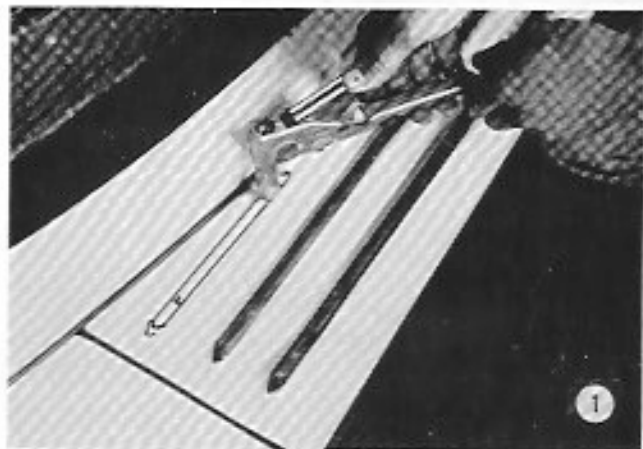
RUNNING BOARD TREAD

These reproduction TD running board treads will protect the finish and add authenticity to your classic.

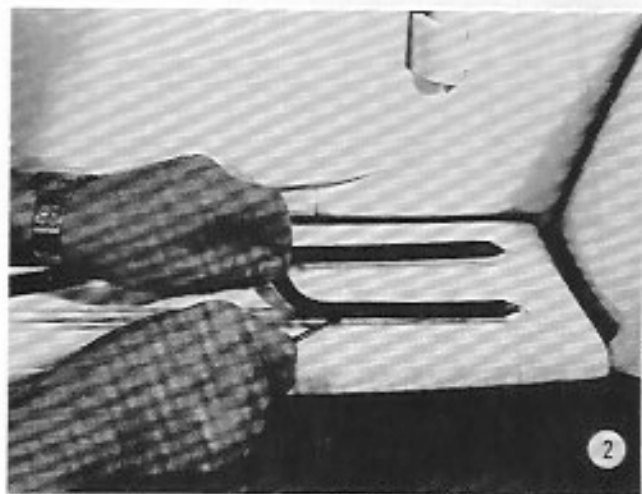


- 1 Drill eight 1/8" holes in each running board using the factory marked holes in running board as a guide.

Secure aluminum strips with 1/8" pop rivets.



- 2 Insert rubber treads into the aluminum strips.



(16) 1/8" X 1/4" Pop Rivets

FRONT SPLASH APRON

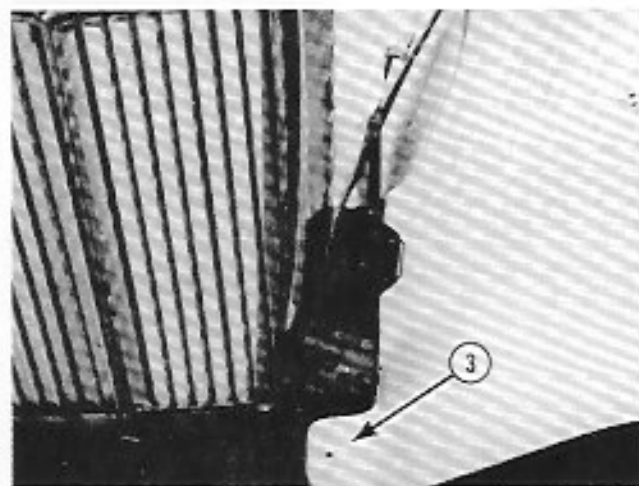


- ① Cut two lengths of fender welting, one for each side of the splash apron.

Glue welting to the underside of the apron with contact cement.



- ② Attach splash apron to the front fenders with three chrome phillips head screws, one on the driver side and two on the passenger side. Secure with fender washers, lock washers and nuts.



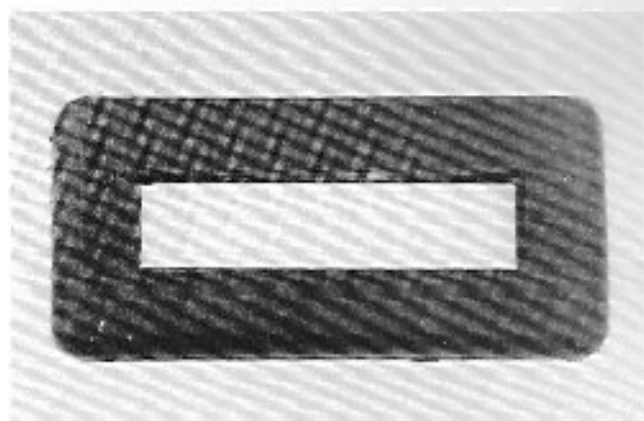
- ③ **NOTE:** If splash apron interferes with steering box, it may be necessary to use washers as spacers between the splash apron and fenders.

(3) *1/4" X 2-1/2" Chrome Phillips Round Head Machine Screws*

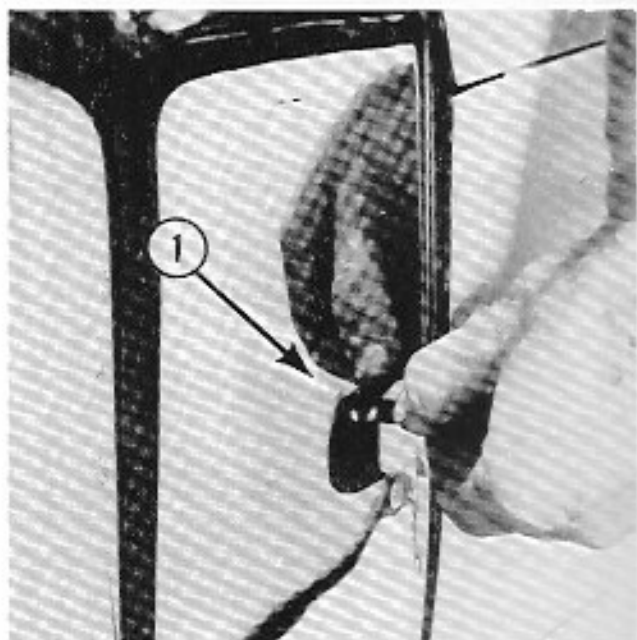
(3) *Fender Washers, Lock Washers, Nuts*

GRILL SHELL RUBBER

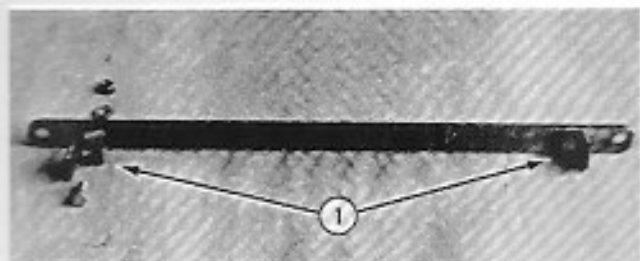
TD Reproduction
Grill Shell Rubber Grommet



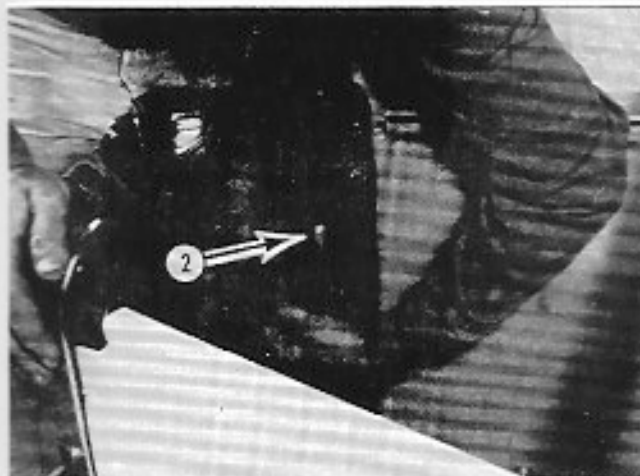
- 1 Insert the TD reproduction rubber grommet in the opening on each side of the chrome radiator grill shell.



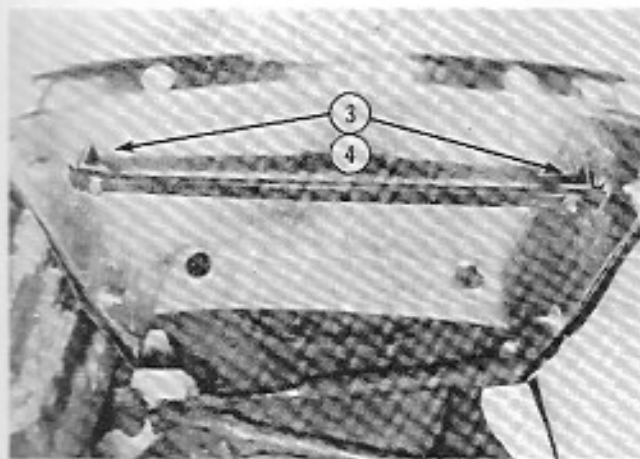
HEADLIGHT TIE BAR



- ① Unbolt clip angles from tie bar.



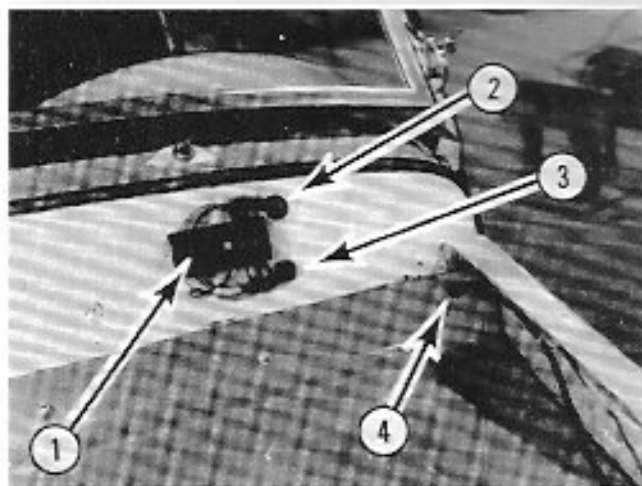
- ② Insert bar through radiator assembly.



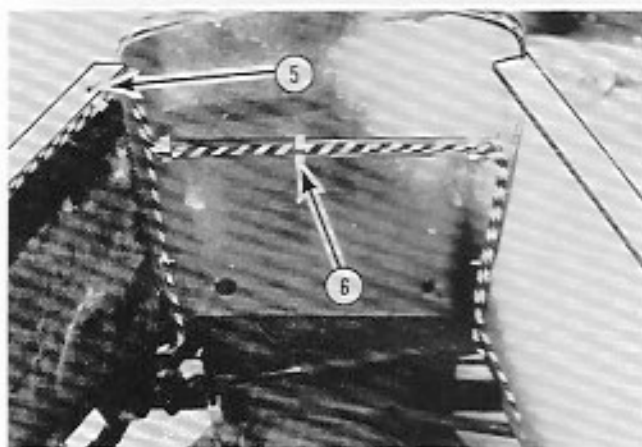
- ③ Reinstall clip angles. The angles should face towards the front of the car.
- ④ Push angles tight against radiator core sides, then tighten bolts.

FUSE BOX

- ① Remove cover from fuse box and attach fuse box to the cowl by inserting two #10 X 3/4" tapping screws through the fuse block and into the factory pre-drilled holes in the cowl.
- ② Insert BCW rubber grommet into upper hole in the cowl and push top portion of loom through cowl into the passenger compartment.
- ③ Insert BCW rubber grommet into lower hole in the cowl and push bottom portion of the loom through the cowl and into the passenger compartment.
- ④ Insert BCW rubber grommet into the factory pre-drilled hole and pull front lighting and horn portion of wiring loom through the cowl.



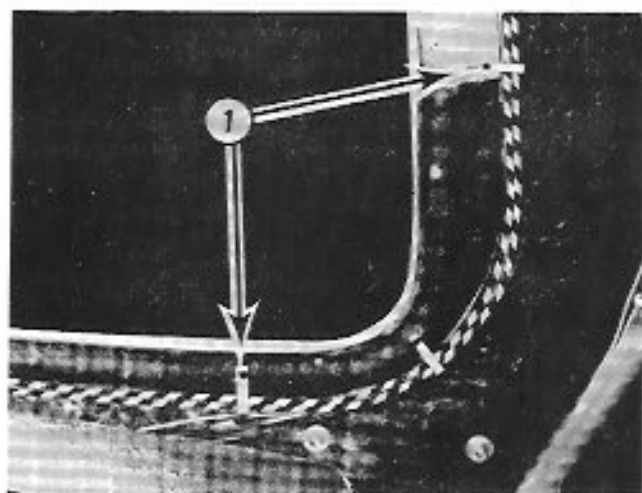
- ⑤ Drill 1/8" holes and rivet loom wire ties to the underside of the top edge of the driver's hood side panel.
- ⑥ Attach loom wire ties to headlight tie bar.



(2) #10 X 3/4" Tapping Screws

(5) 1/8" X 1/4" Pop Rivets

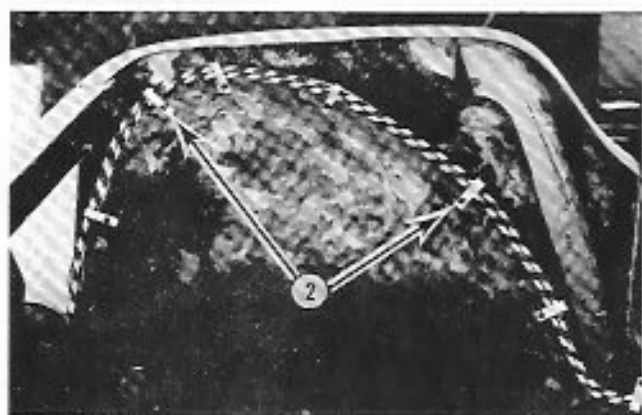
WIRING LOOM



Placing wiring loom in the passenger compartment on the driver's side of car.

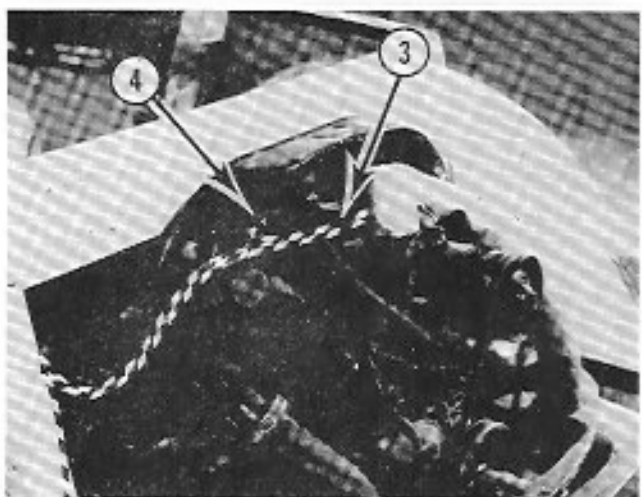
- ① Loom is designed to follow the perimeter of the door opening. Attach loom wire ties by drilling 1/8" holes into inner structural supports at convenient points and inserting 1/8" rivets.

CAUTION: Do not drill through outer body.



- ② The rear portion of wiring loom is designed to follow the perimeter of the rear fender well. Attach loom wire ties to the **inner fender well** portion of the body side panel by drilling 1/8" holes and inserting 1/8" rivets as shown.

CAUTION: Do not drill through outer body.

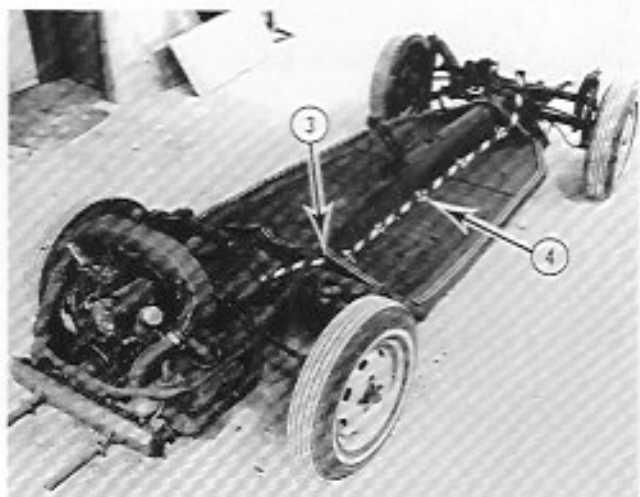
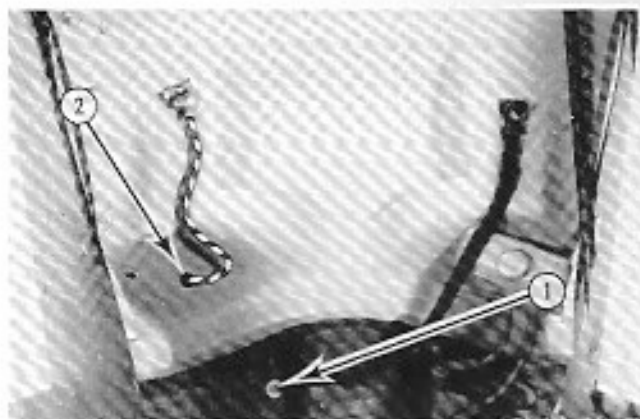


- ③ Attach wiring loom to the VW engine fan shroud using the clips on the fan shroud.
- ④ Mount VW voltage regulator on the driver's side of the fan shroud using the VW hardware.

(18) 1/8" X 1/4" Pop Rivets

BATTERY CABLES

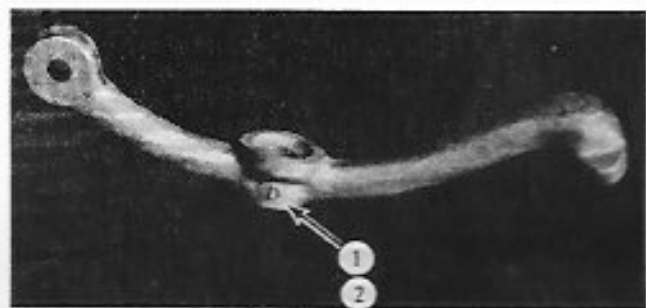
- 1 Install BCW battery-ground cable. Drill 5/16" hole through front corner on the passenger side of VW floor pan. Brighten metal around hole for good electrical contact. Insert 1/4" X 1" carriage bolt through BCW battery-ground cable and floor pan. Secure with fender washer, lock washer and nut.
- 2 Insert BCW rubber grommet in factory pre-drilled hole in the front body section. Insert small end of BCW battery (+) positive cable and run through passenger compartment next to tunnel on passenger side.
- 3 Run (+) positive cable through VW rubber grommet in the rear bulk head of the chassis and connect the starter motor according to wiring instructions.
- 4 Secure (+) positive battery cable by riveting the insulated half clips to the floor pan.



(1) 1/4" X 1" Carriage Bolt, Fender Washer, Lock Washer and Nut

(5) 3/16" X 1/2" Rivets, Insulated Half Clips

HEADLIGHT CRADLE ASSEMBLY



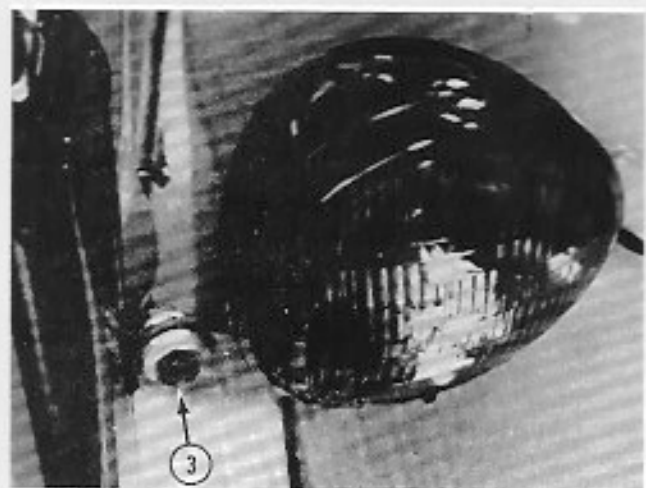
Each reproduction TD headlight cradle is to be attached to the headlight tie bar and the front fender.

- ① One headlight cradle will have a "D" cast into it at the headlight boss. This cradle is for the driver side of the car.

- ② Install headlights on the cradles, using lock washers and nuts supplied with headlights. Using hacksaw, cut excess headlight mounting stud flush with nut.

Install VW headlight bulbs.

- ③ Attach the headlight cradle to the headlight tie bar using a 1/2" bolt, lock washer and nut.



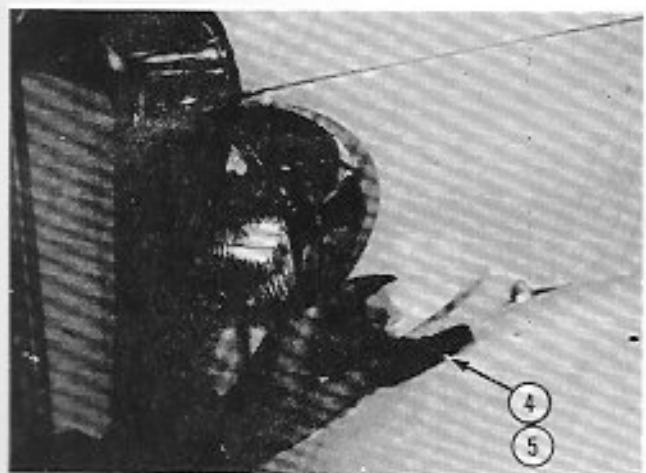
- ④ You will notice two factory pre-drilled holes in the fender. The rear hole is for the attachment bolt and the front hole is for the wiring of the headlight. Connect wiring according to wiring instructions.

- ⑤ Insert 5/16" X 3/4" hex head bolt through lock washer and fender washer, then push bolt up through the rear pre-drilled hole in the fender, through the rubber pad and into the threaded headlight cradle.

Repeat process for other side.

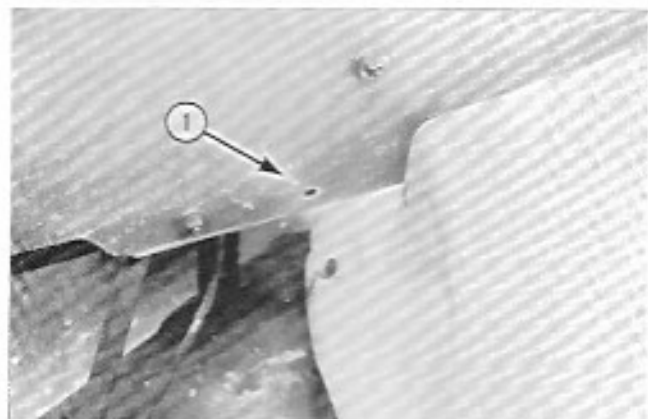
- (2) 1/2" X 1-1/2" Hex Head Bolts, Lock Washers, Nuts

- (2) 5/16" X 3/4" Hex Head Bolts, Fender Washers, Lock Washers

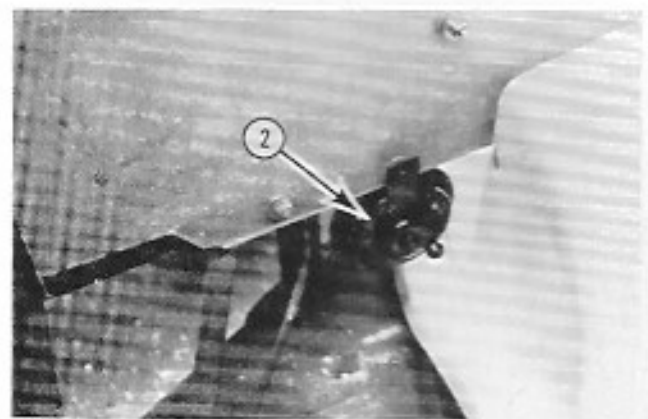


HORN INSTALLATION

- 1 The VW horn is to be mounted under the hood, using the remaining factory pre-drilled hole in the passenger hood side panel.



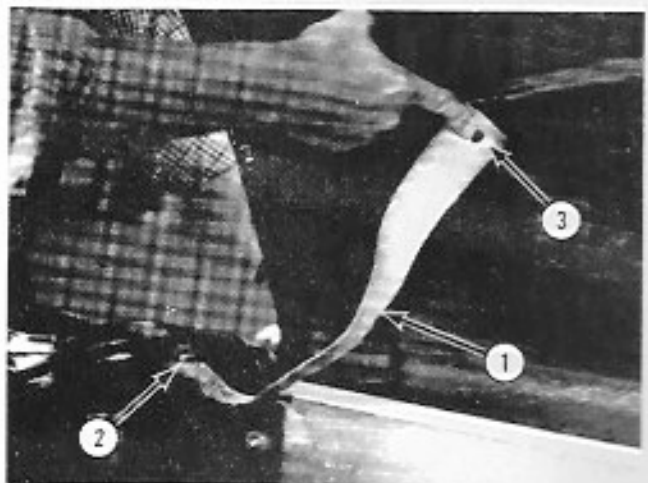
- 2 Position horn facing outward.
Insert VW bolt through hood side panel into horn.
Connect electrical wiring according to wiring instructions.



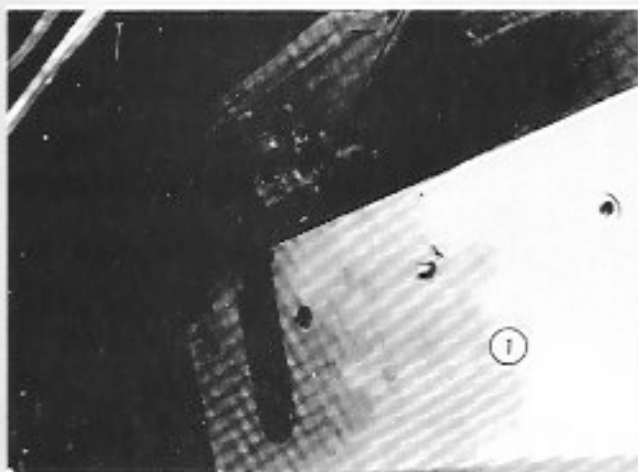
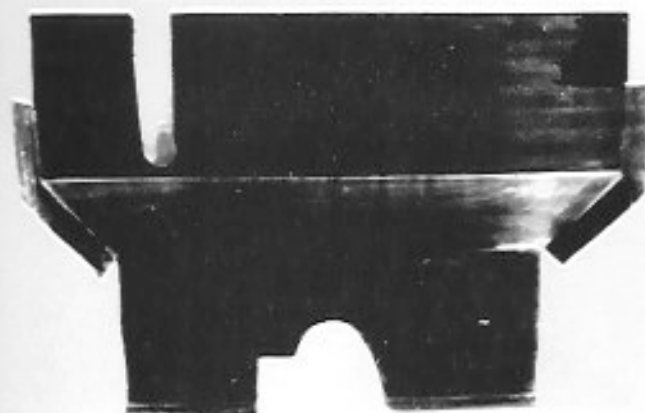
HOOD RESTRAINT

The hood restraint is necessary to eliminate interference between the headlight and the hood when in open position.

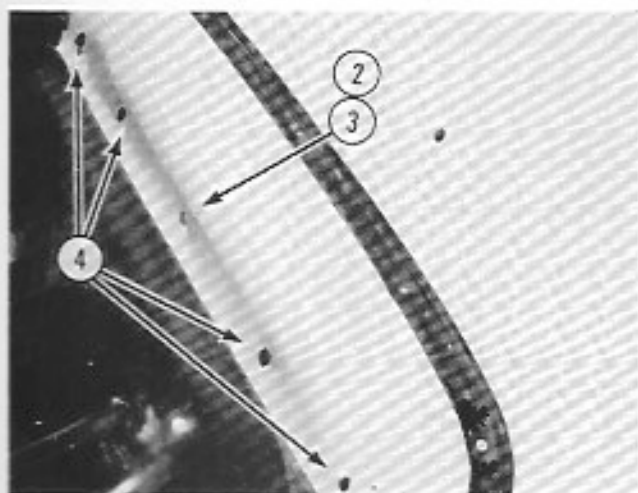
- 1 Cut the VW seatbelt to length.
Pierce a hole 1" from each end of seatbelt.
- 2 Attach one end of this belt to the grill shell attachment bolt and secure with original fender washer, lock washer and nut.
- 3 Attach other end to the foremost hood molding attachment bolt and secure with original fender washer, lock washer and nut.



PRELIMINARY FIREWALL INSTALLATION



- ① Place the firewall under the dash and hold in position.



- ② From under the hood, use the five factory pre-drilled holes in the front body section as a guide. Starting with the center hole, drill 5/16" hole through cowl and firewall.
- ③ Insert carriage bolt through front body section, cowl and firewall. From the inside, temporarily secure firewall in position by attaching nut.
- ④ From under the hood, drill the other four holes through cowl and firewall.

Remove nut, carriage bolt and firewall until gas tank is installed.

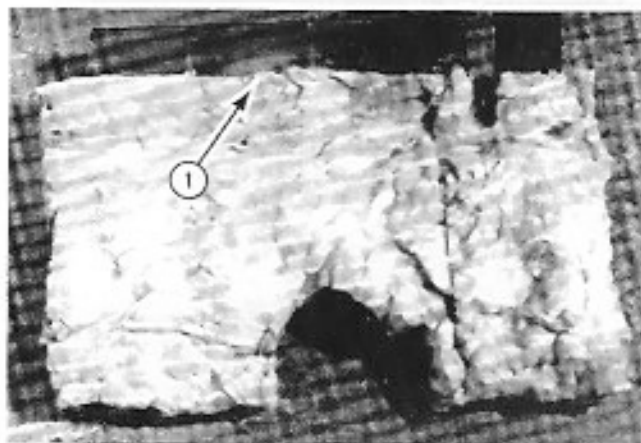
(1) 1/4" X 1-1/2" Carriage Bolt, Nut

FIREWALL SOUND DEADENING PACKAGE

The sound deadening package will insulate and sound proof your BCW Model 52 for maximum driving comfort.

- ① Cut the insulation 28" long X width of roll.

Fit insulation to cover the unfinished side of the firewall, keeping the insulation approximately 5" below the top of the firewall.

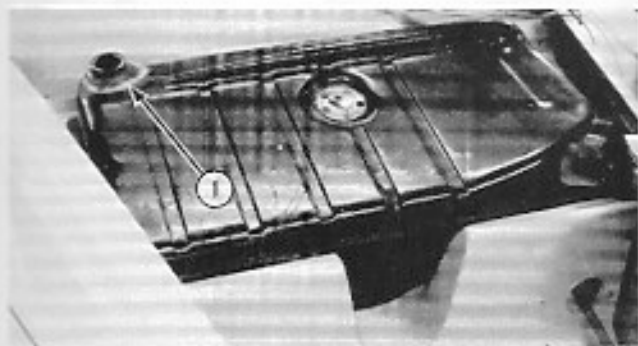
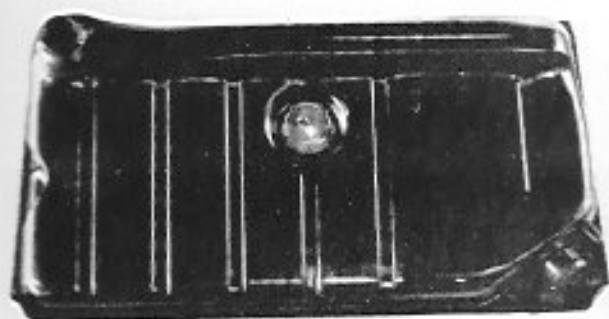


- ② Spray or brush adhesive on to unfinished side of the firewall.

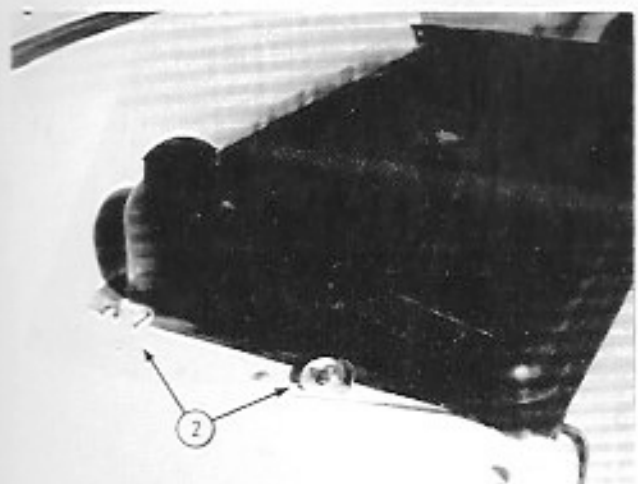
Place foil side of insulation against the glued firewall.



GAS TANK INSTALLATION



- ① Place previously modified VW gas tank into the well in the front body section. The new filler neck should face towards the rear on the passenger side.



- ② From underneath front body section, insert four 1/4" X 1" carriage bolts up through the factory pre-drilled holes.

Secure with the original VW clamps, lock washers and nuts.

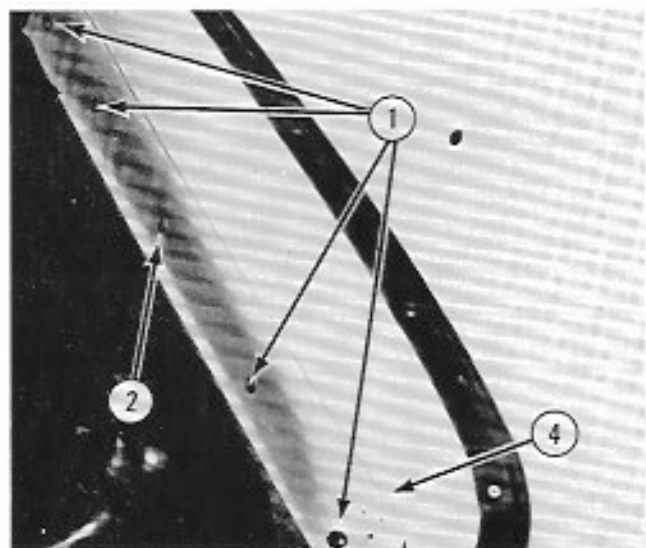
Connect fuel lines and secure connections with hose clamps.

(4) 1/4" X 1" Carriage Bolts, Lock Washers, Nuts

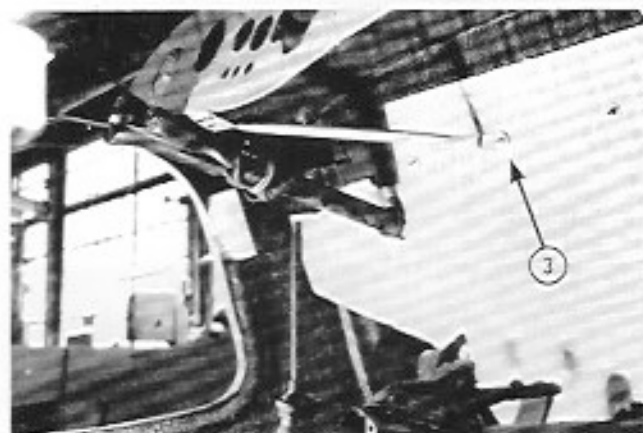
FIREWALL INSTALLATION

Place firewall in position under dash.

- ① From under the hood, insert four carriage bolts through the front body section, cowl and firewall. Secure with fender washers, lock washers and nuts.
- ② Reinsert $1/4"$ X $1-1/2"$ carriage bolt through the center hole in the front body section, cowl and firewall.
- ③ From under dash, place fender washer over bolt. Attach dash stabilizer to bolt and secure with lock washer and nut.



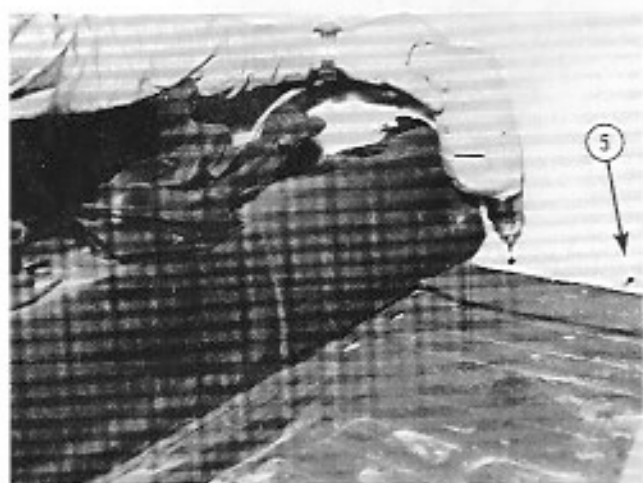
- ④ From under hood caulk top joint.



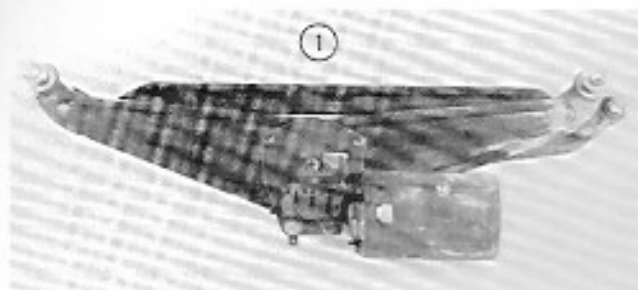
- ⑤ Push the firewall as far forward as possible, making sure that there is enough room to fully depress the clutch and the brake pedal. Drill four $5/16"$ holes through the firewall and through the VW floor pan. Insert the carriage bolts through firewall and the VW floor pan. Secure with fender washers, lock washers and nuts.

NOTE: To remove brake master cylinder or to adjust the brake extension, firewall must be removed.

- (8) $1/4"$ X $3/4"$ Carriage Bolts, Fender Washers, Lock Washers, Nuts



WINDSHIELD WIPER MECHANISM

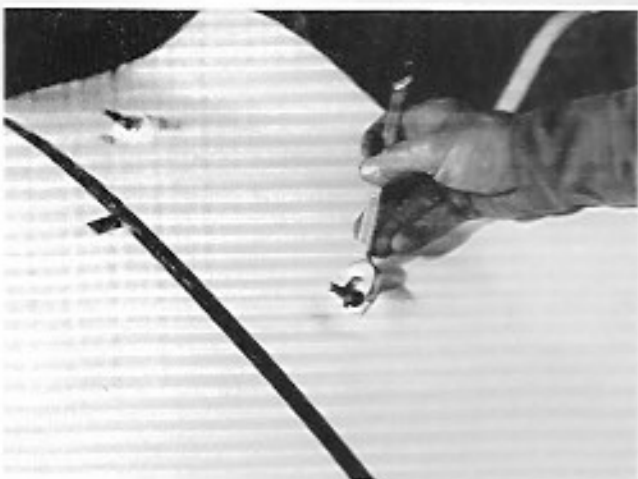


- ① Place VW windshield wiper mechanism under dash and insert wiper arm shafts through factory pre-drilled holes in cowl.



- ② Install original VW felt washer, flat washer and nut on each shaft.

Connect electrical wiring according to wiring instructions.

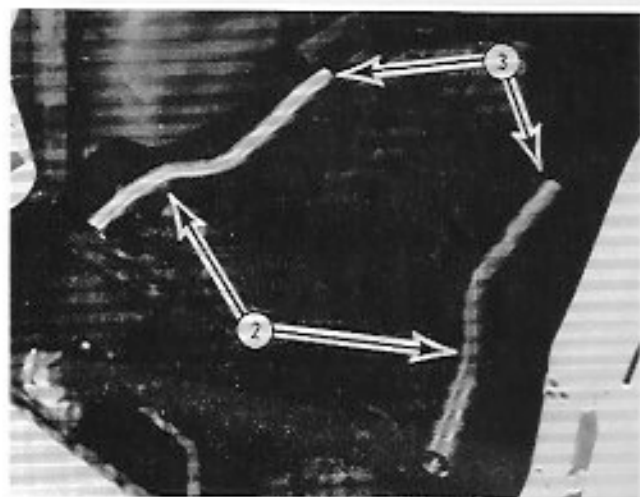


HEATER DUCT INSTALLATION

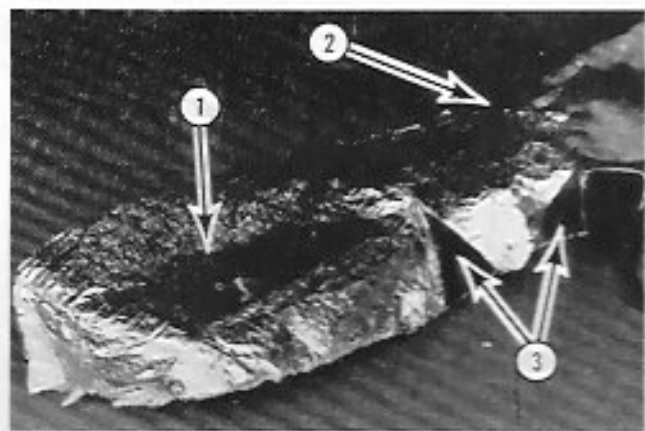
- 1 Inspect heater control cables and butterflies in the exhaust heat boxes to insure proper working condition. Lubricate, if necessary.



- 2 Cut two heater duct hoses 38" long. The remaining length of hose will be used later for the air cleaner installation.
- 3 Insert heater ducts into VW heater boxes. Secure this connection with duct tape.

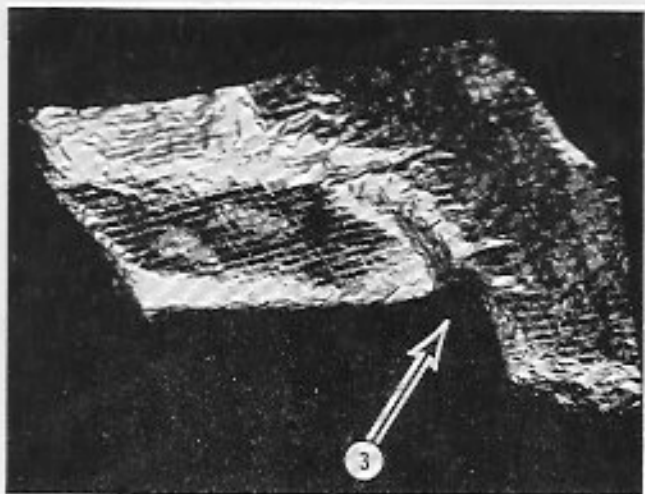


INNER PANEL SOUND DEADENING PACKAGE

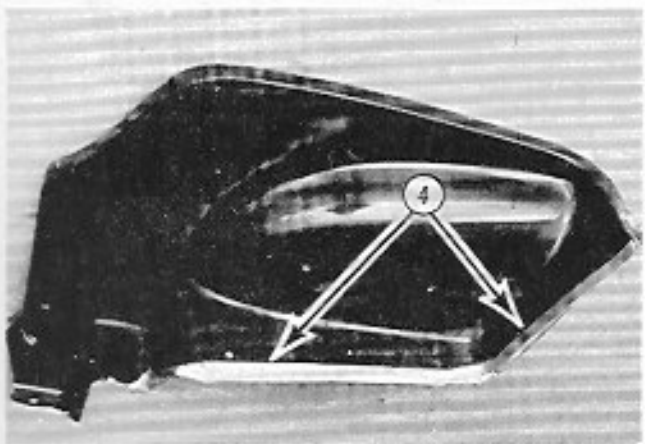


① Cut insulation 20" long X roll width. Spray or brush adhesive on to the unfinished surface of inner side panel. Install insulation foil side up.

② Trim excess from edges.



③ Fill voids with insulation trimmings.

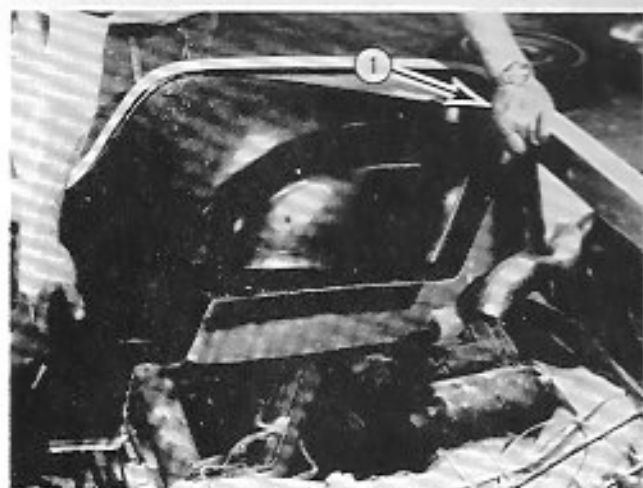


④ Using duct tape, seal edges.

Repeat this process for other side.

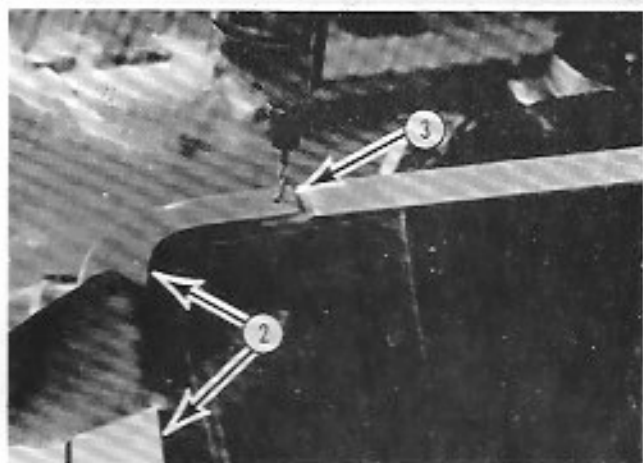
INNER PANELS

- ① Remove carriage bolt from top rear corner of the body side panel.



- ② Place inner panel in position. Pull inner panel towards outside of car until the face of the inner panel is even with the inside edge of the outer body panel.

- ③ Using hole in body side as a guide, drill 5/16" hole through inner panel.

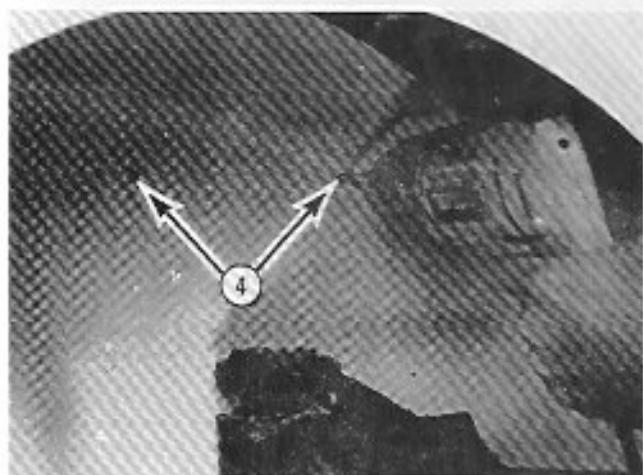


Reinsert carriage bolt. Secure with fender washer, lock washer and nut.

- ④ From under rear fender, using body side panel holes as a guide, drill two 5/16" holes through inner panel.

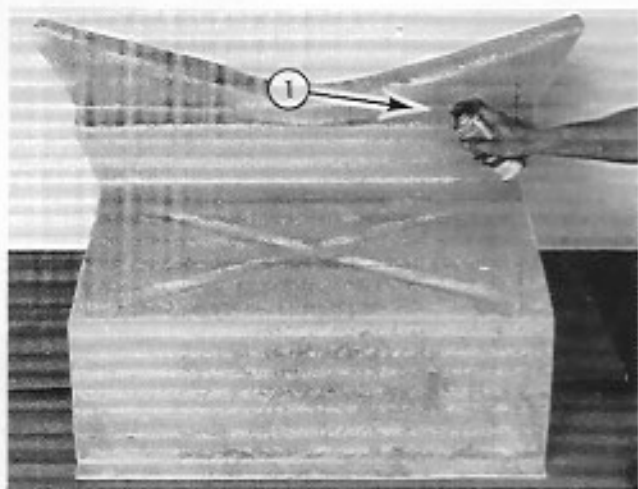
From inside, insert two carriage bolts in these holes through inner panel, body side panel. Secure with fender washers, lock washers and nuts.

Install opposite side by repeating above process.



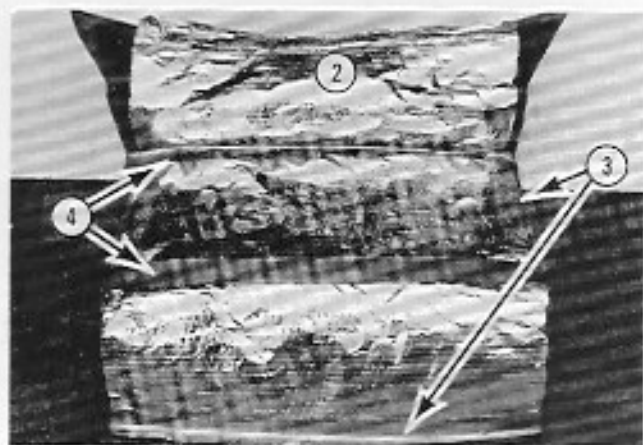
- (4) 1/4" X 1" Carriage Bolts, Fender Washers, Lock Washers, Nuts per panel

INNER PANEL - CENTER SECTION SOUND DEADENING PACKAGE



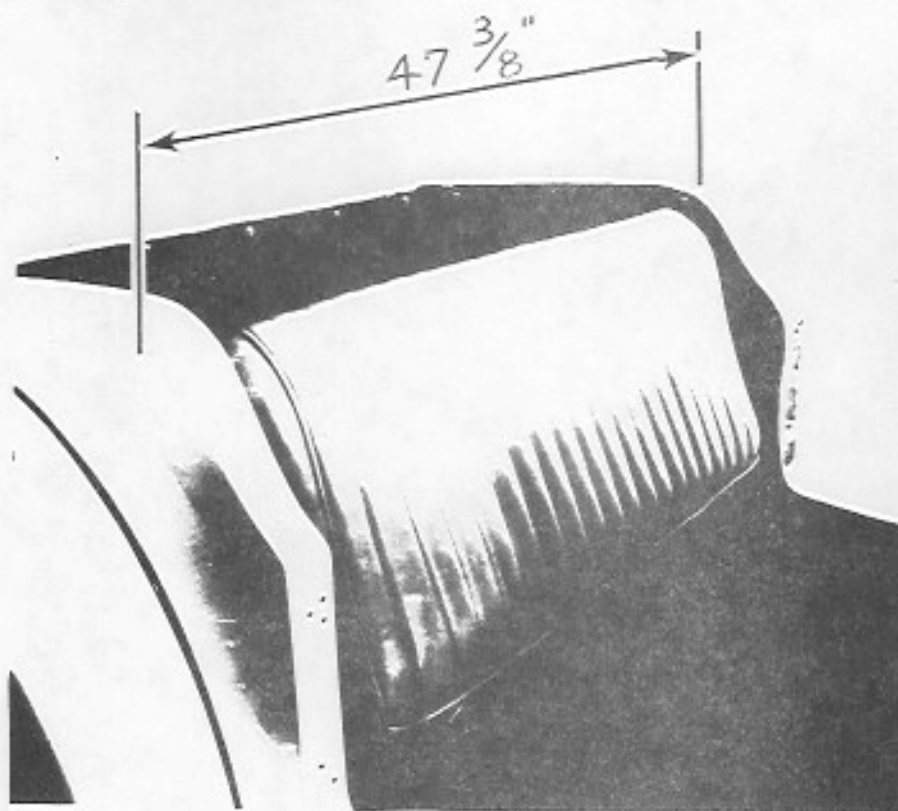
Cut insulation 30" long X roll width.

- ① Spray adhesive on underside of rear inner panel.



- ② Install insulation foil side up.
- ③ Apply duct tape to all outer edges.
- ④ To secure insulation in place when panel is installed, run two strips of duct tape all around inner panel.

NOTE: To obtain proper door fit in the preceeding steps, the dimension of $47\frac{3}{8}$ " across to the OUTSIDE of each body side panel must be maintained during installation of the inner panel center section and doors. A temporary "spreader" can be made by cutting a piece of wood to the proper length. The seat back is designed as a structural member and will maintain $47\frac{3}{8}$ " dimension after completion.

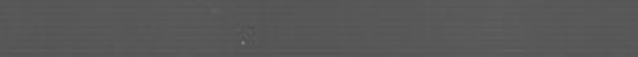
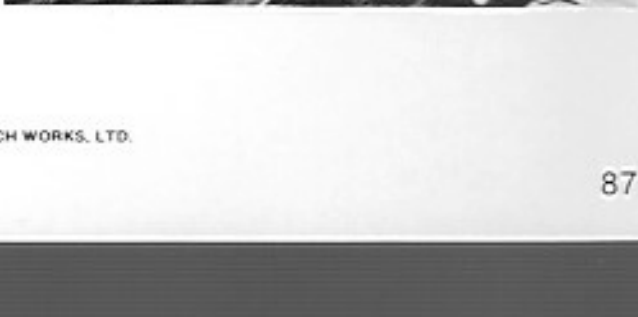
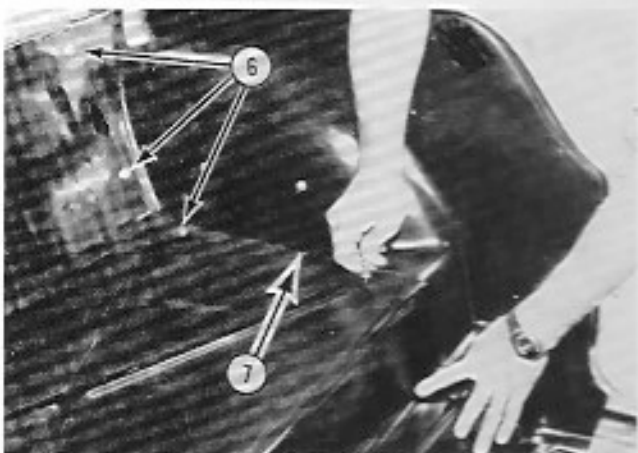
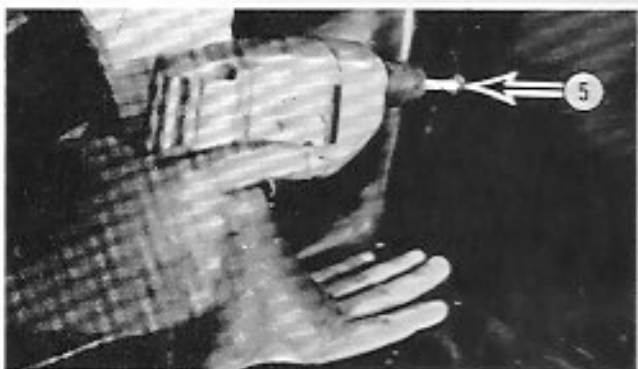
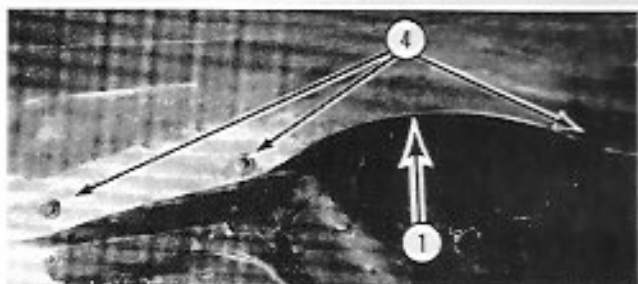
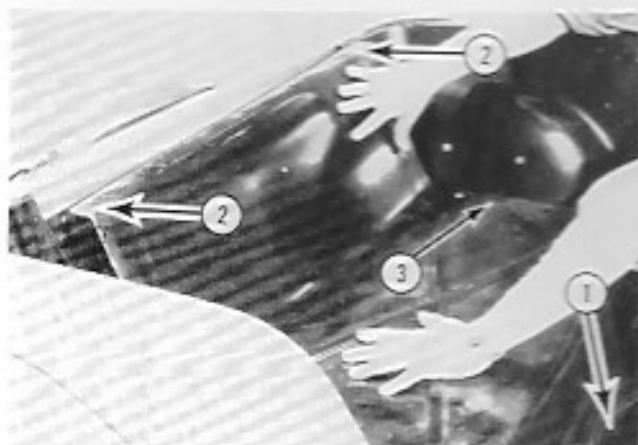


INNER PANEL CENTER SECTION

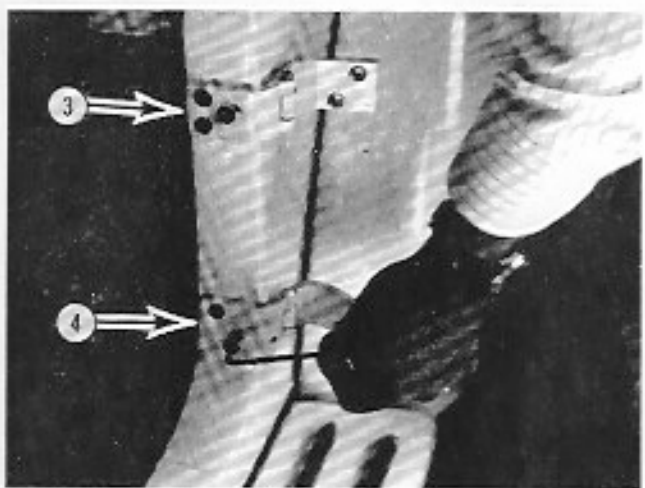
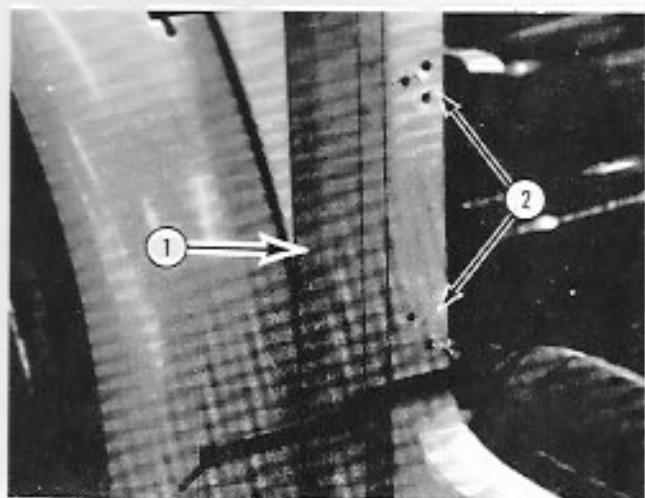
NOTE: At this time, leave heater ducts underneath inner panel. **CAUTION:** Do not crush heater ducts.

- ① Caulk exposed section of belly pan gasket where it will meet inner panel.
- ② Slip the top edge of center inner panel between the rear body section and side inner panels.
- ③ The side edges of the center inner panel should lay on top of the side inner panels.
- ④ On the bottom edge, insert four VW body bolts through the factory pre-drilled holes and into the chassis.
- ⑤ Using factory pre-marked locations, drill ten 5/16" holes, five on each side, through the inner panel center section and inner panel sides.
- ⑥ Insert ten carriage bolts through these holes. Secure with fender washers, lock washers and nuts.
- ⑦ Caulk joints.

(10) 1/4" X 3/4" Carriage Bolts, Fender Washers, Lock Washers, and Nuts



DOOR HINGES



- ① Use two "C" clamps to pull face of inner side panel flush with inner edge of outer body panel. Place a piece of wood between clamps and outer body panel to prevent damage to finish.
- ② Using factory pre-drilled holes as a guide, drill $5/16"$ holes through inner panel.
- ③ Making sure that the "head" of the hinge pin is on the top, insert three screws in upper hinge. Secure with flat washers, lock washers and nuts.
- ④ Making sure that the "head" of the hinge pin is on the top, insert two screws in lower hinge. Secure with flat washers, lock washers and nuts.

Repeat the process described above on the opposite side.

(5) $1/4" \times 1-1/4"$ Allen Flat Head Machine Screws per side

(5) Flat Washers, Lock Washers, Nuts per side

DOOR INSTALLATION

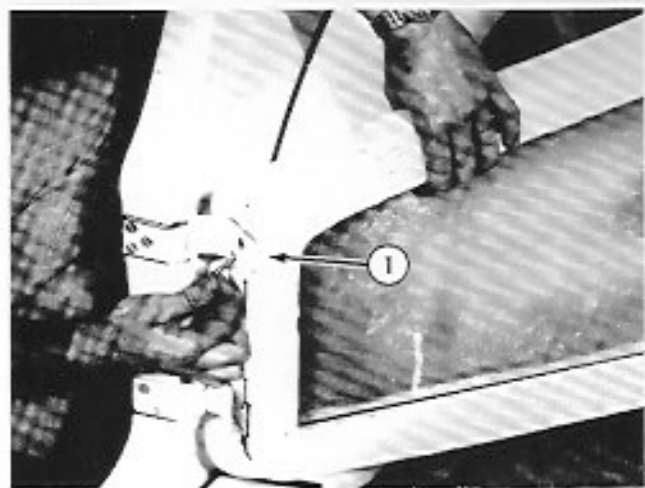
- 1 Align door with hinges and insert two screws through each door hinge and through factory pre-drilled holes in doors. Secure with flat washers, lock washers and nuts.

Open and close door to check for proper fit. Adjustments can be made by inserting washers as spacers between door hinge and door at either the top or the bottom hinge, depending what adjustments are necessary. Before making any adjustments, refer to step 5 of Rear Sub-Frame Installation. Normally, no adjustments are necessary.

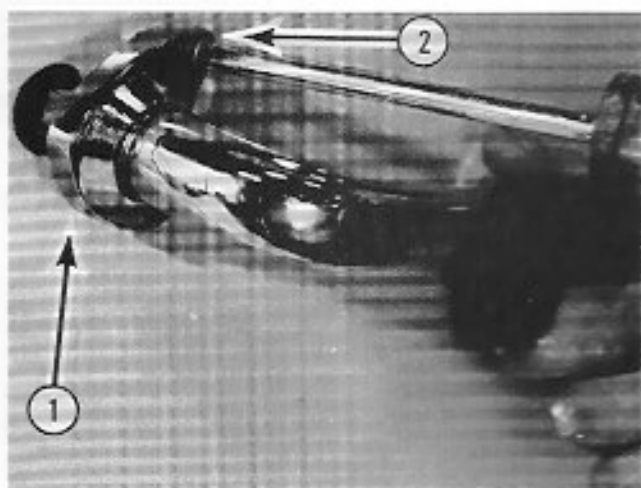
Repeat the process described above on opposite door.

(4) 1/4" X 1-1/4" Allen Flat Head Machine Screws per door

(4) Flat Washers, Lock Washers, Nuts per door



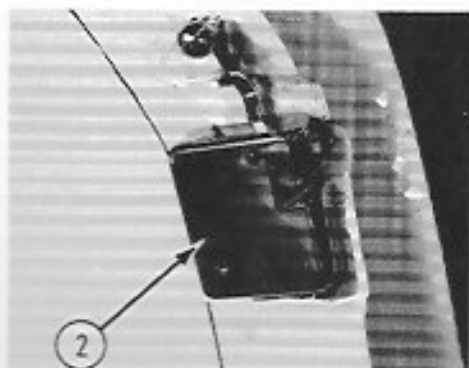
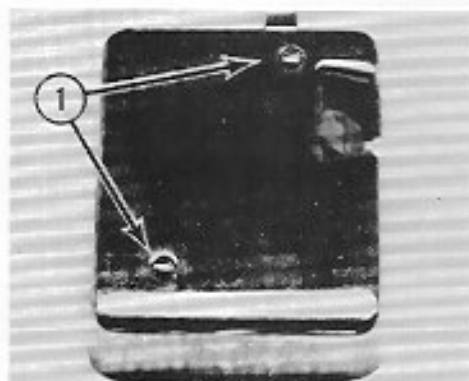
DOOR HANDLE INSTALLATION



- ① Slip gasket over handle shaft.
Insert handle shaft into factory pre-drilled hole.
- ② Insert two chrome phillips head screws through handle and factory pre-drilled holes in door.
Secure with flat washers, lock washers and nuts.
Repeat same process on other door.

(2) #10 X 3/4" Chrome Phillips Oval Head Machine Screws, Flat Washers, Lock Washers, Nuts per door

DOOR LATCH INSTALLATION



- ① Remove chrome cover from latch to expose the four mounting holes.
Insert four round head screws through latch into the factory pre-drilled holes in inner door panel. Secure with flat washers, lock washers and nuts.
Lubricate lock mechanism.
- ② Replace cover.
Repeat same process on other door.

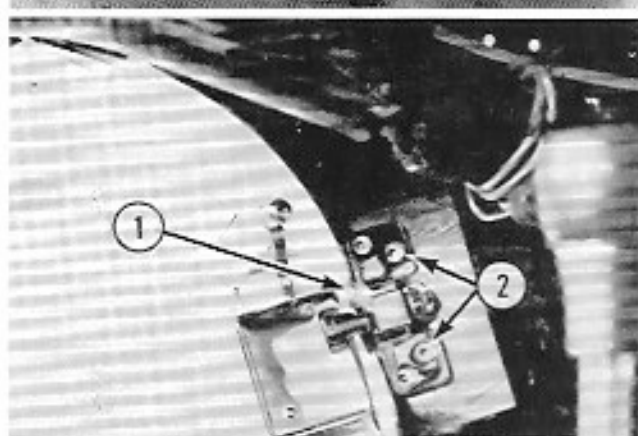
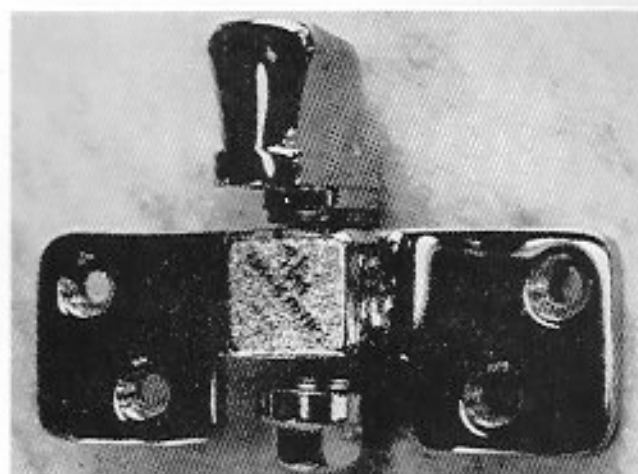
(4) #10 X 3/4" Round Head Machine Screws, Flat Washers, Lock Washers, Nuts per door

DOOR STRIKER

- 1 Close door, insert striker into door latch and position striker as shown.
- 2 Using door striker as a guide, drill four 1/4" holes through inner panel. **CAUTION:** Do not drill through exterior body side panel. Insert four phillips head screws through striker and inner panel. Finish with flat washers, lock washers and nuts.

Repeat process on opposite side.

- (4) #10 X 3/4" Chrome Phillips Oval Head Machine Screws, Flat Washers, Lock Washers, Nuts per door

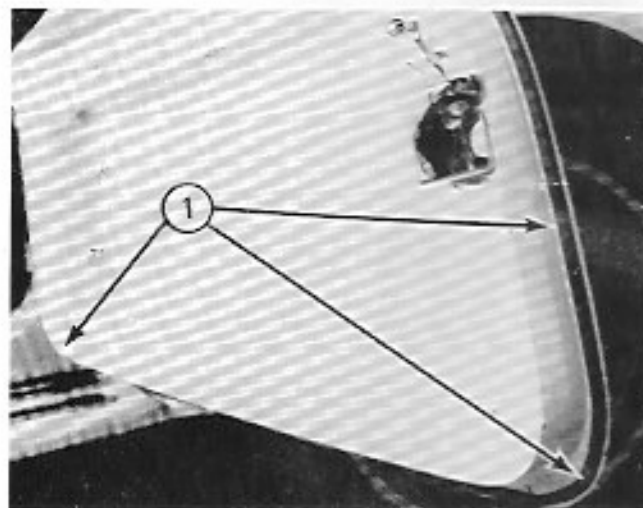


DOOR WEATHERSTRIPPING

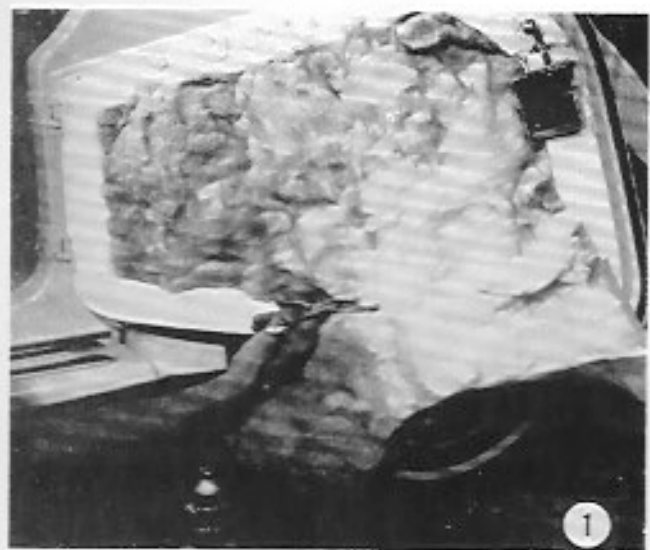
- 1 Cut a piece of 1/4" X 3/8" self-adhering foam rubber weatherstripping 50" long. Attach weatherstripping to the front edge of the door and to the bottom edge of the door. **Do not use any weatherstripping in the hinged or rear portion of the door.**

Repeat process described above on opposite side.

Open and close door to check for proper fit and seal. If door seal is not tight enough, adjustment can be made by placing shims between door striker and inner panel. If door seal is too tight, add shims between door latch and door inner panel. Normally no adjustment is necessary.



DOOR SOUND DEADENING PACKAGE

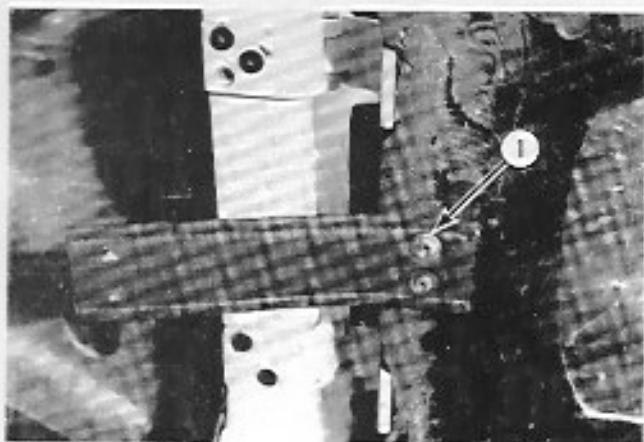


- ① Cut insulation 26" long X 1/2 roll width to fit door.

Glue foil side to door.

Repeat this process for other door.

DOOR RESTRAINT

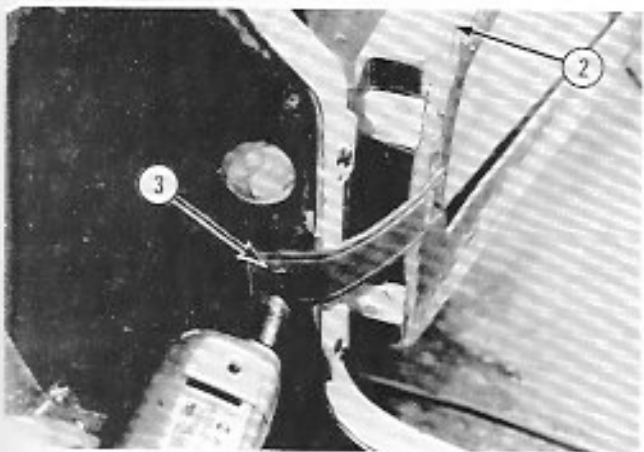


The door restraint is necessary to prevent the door from hitting the rear fender when opened.

- ① Position vinyl door restraint on door inner panel as shown. Center between upper and lower hinges.

Drill two 3/16" holes through restraint and door inner panel approximately 1" from door inner panel edge.

Insert two 3/16" pop rivets and attach to door panel.



- ② Open door until it is 90° from body.
- ③ Pull restraint tight, drill two 3/16" holes and attach opposite end to the inner body panel with two 3/16" rivets.

Repeat above process for opposite door.

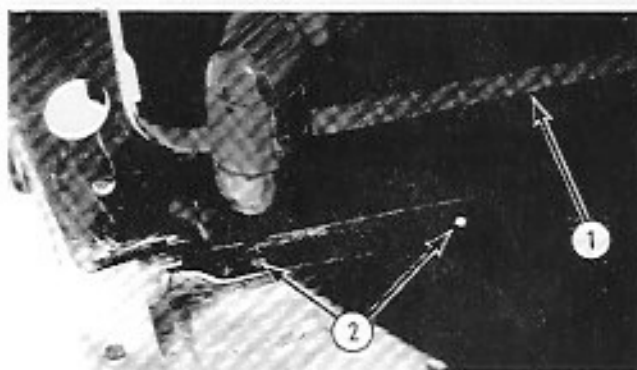
(4) 3/16" X 1/2" Pop Rivets per door

INNER DOOR SILL

Cut insulation 6" long X roll width. Glue insulation under door sill, foil side out.



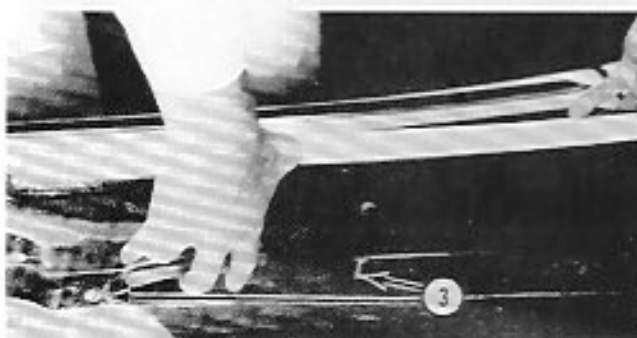
- 1 Place door sill inner panel in position. Use two "C" clamps to pull face of door sill panel flush with inner edge of outer body panel. Place a piece of wood between clamps and outer body panel to prevent damage to finish.
- 2 Using factory pre-marked holes as a guide, drill three 3/16" holes through inner panel and VW floor.



- 3 Insert 3/16" pop rivets and attach panel to floor.

Caulk joint at floor pan and at door sill.

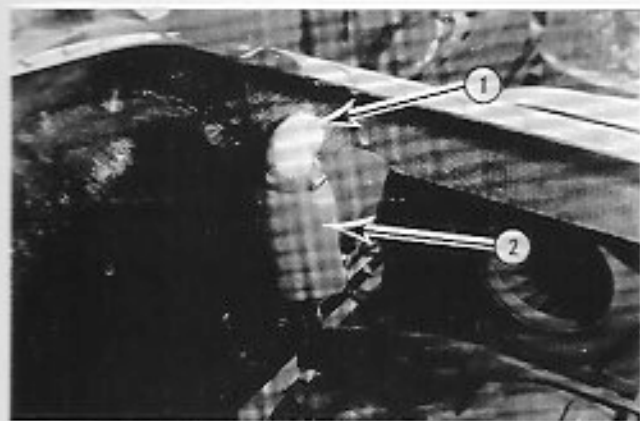
Repeat the above process for the opposite side.



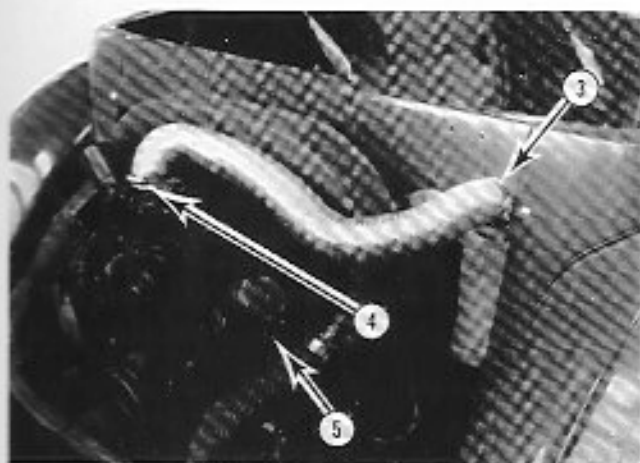
(3) 3/16" X 1/2" Pop Rivets per panel

AIR FILTER MOUNTING

THE AIR FILTER IS MOUNTED ON THE INSIDE OF THE CAR BETWEEN THE REAR BODY SECTION AND THE INNER PANEL. THIS PROVIDES AN AREA PROTECTED FROM THE WEATHER WHICH ENABLES THE ENGINE TO BREATHE COOL, DRY, CLEAN AIR.



- 1 Insert BCW air filter elbow through the factory pre-cut hole in the rear body section.
- 2 Prepare filtering element according to instructions supplied with filter and attach filter to elbow using hose clamp.



- 3 Cut air filter hose 27" long and attach to air filter elbow with hose clamp.
- 4 Attach opposite end of filter hose to carburetor with hose clamp.

CAUTION: Do not crush filter hose when installing simulated gas tank ends.

- 5 Attach VW crank case breather hose and route down under car away from exhaust system.

SIMULATED TD GAS TANK DETAILS

THE CHROME PLATED ACORN NUTS AND GAS TANK BEAUTY STRIPS ARE MORE AUTHENTIC TD DETAILS DESIGNED INTO THE MODEL 52.

- 1 From inside simulated TD gas tank end, insert 1/4" hex head bolt through the top and bottom factory pre-drilled holes.

Finish with chrome acorn nuts.

Remove protective backing from beauty strips.

Place polished side up.

- 2 Using metal strip as a guide, drill 1/8" hole through top backside of gas tank end, as shown.

- 3 Insert pop rivet through metal strip and gas tank end.

- 4 Bend strip around gas tank end, as shown.

- 5 Using strip as a guide, drill 1/8" hole through bottom edge of gas tank end. Insert pop rivet through metal strip and gas tank end.

- 6 Make sure metal strip is flush with the edge of the gas tank end.

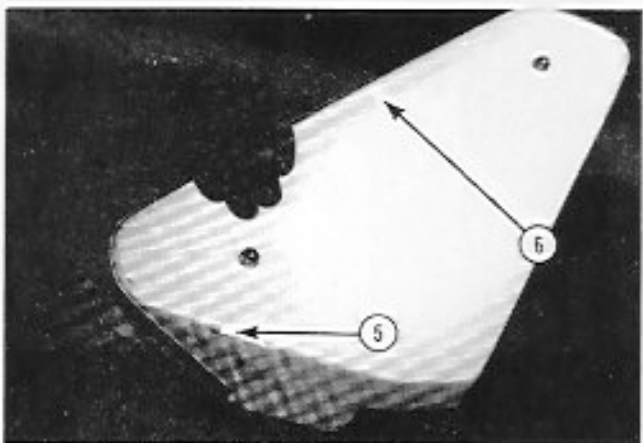
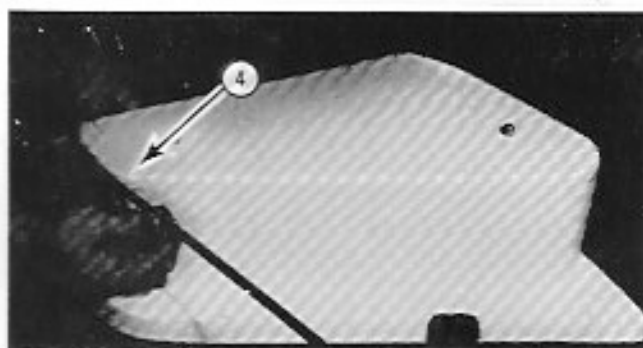
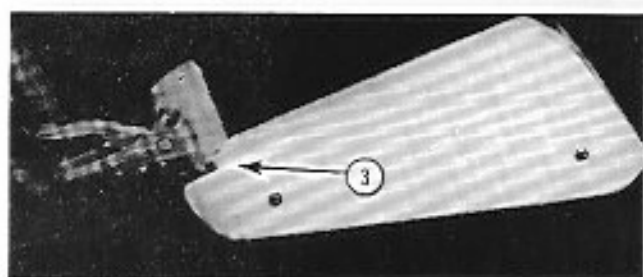
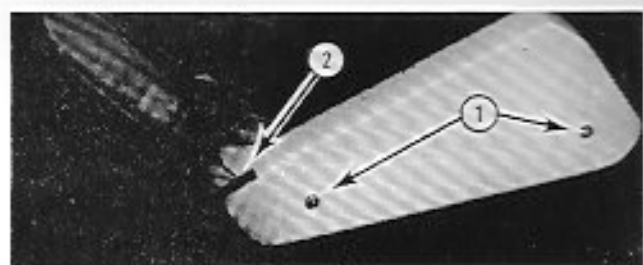
Drill the remaining 1/8" hole in each end and insert pop rivets.

Repeat above process for opposite gas tank end.

(2) Chrome Acorn Nuts per end

(2) 1/4" X 3/8" Hex Head Bolts per end

(4) 1/8" X 1/4" Pop Rivets per end

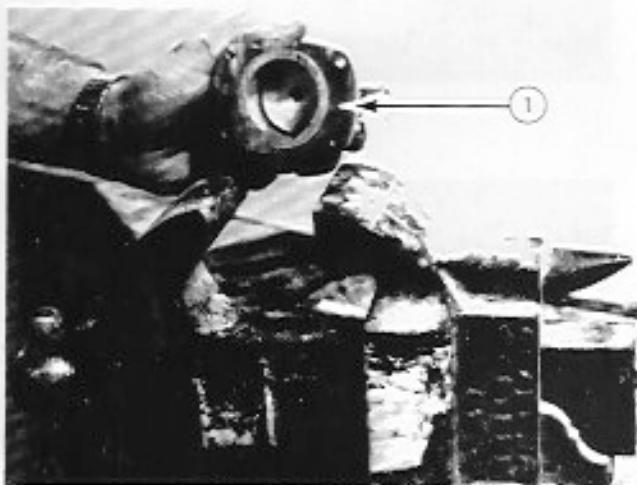


SIMULATED GAS FILLER

THIS INSTALLATION PROVIDES ANOTHER AUTHENTIC TD DETAIL DESIGNED INTO THE MODEL 52.



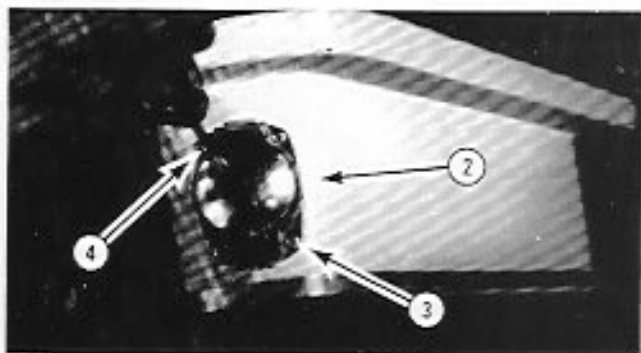
- ① Cut neck from gas filler with hacksaw.



- ② Position on the top corner of the driver's gas tank side cover as shown.

- ③ Using holes in gas filler as a guide, drill four 1/8" holes through driver's gas tank end.

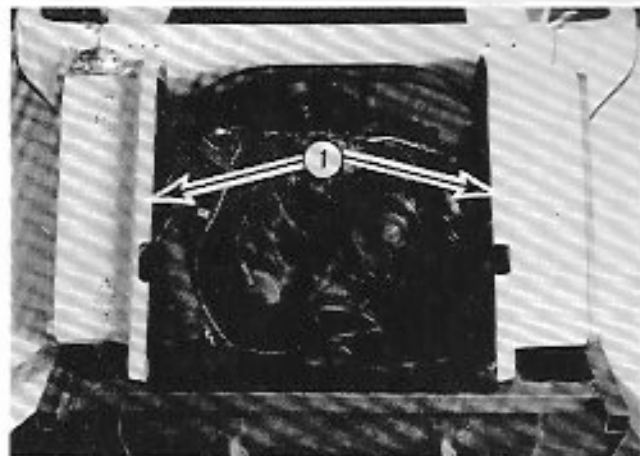
- ④ Attach using chrome phillips head screws as shown.



(4) #8 X 3/4" Chrome Phillips Oval Head Tapping Screws

SIMULATED GAS TANK ENDS

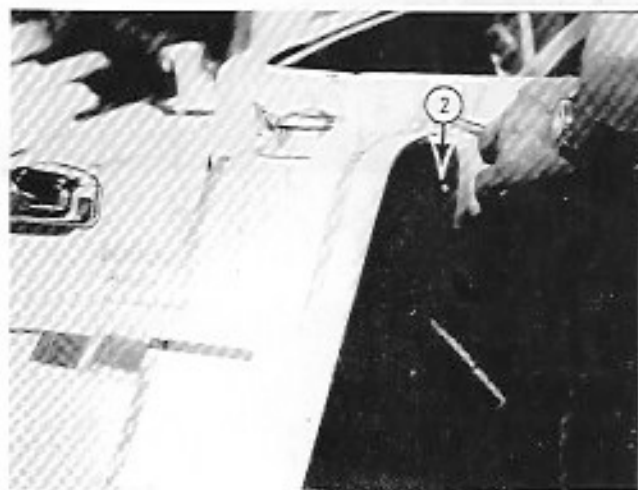
- ① Place gas tank end into position.



- ② From inside top portion of each gas tank end, insert carriage bolt through the factory pre-drilled hole in the gas tank end and into rear body panel.

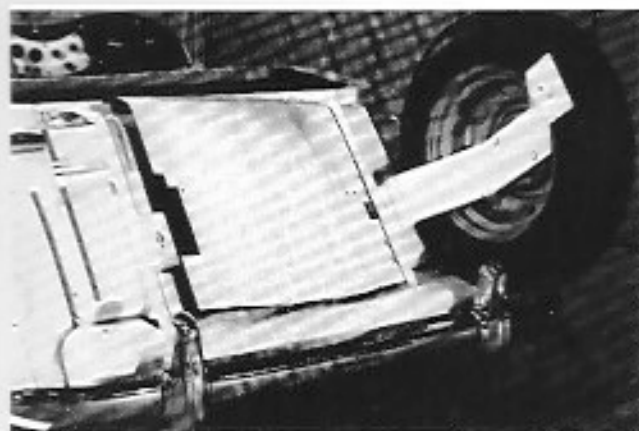
Secure with fender washer, lock washer and nut.

Repeat process for opposite gas tank end.

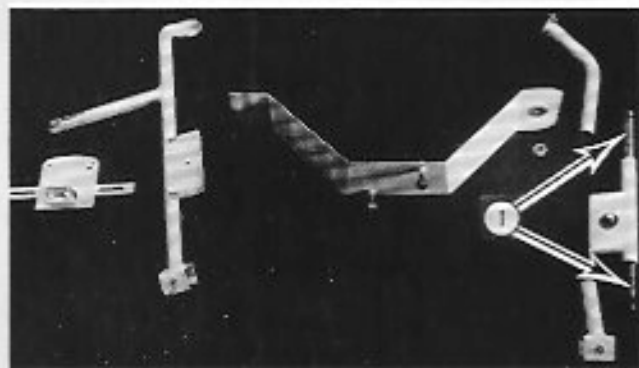


- (2) 1/4" X 3/4" Carriage Bolts, Fender Washers, Lock Washers, Nuts

SPARE TIRE CARRIER ASSEMBLY

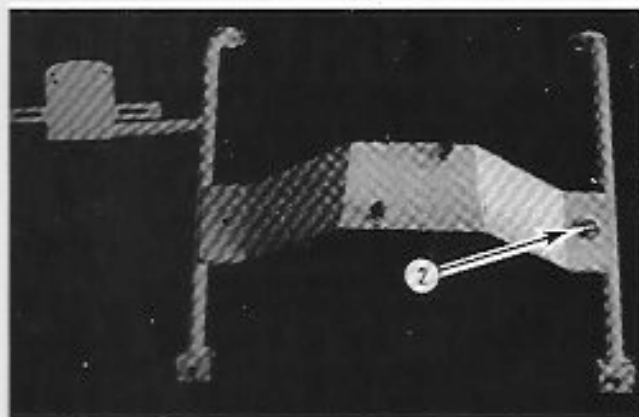


The all welded steel spare tire carrier is an authentic BCW detail that is a "look alike" reproduction of the original TD, engineered to fully support a real spare tire to swing to the side for easy engine accessibility.



- ① Grease pivot shaft.

Assemble all pieces of the tire carrier, as shown.



- ② Tighten lock nut to eliminate free play that could cause a rattle, yet loose enough to allow the up and down pivot motion.

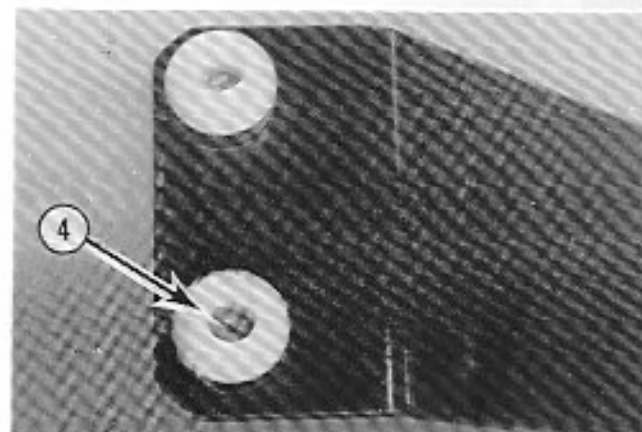
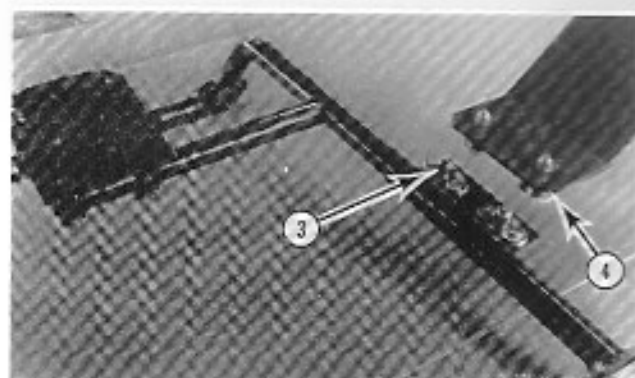
CAUTION: Do not crush nylon bearings.

(Continued Next Page)

SPARE TIRE CARRIER ASSEMBLY *(Continued)*

- ③ Attach both male portions of latches to the stationary portion of the carrier using two truss head bolts, lock washers and nuts per latch.
- ④ Attach both female portions of latches to the movable portion of the carrier using 1/4" X 3/4" round head bolt, lock washer and chrome acorn nut per latch. The holding capacity of the latch can be increased or decreased by tightening or loosening the mounting screw.

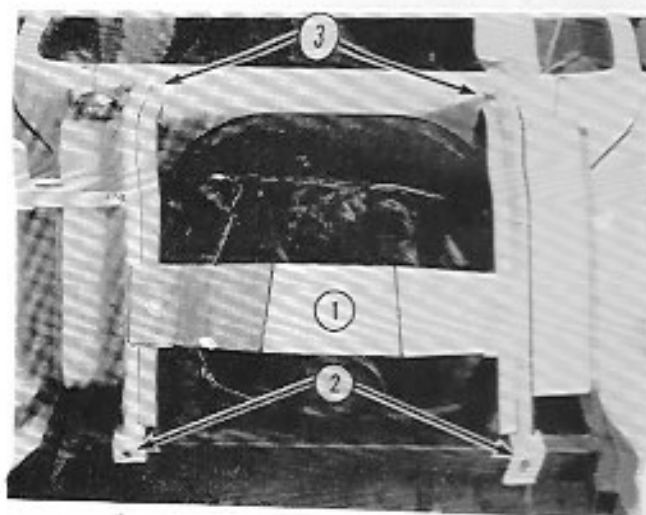
- (4) 10-32 X 3/4" Truss Head Bolts, Lock Washers, Nuts
- (2) 1/4" X 3/4" Round Head Bolts, Lock Washers, Chrome Acorn Nuts



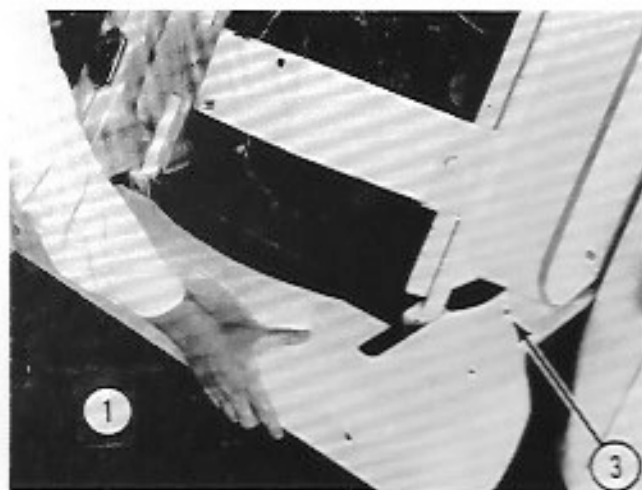
SPARE TIRE CARRIER MOUNTING

- ① Place assembled spare tire carrier on sub-frame.
- ② Align factory pre-drilled holes and insert 1/4" x 2-1/2" hex head bolt through tire carrier and sub-frame on each side. Secure with lock washers and nuts.
- ③ From inside of rear body section, insert two 1/4" x 3/4" carriage bolts through the rear body section and tire carrier on each side. Secure on outside with lock washers and chrome acorn nuts.

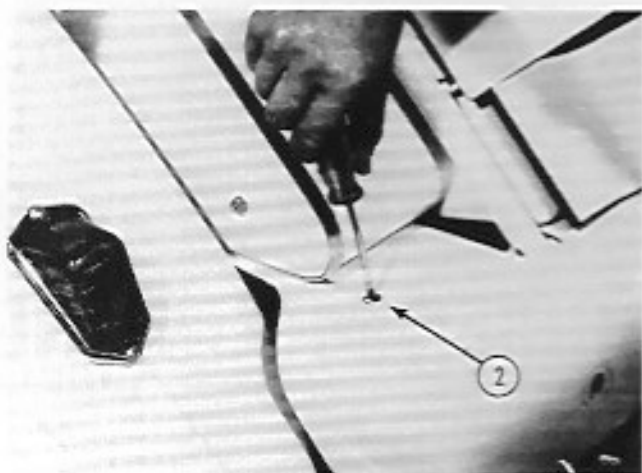
- (2) 1/4" X 2-1/2" Hex Head Bolts, Lock Washers, Nuts
- (4) 1/4" X 3/4" Carriage Bolts, Lock Washers
- (4) 1/4" Chrome Acorn Nuts



REAR SPLASH APRON

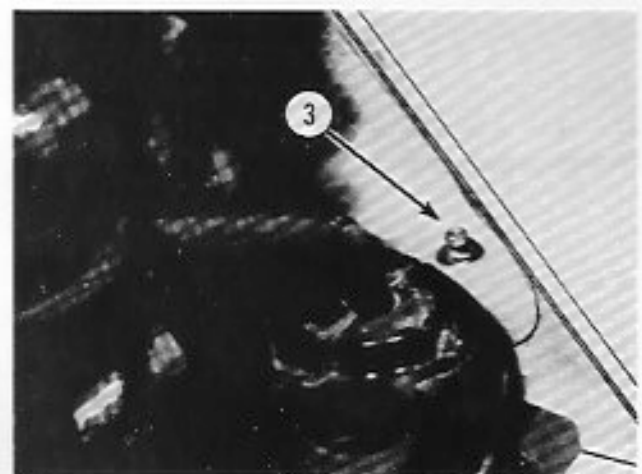


- ① Slide splash apron between sub-frame and both gas tank covers.



- ② Insert chrome phillips head bolt through the factory pre-drilled holes in the splash apron and subframe.

Secure with lock washer and nut.



- ③ From underneath, attach splash apron to gas tank end by inserting 1/4" X 3/4" carriage bolt through the factory pre-drilled holes.

Secure with fender washer, lock washer and nut.

Repeat process on other side.

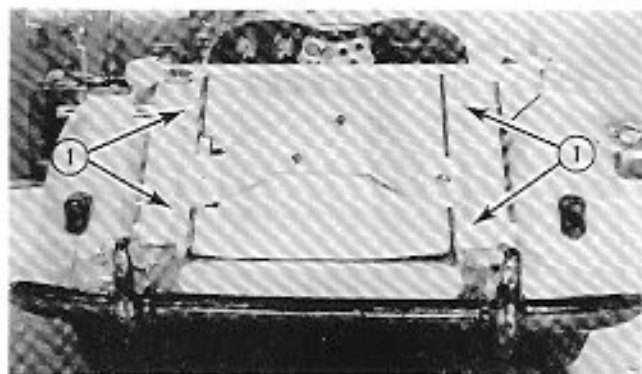
(2) 1/4" X 2-1/2" Chrome Phillips Round Head Machine Screws, Lock Washers, Nuts

(2) 1/4" X 3/4" Carriage Bolts, Fender Washers, Lock Washers, Nuts

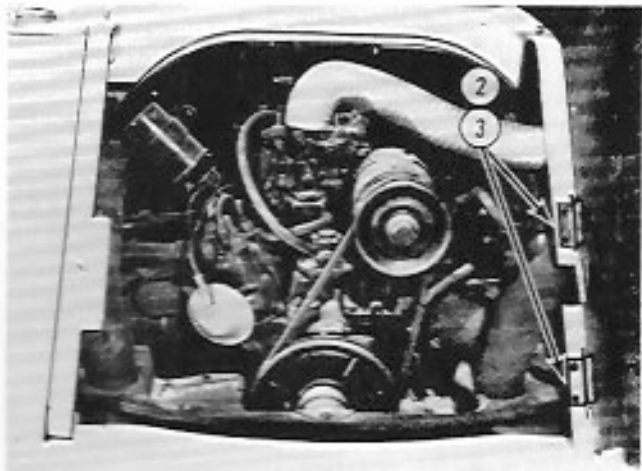
ATTACH ENGINE COVER

The engine cover is attached to passenger side gas tank end with two hinges. The hinges are attached to the engine cover at the factory.

- 1 Align engine cover with gas tank ends.

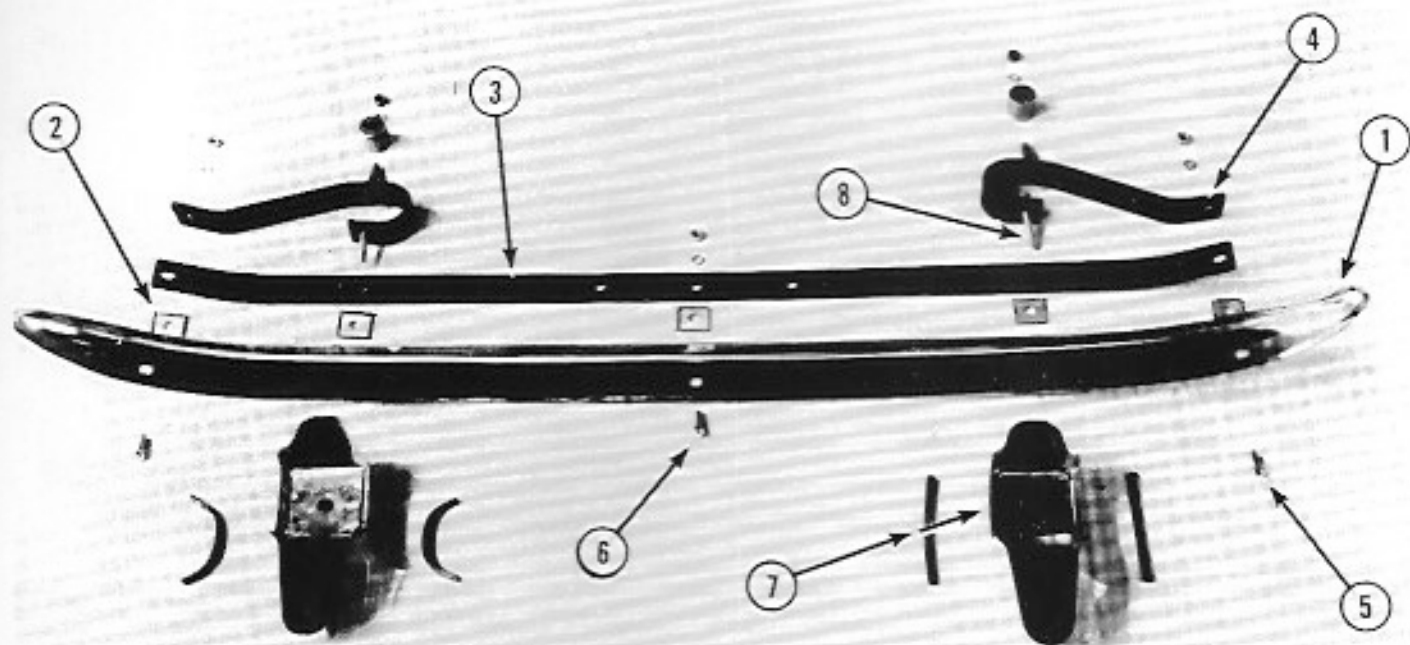


- 2 Drill four 3/16" holes through the passenger side gas tank end using hinges as guides.
- 3 Attach hinges to gas tank end with pop rivets.



(4) 3/16" X 1/2" Pop Rivets

BUMPER ASSEMBLY



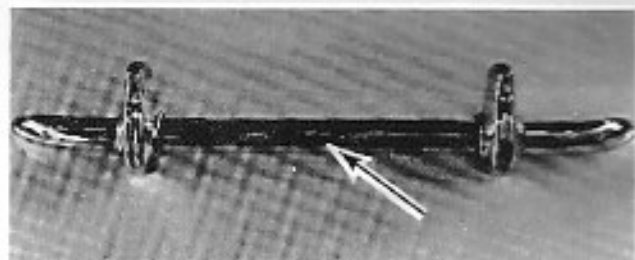
The front and rear bumper assemblies are reproductions of the TD.

- 1 Place bumper on padded surface, chrome side down.
- 2 Position rectangular spacers over each bolt hole on the backside of the bumper. (Five spacers rear bumper — four spacers front bumper.)
- 3 Position back bar over spacers.
- 4 Position "S" bracket over each end of back bar.
- 5 On each end of bumper, insert chrome bumper bolts through bumper, rectangular spacer, backbar, and "S" bracket.
- 6 (Rear Bumper Only) Insert chrome bumper bolt through the center hole in the bumper, rectangular spacer and back bar.
- 7 Place two pieces of black rubber packing on each override where it will contact the bumper.
- 8 Insert bolt through the hole in the "S" bracket, back bar, rectangular spacer, bumper and thread into each override.

Secure with lock washers and nuts.

FRONT BUMPER ATTACHMENT

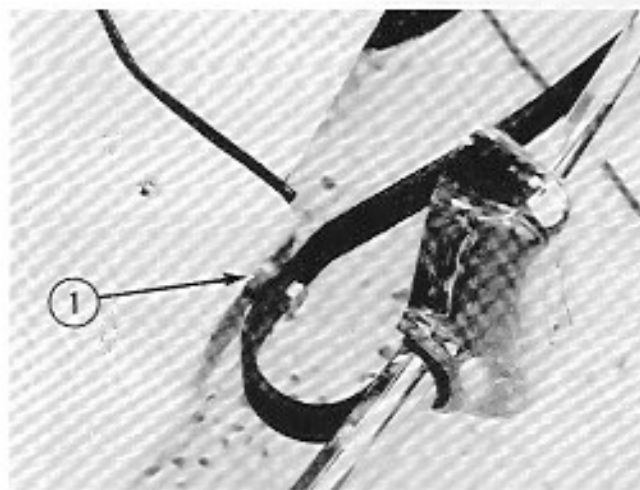
FRONT BUMPER HAS LARGE HOLE IN CENTER. THIS HOLE WAS USED ON THE TD FOR THE HANDLE OF THE CRANK FOR HAND STARTING.



- 1 Insert 1/2" X 1-3/4" hex head bolt through "S" bracket, small 1/2" long cylindrical spacer, front splash apron and frame bracket on each side.

Secure with lock washers and nuts.

- (2) 1/2" X 1-3/4" Hex Head Bolts, Lock Washers, Nuts

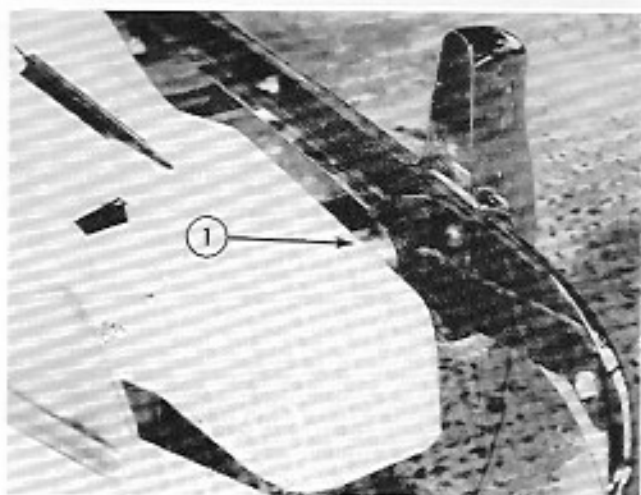


REAR BUMPER ATTACHMENT

- 1 Position rear bumper and insert 1/2" X 2-1/2" hex head bolt through "S" bracket, large 1-1/4" long cylindrical spacer, rear splash apron and sub-frame on each side.

Secure with lock washers and nuts.

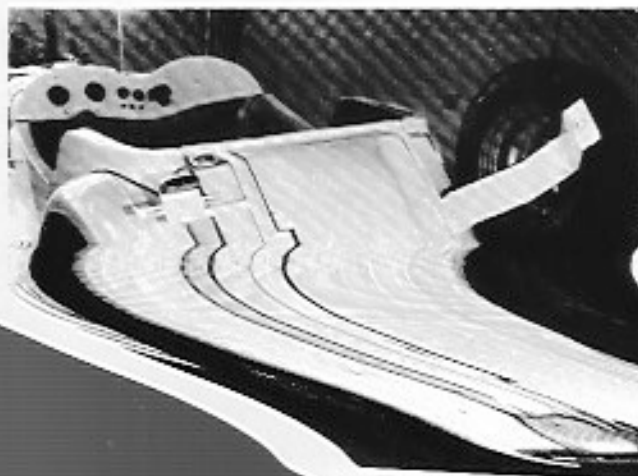
- (2) 1/2" X 2-1/2" Hex Head Bolts, Lock Washers, Nuts



SPARE TIRE



Mount the spare tire by placing the wheel over the factory installed studs on the carrier. Secure with the BCW wheel nuts.



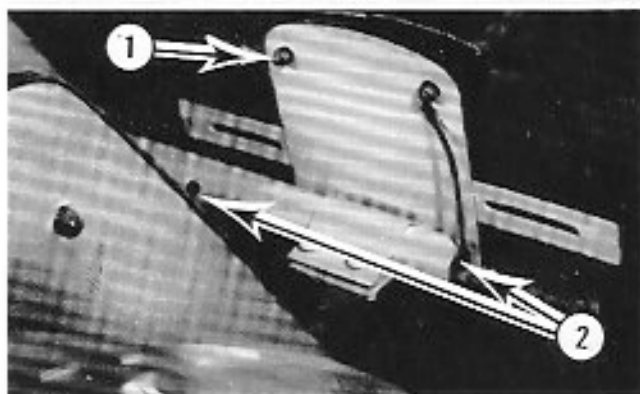
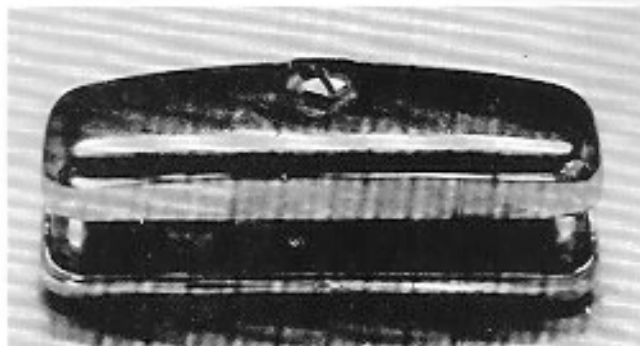
TD STYLE LICENSE PLATE LAMP

THE LICENSE PLATE LAMP IS THE ORIGINAL AUTHENTIC STYLE, MANUFACTURED BY LUCAS AND USED ON THE TD.

- 1 Install lamp by inserting the studs through the factory pre-drilled holes in the bracket.

Secure with lock washers and nuts.

- 2 Insert BCW grommets into the tube to protect the wiring, run wire through spare tire carrier and then connect wiring according to wiring instructions.



TD FRONT PARKING LAMPS

THE FRONT PARKING LAMPS ARE THE ORIGINAL AUTHENTIC STYLE MANUFACTURED BY LUCAS AND USED ON THE TD.

- 1 Place rubber pad in position over the three factory pre-drilled holes in the fender.

Insert electrical wires through center hole and rubber pad (refer to wiring instructions) and connect accordingly.

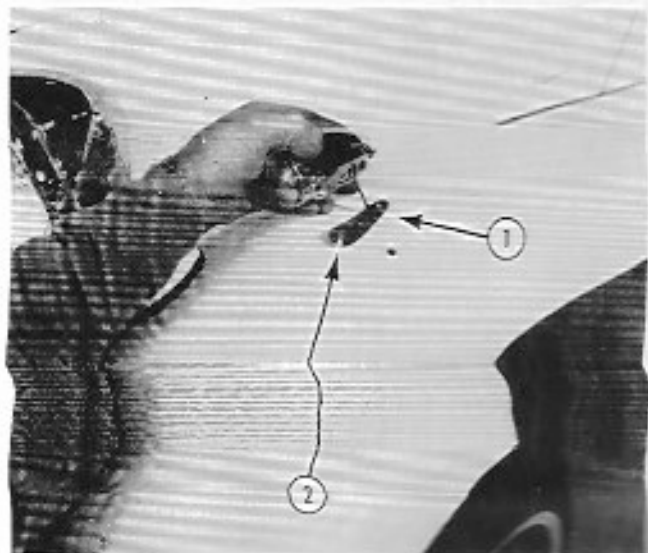
- 2 Attach lamp to fender by inserting hex head

lamp bolts through fender and rubber pad.

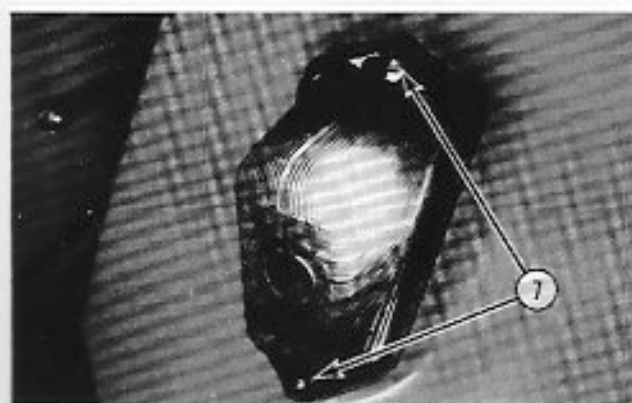
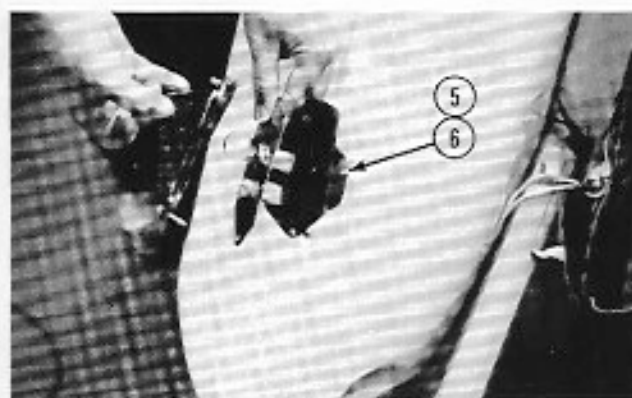
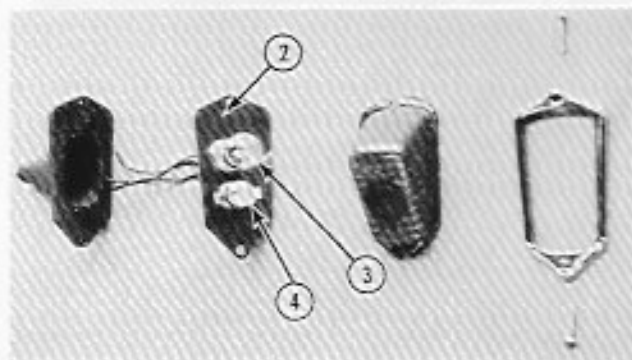
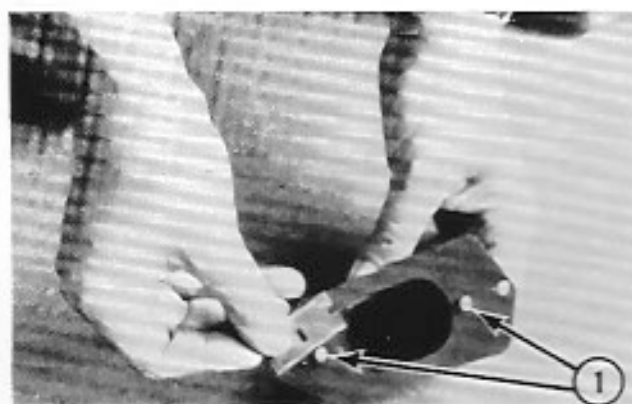
- 3 Insert lamp bolts through fender and rubber pad.

Attach electrical ground wire to one of the lamp mounting bolts. (Refer to wiring instructions.)

Repeat same process on opposite side.



TD TAIL LAMP INSTALLATION



TD tail lamps are exact reproductions of the originals. However, the electrical parts are designed for modern use.

- ① Using a razor blade, cut the two rubber protrusions from the face of the rubber boot.

- ② Remove protective backing from reflector to expose polished face.

- ③ Insert double filament socket and bulb into upper portion of reflector.

- ④ Insert single filament socket and bulb into lower portion of reflector.

- ⑤ Place rubber boot in factory pre-cut hole in fender. Connect electrical wires. (Refer to wiring instructions.)

- ⑥ Push reflector assembly into rubber boot.

- ⑦ Place chrome rim over lens and insert two chrome #10 X 1" phillips head screws through rim and into the factory pre-drilled holes in fender.

Repeat same process on opposite side.

(4) #10 X 1" Chrome Phillips Binding Head Tapping Screws

TD STYLE REAR VIEW MIRROR

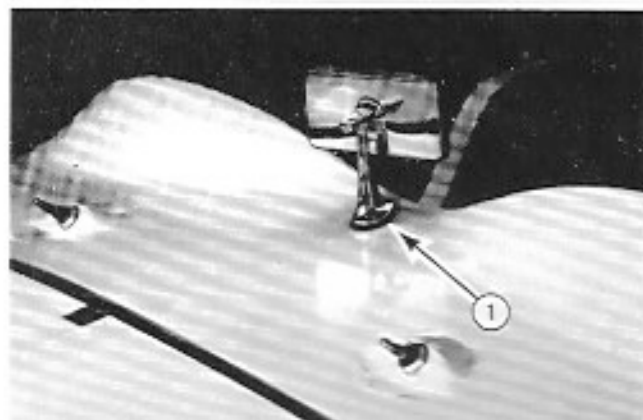
AUTHENTIC COWL MOUNTED TO REAR VIEW MIRROR
AND HARDWARE.



- 1 Place rubber pad over the factory pre-drilled hole in the cowl.

Insert mirror stud through the rubber pad and cowl.

Secure with lock washers and nuts.



TD STYLE FENDER MIRRORS

BOTH FENDER MIRRORS ARE TOP QUALITY REPRODUCTION TO STYLE ACCESSORIES.

- 1 Place rubber pad over the factory pre-drilled hole in the fender.

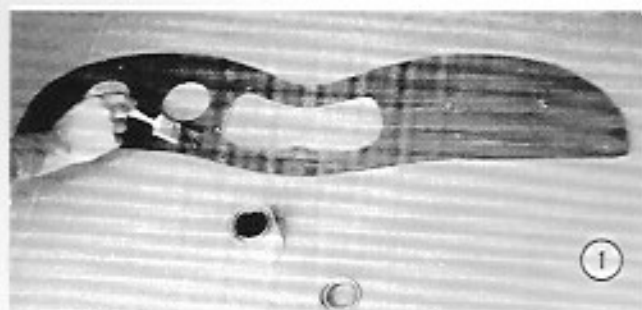
Insert mirror stud through the rubber pad and fender.

Secure with lock washer and nut.

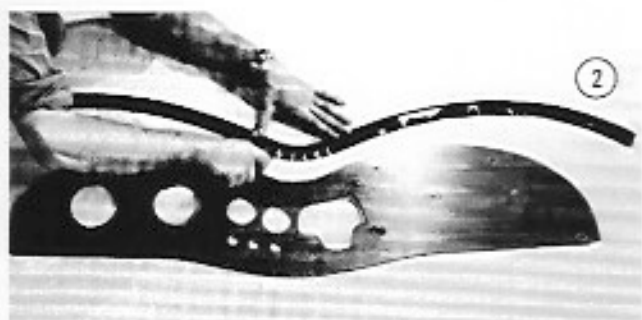
Repeat same procedure on opposite side.



WOOD DASH



The dash panel is genuine walnut wood. A tremendous amount of personal satisfaction can be derived from hand finishing wood. Some people prefer a glossy finish, while others prefer a satin finish. We recommend showing your local paint dealer the wood dash panel and discuss with them the procedure to obtain the finish of your choice.

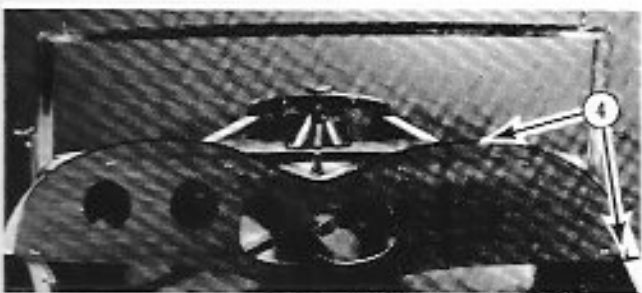


① Finish dash according to paint dealer's recommendation.

② Cut fender welt 53" long. Cut darts to allow welt to conform to the shape of the wood.



③ Loosely attach wood dash panel by inserting six #10 X 3/4" chrome phillips oval head tapping screws with counter sunk washers in factory pre-drilled holes.



④ Insert fender welt between wood and dash, allowing only the bead of the welt to show.

Tighten screws and cut excess welt from ends of dash.

(6) #10 X 3/4" Chrome Phillips Oval Head Tapping Screws and Chrome Countersunk Washers

INSTRUMENTATION INSTALLATION

Classic type instruments and sending units are built to exacting specifications by one of America's most quality-conscious and respected manufacturers of precision timepieces and marine gauges. Featuring the looks and designs of the classic years, coupled with the precision and technology of the 1980's.



- 1 Install speedometer into the dash panel using hardware supplied with instruments. (Refer to Classic Instruments Instructions for specific details.)
- 2 Install tachometer and repeat above installation process.

Connect electrical wiring according to wiring instructions.

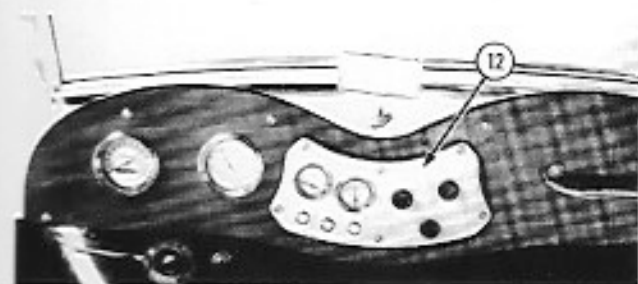
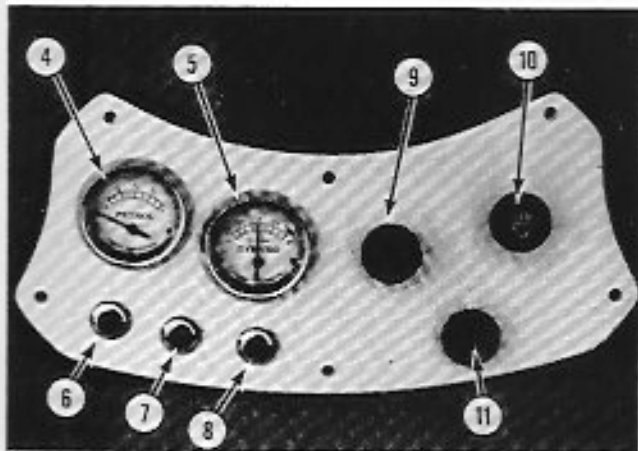
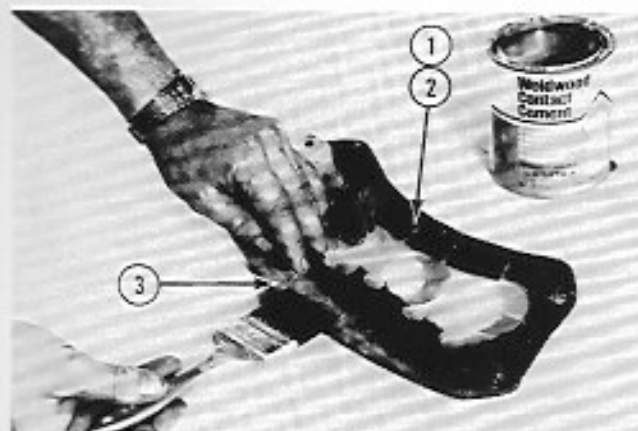


- 3 From underneath dash, drill 3/8" hole directly behind speedometer through cowl for speedometer cable. Insert new BCW speedometer cable through hole. Connect threaded end of cable to speedometer.

Connect opposite end of cable to front wheel as originally installed on the VW.



DASHBOARD INSTRUMENT CLUSTER PANEL



- ① Cut fender welt 34" long.
- ② Cut "darts" in fender welt to allow it to conform to the outer edge of the dashboard instrument cluster.
- ③ Glue fender welt to the back side of the cluster with contact adhesive.
- ④ Install petrol gauge — refer to Classic Instrument Instructions.
- ⑤ Install dynamo gauge — refer to Classic Instrument Instructions.
- ⑥ Install turn signal indicator (green).
- ⑦ Install high beam indicator (blue).
- ⑧ Install engine oil pressure indicator (red).
- ⑨ Install VW windshield wiper switch.
- ⑩ Install VW head lamp switch.
- ⑪ Install VW emergency flasher switch.

Connect all electrical wiring. (Refer to wiring instructions.)

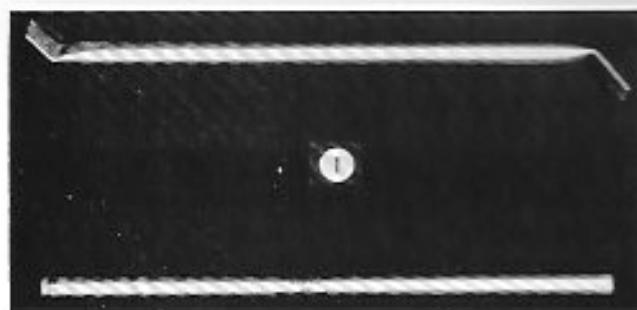
- ⑫ Insert instrument cluster panel into dash and secure with six #8 X 3/4" chrome phillips head screws and chrome countersunk washers.

(6) #8 X 3/4" Chrome Phillips Oval Head Tapping Screws and Chrome Countersunk Washers

GRAB HANDLE STABILIZER BAR

The grab handle stabilizer bar will tie the grab handle to the cowl and firewall.

- 1 Construct the stabilizer bar from the remaining 20" piece of tubing supplied in kit. Flatten 2" of each end of tubing in a vise, drill 5/16" hole 1/2" from each end, and then bend both ends of tubing to the required angles and length which can be determined by placing tubing in position for trial fit.



- 2 Remove nut and lock washer from bolt securing dash stabilizer to firewall.



- 3 Place one end of grab handle stabilizer bar over bolt and reinstall lock washer and nut.

- 4 Place grab handle on dash. Insert chrome phillips screw through passenger side hole in grab handle and dash.

Secure with fender washer, lock washer and nut.

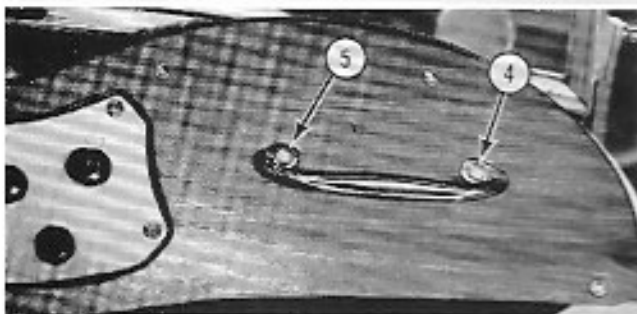


- 5 Insert chrome phillips screw through other hole in grab handle and dash. Place end of stabilizer over screw.

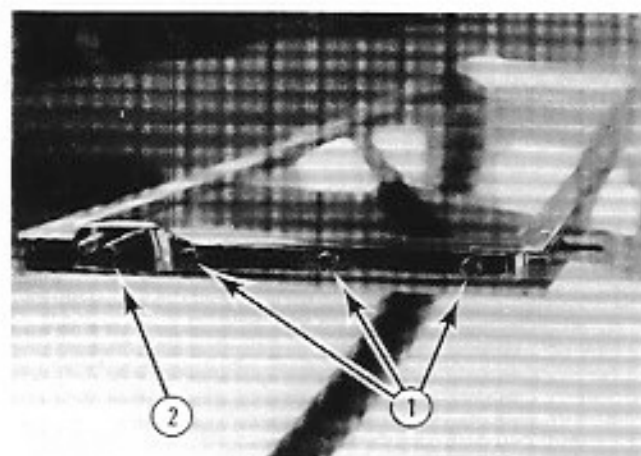
Secure with fender washer, lock washer and nut.

NOTE: Check wood dash for flatness. Use washers as shims between stabilizer bar and fiberglass dash if necessary.

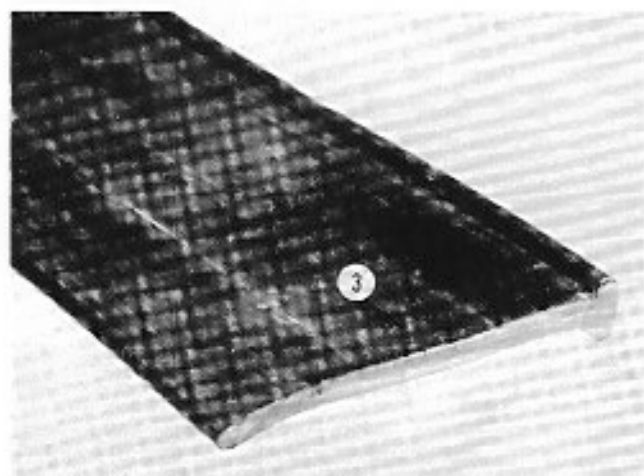
- (2) 1/4" X 1" Chrome Phillips Oval Head Machine Screws, Flat Washers, Lock Washers, Nuts



TD REPRODUCTION WINDSHIELD ASSEMBLY



- ① Install the reproduction TD chrome windshield side brackets on both sides of windshield frame with three #10 X 3/4" chrome machine screw studs per side. Use LOC TITE on all threads.
- ② Insert one #10 X 3/4" flat head machine screw per side. Take windshield frame to local glass shop to have glass cut and installed in frame. The frame is designed to use cork packing and will accommodate ASI safety plate glass only. **CAUTION:** Do not substitute.



- ③ Cut the reproduction TD cowl rubber 42-1/2" long.



- ④ Slide cowl rubber into the bottom of the windshield frame.

(6) #10 X 3/4" Chrome Machine Screw Studs

(2) #10 X 3/4" Flat Head Machine Screws

WINDSHIELD INSTALLATION

WHEN INSTALLED, THE WINDSHIELD CAN FOLD DOWN IN THE SAME MANNER AS THE ORIGINAL TD BY LOOSENING THE WING NUTS.

- ① Loosely attach chrome reproduction TD cowl brackets to both windshield side brackets with 5/16" chrome acorn nuts on the lower studs and chrome wing nuts and cone washers on the upper studs.
- ② Place windshield assembly on cowl and hold in position while inserting bracket rubber gasket between cowl bracket and cowl. Align holes and insert three chrome phillips oval head screws through bracket, rubber and cowl.

Secure with fender washers, lock washers and nuts.

Repeat process on opposite cowl bracket.

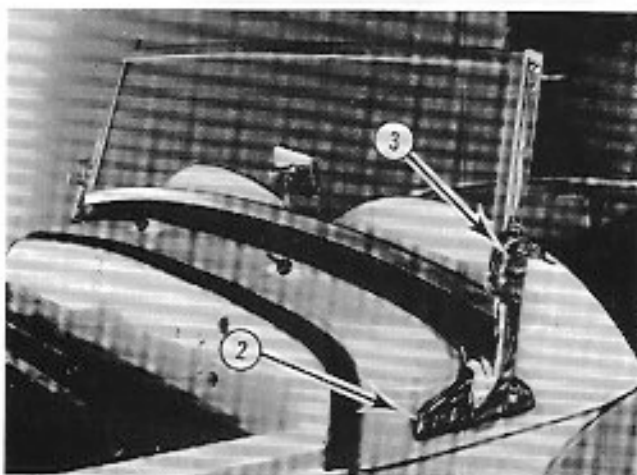
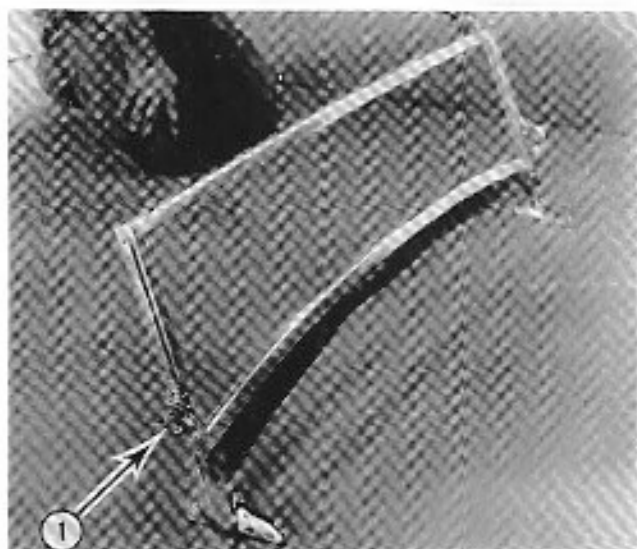
- ③ Tighten chrome acorn nuts and chrome wing nuts while windshield is in upright position.

Remove chrome acorn nuts, apply LOC TITE to the threads and reinstall finger tight. The windshield should freely move to the down position when the wing nuts are loosened.

(6) 1/4" X 1-1/2" Chrome Phillips Oval Head Machine Screws, Fender Washers, Lock Washers, Nuts

(2) 5/16" Chrome Acorn Nuts

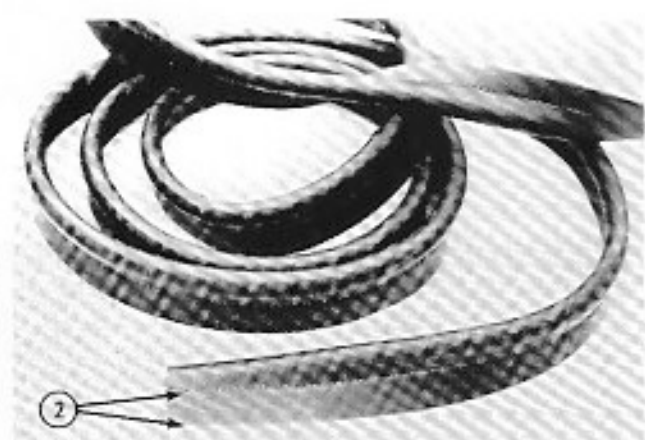
(2) Chrome Wing Nuts, Cone Washers



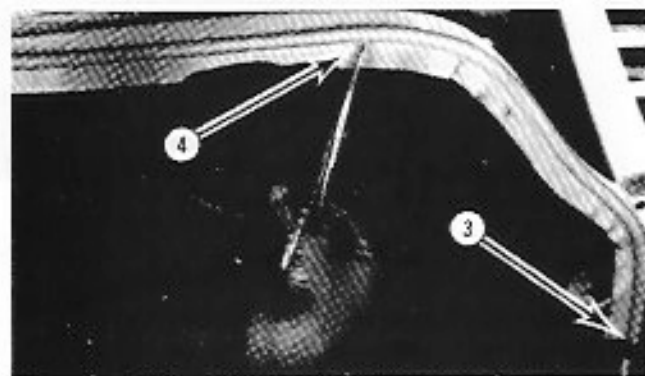
UPHOLSTERY LACE WIND



- ① Apply contact adhesive to the top 1-1/2" edge of the inner side panels and rear center inner panel, starting at the bottom door hinge, follow door edge up and round top rear edge of center inner panel, and down to the opposite bottom door hinge.



- ② Apply contact adhesive to one side of the upholstery wind lace "flap" from the stitching to the edge. Be careful to keep adhesive off of bead.

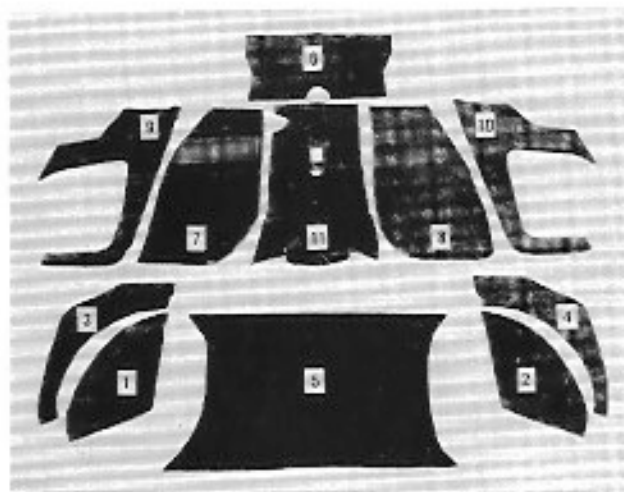


- ③ Starting from the bottom door hinge, glue upholstery wind lace to the top edge of the inner side panel continuing around rear section and opposite side panel.
- ④ Cut darts in "flap" to curve around body contours.

When properly installed, only the bead of the wind lace will be visible from the outside of car.

CARPET INSTALLATION

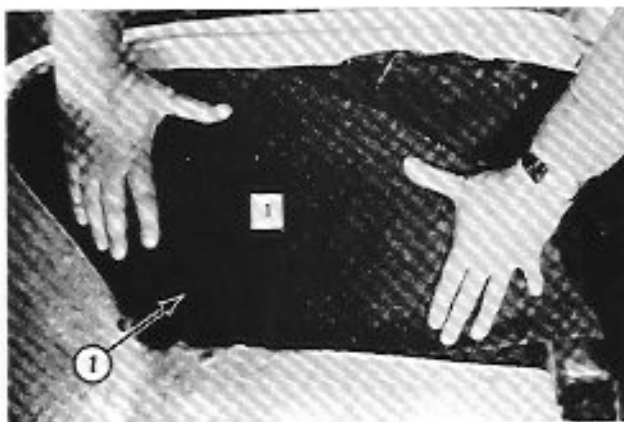
EACH CARPET SECTION IS IDENTIFIED BY NUMBER SEQUENCE IN WHICH IT IS INSTALLED.



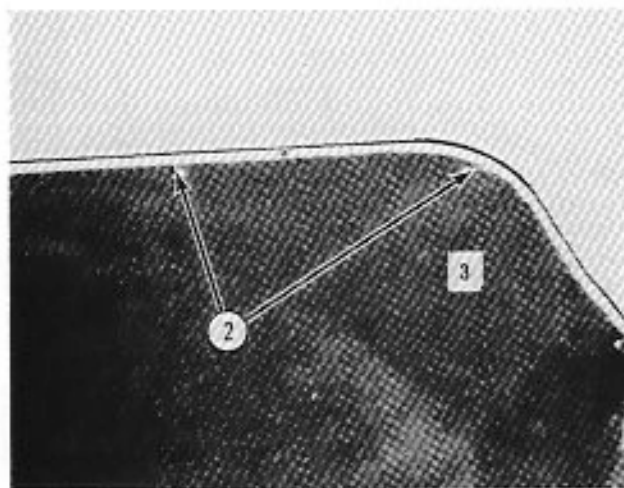
- 1 Apply contact adhesive to the back side of carpet section #1 and to the area of the inner side panel which will be covered.

Install carpet section #1 as shown.

Repeat same process on opposite side for carpet section #2.

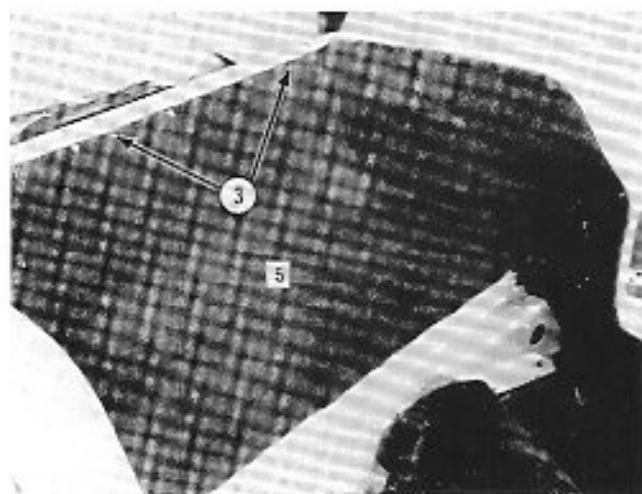


- 2 Repeat above contact adhesive application process for carpet sections #3 and #4 aligning top edge of carpet with wind lace bead.



Continued on next page.

CARPET INSTALLATION *(Continued)*

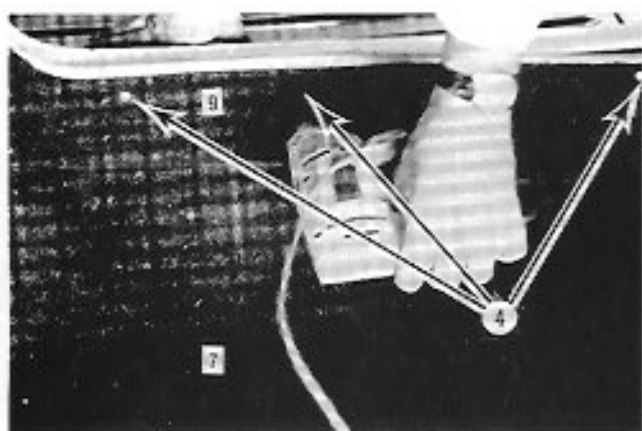


- 3 Glue carpet section #5 to center section using contact adhesive as in previous steps. Align top edge of carpet with wind lace bead. Glue carpet section #6 to firewall using contact adhesive as in previous steps.

Glue carpet sections #7 and #8 in position on the floor pan.

Place carpet section #9 in position against inner door sill.

The carpet is designed to cover the door latch striker.

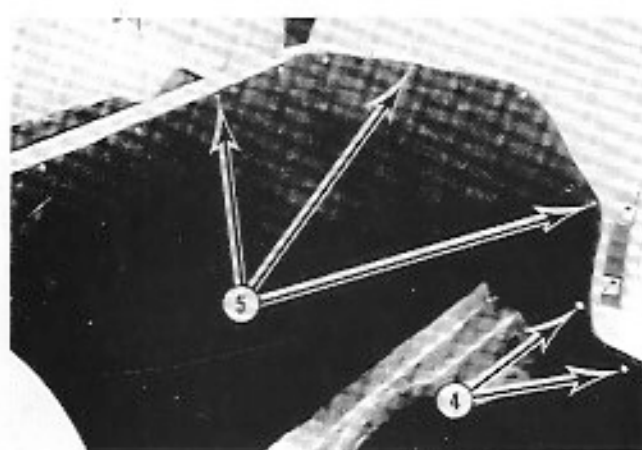


- 4 Starting at the bottom front corner of the door opening, drill five 1/8" holes through carpet section #9 and inner door sill. Drill holes approximately 1/2" below wind lace bead and 8" apart. Install five #8 X 3/4" chrome oval head screws in these holes.

Glue forward section of carpet #9 to the body side panel.

On the top and bottom side of the door latch striker mount, drill two 1/8" holes through carpet #9 and striker mount. Install two chrome screws.

Repeat same process for installing carpet section #10.



- 5 Continue drilling 1/8" holes and installing chrome oval head screws, on 8" centers approximately 1/2" below wind lace bead around top perimeter of interior, through carpet sections #3, #4, and #5. Use approximately fifteen screws.

Glue carpet section #11 in position over emergency brake and gear shift levers.

(29) #8 X 3/4" Chrome Phillips Oval Head Tapping Screws and Chrome Countersunk Washers

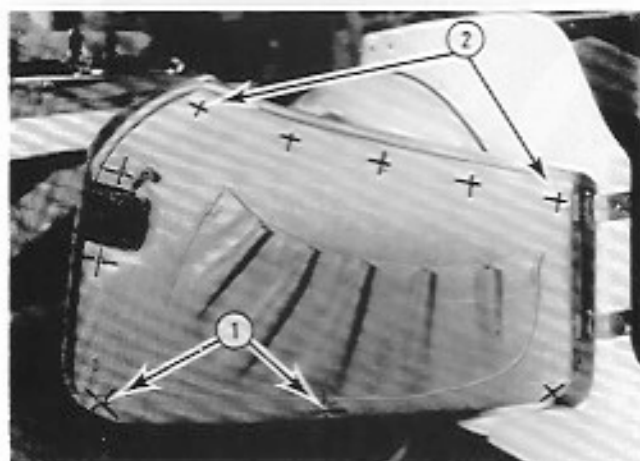
DOOR UPHOLSTERY

- 1 Lay out ten screw locations with chalk approximately 3/4" from door edge as shown.
- 2 While holding door upholstery in position, drill 1/8" hole through each top corner of the upholstery and door inner panel. Install two #8 X 3/4" chrome phillips oval head tapping screws and washers.

Drill the remaining eight holes and install the screws and washers.

Repeat above process for opposite side.

(10) #8 X 3/4" Chrome Phillips Oval Head Tapping Screws and Chrome Countersunk Washers per door



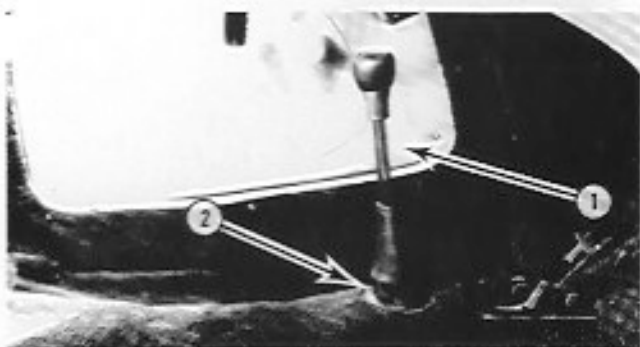
CHROME SPORT SHIFTER INSTALLATION

Remove original VW gear shift knob by turning it counterclockwise then discard.

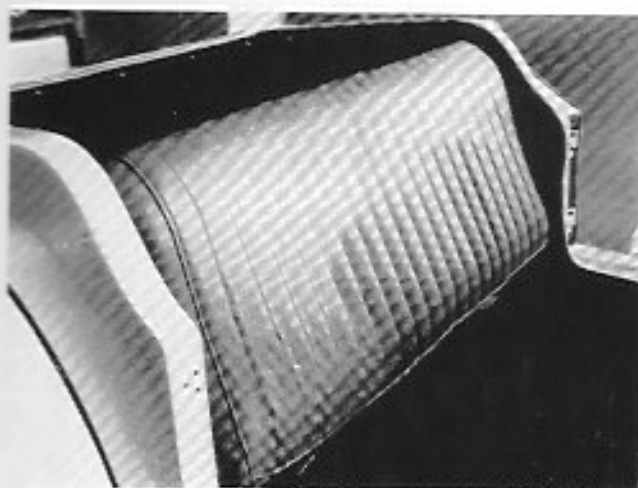
- 1 Place BCW sport shifter over VW gear shift lever.

Screw sport shifter to VW gear shift lever by turning sport shifter clockwise.

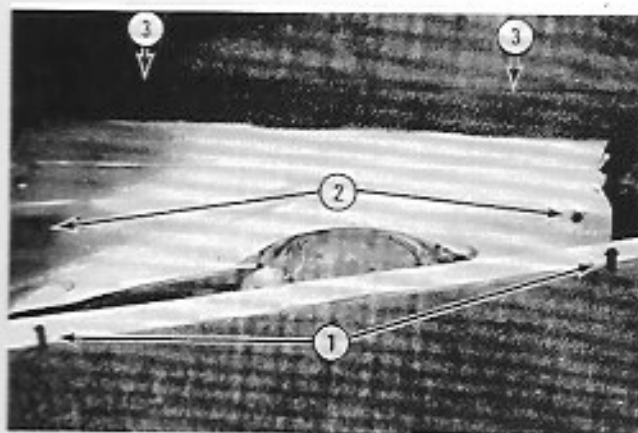
- 2 Tuck gear lever boot under carpet.



SEAT BACK INSTALLATION



THE SEAT BACK IS A ONE-PIECE UNIT AS WAS THE 52 TD.



- ① On the lower rear position of the seat back are two factory installed threaded studs.

- ② While placing seat back in position, insert these studs through the factory pre-drilled holes in the rear center section. From underneath vehicle, secure with fender washers, lock washers and nuts.

- ③ Push the seat towards the rear of the car until the seat back "butts" against the front edge of the "floor area" of the rear carpeted section.

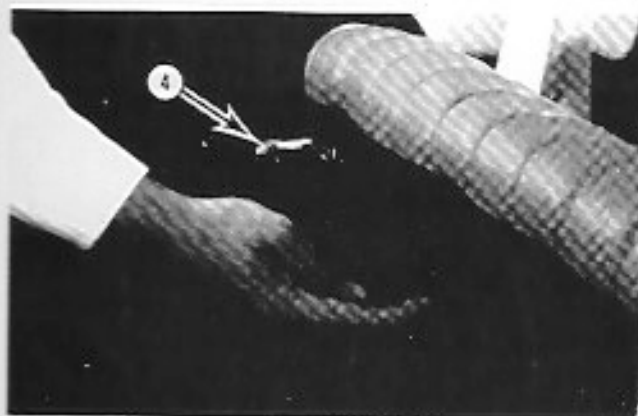
- ④ Using brackets as a guide, drill two 1/8" holes in the seat back and drill two 1/8" holes into the side panel.

Secure bracket to seat and side panel with chrome #10 X 1" phillips binding head tapping screws.

Repeat process for other bracket.

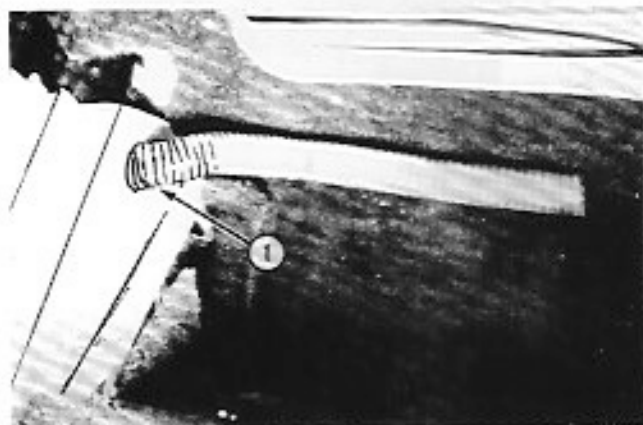
(2) 5/16" Fender Washers, Lock Washers, Nuts

(8) #10 X 1" Chrome Phillips Binding Head Tapping Screws

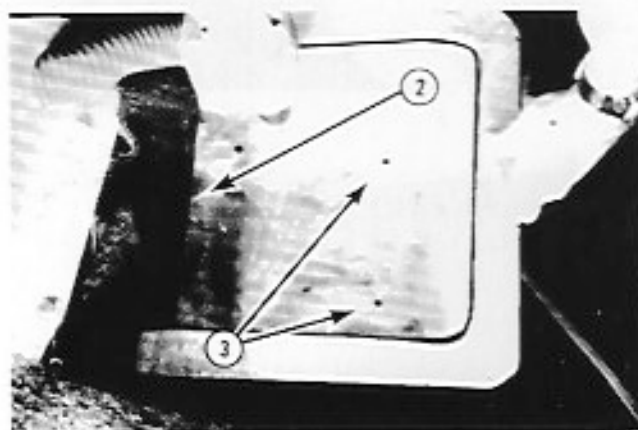


SEAT BOX INSTALLATION

- 1 Insert previously installed heater duct through factory cut hole in center section and place beside door sill.



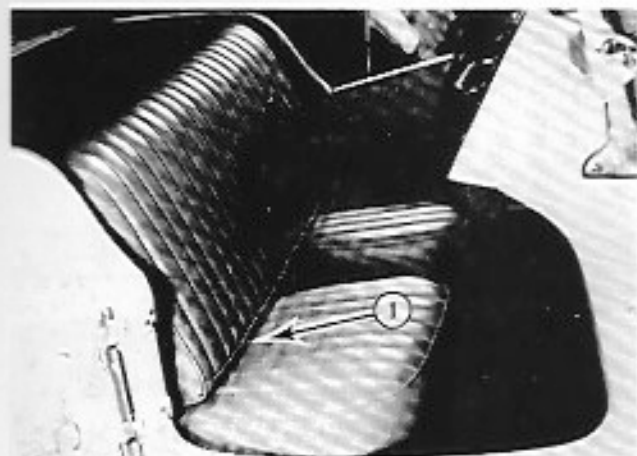
- 2 Position seat box as far towards the rear as possible while the bottom remains flat on the floor. Center box between door and tunnel.
- 3 Drill four 5/16" holes through the bottom of the seat box, carpet the floor pan as shown. Insert 1/4" X 3/4" carriage bolt in each side. Secure with fender washers, lock washers and nuts.



Repeat process for other seat box.

- (4) 1/4" X 3/4" Carriage Bolts, Fender Washers, Lock Washers, Nuts per seat box

SEAT BOTTOMS

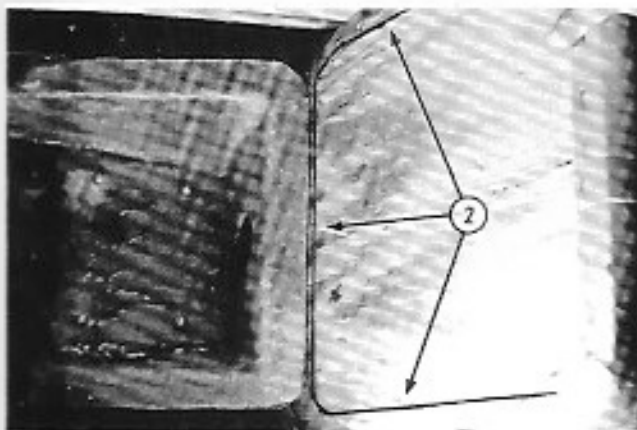


THE SEAT BOTTOMS ARE DESIGNED TO OPEN AND CLOSE FOR EASY ACCESS TO A HIDDEN STORAGE COMPARTMENT. THE INTERFERENCE BETWEEN THE SEAT BACK AND THE SEAT BOTTOMS WILL KEEP IT IN THE CLOSED POSITION. THE DRIVER'S SIDE SEAT BOX IS A GOOD PLACE TO INSTALL A HIDDEN STEREO, RADIO OR TAPE DECK. THE ORIGINAL TD WAS NOT AVAILABLE FROM THE FACTORY WITH A RADIO INSTALLED IN THE DASH.

- ① Place seat bottom on seat box. The rear portion of the seat bottom should fit underneath the seat back approximately 1".



- ② Hold seat bottom in position. Draw a line around the perimeter of the seat box on the underside of the seat bottom.



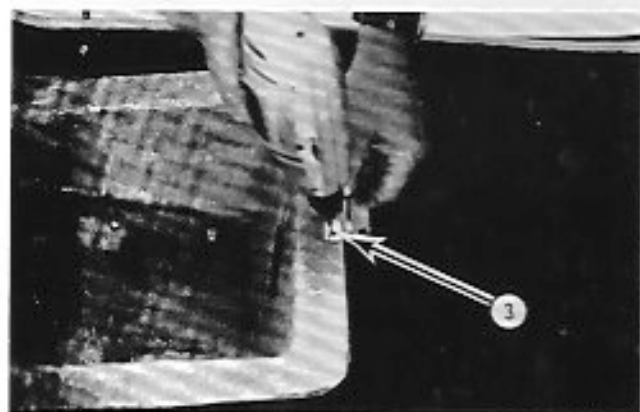
Continued on next page.

SEAT BOTTOMS

(Continued)

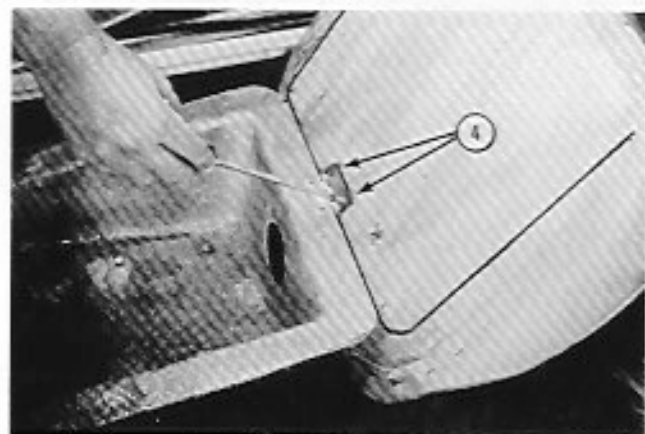
- ③ Drill two 3/16" holes through the front outer edge of the seat box using the hinge as a guide.

Rivet hinge to the seat box with two 3/16" rivets.



- ④ Align the previously drawn lines on the bottom of seat with seat box. Using hinge as a guide, drill two 3/16" holes into seat bottom. Attach seat bottom to hinge with two 3/16" rivets.

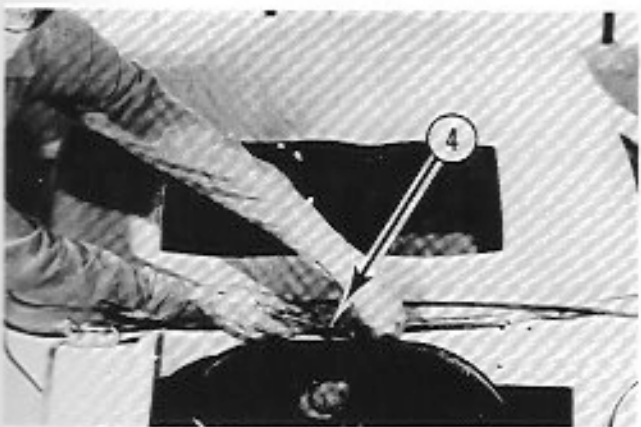
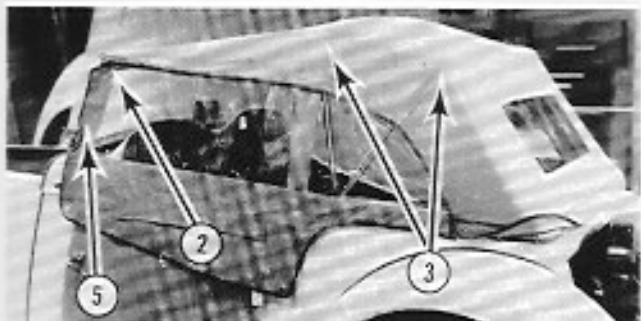
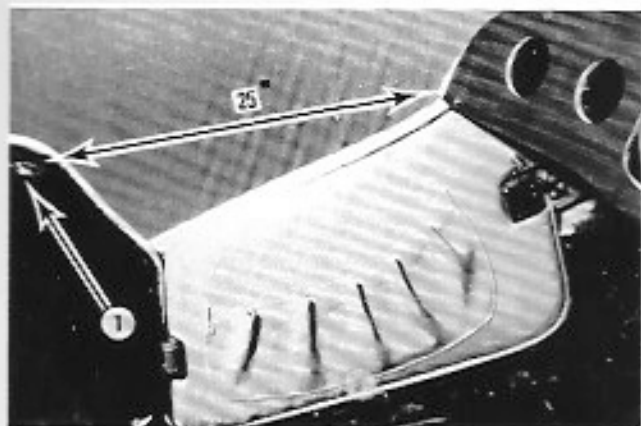
Repeat above process on opposite seat bottom.



NOTE: We highly recommend the use of seat belts. We do not recommend the use of the old VW seat belts because of age or possible previous damage. Buy only new, quality seat belts for your protection. **CAUTION: MOUNT THE BELTS TO THE VW FLOOR PAN AND TO THE SIDES OF THE VW TUNNEL ONLY. DO NOT MOUNT TO THE FIBER-GLASS.**

(8) 3/16" X 1/2" Pop Rivets

CONVERTIBLE TOP INSTALLATION



THE GENUINE CANVAS CONVERTIBLE TOP IS AN AUTHENTIC REPRODUCTION OF THE ORIGINAL TOP. OBSERVE THE METHOD OF WHICH THE TOP QUICKLY ATTACHES TO THE WINDSHIELD. ALSO NOTE THAT ALL OF THE REAR SNAPS ARE COVERED BY THE FLAP WHICH EXTENDS DOWN FROM THE ROOF. THESE ARE ALL AUTHENTIC DETAILS.

- 1 Position convertible top side mounts 25" from corner of dashboard and upward against the wind lace. Using holes in side mounts as a guide, drill 1/8" holes through carpet and inner body panel. Attach side mount with chrome phillips head screws. Do this to both sides of car.

Attach convertible top bows to the side mounts.

- 2 Attach convertible top windshield bow to windshield and secure with factory installed latches.

- 3 Adjust straps between convertible top bows to center both bows on the seams in the top.

- 4 Find factory center mark on rear body section.

Find center snap (under flap) and pull top tight.

Mark snap location on rear body section. Drill 1/8" hole and insert chrome screw stud. Snap on roof.

- 5 Snap the front of the side curtains to windshield snaps. Zipper side curtains to top.

NOTE: Keep checking approximate side curtain fit on both sides of car as top installation progresses.

Continued on next page.

CONVERTIBLE TOP INSTALLATION (Continued)

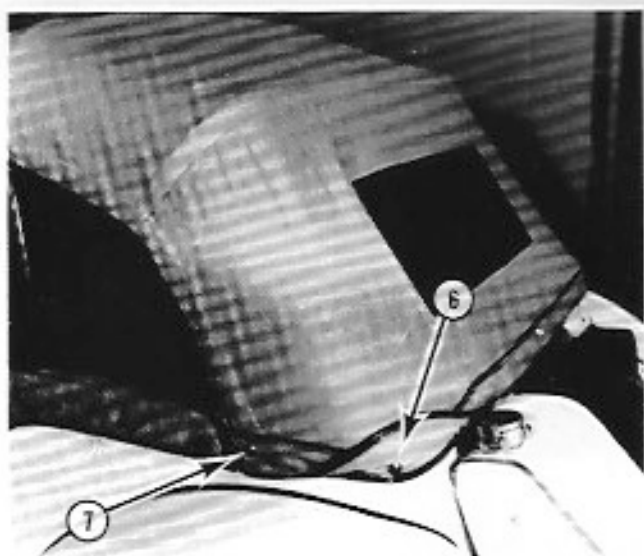
- ⑥ Install corner snaps by pulling top tight. Mark snap locations on body side panels. Drill 1/8" hole and insert chrome snap screw. Snap roof on.
- ⑦ Install front snaps by following the above procedures.
Install all remaining top snaps and side curtain snaps by following the above procedures.

Any wrinkles will soon disappear after the top is exposed to the rain and sun. However, if you can't wait for nature, careful use of steam will give the desired results.

To properly store roof in the lowered position, unsnap at rear, disconnect from windshield, collapse bows in the upright position, carefully wrap top around bows avoiding wrinkles, then lower bows to the rear.

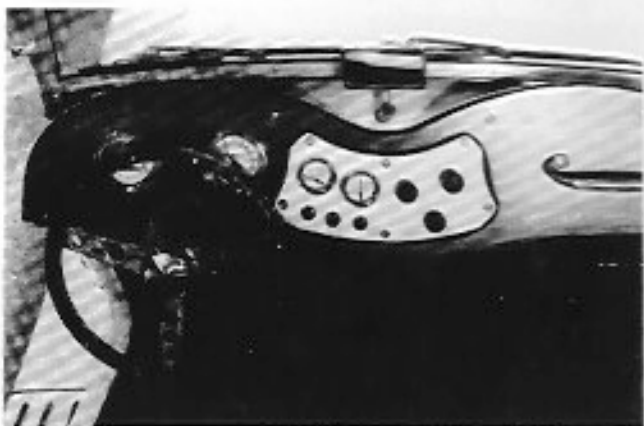
Install convertible top boot according to instructions supplied with boot.

Side curtains should be stored by placing a bath towel between curtains, then rolling both curtains up as one.

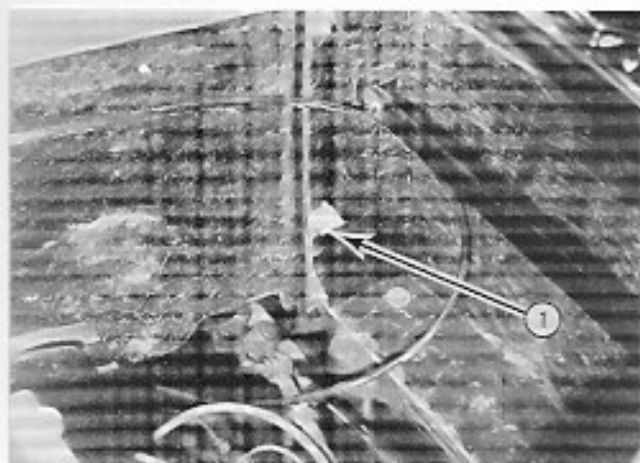


STEERING WHEEL INSTALLATION

Install wood rim steering wheel and horn adapter according to instructions provided with horn adapter.



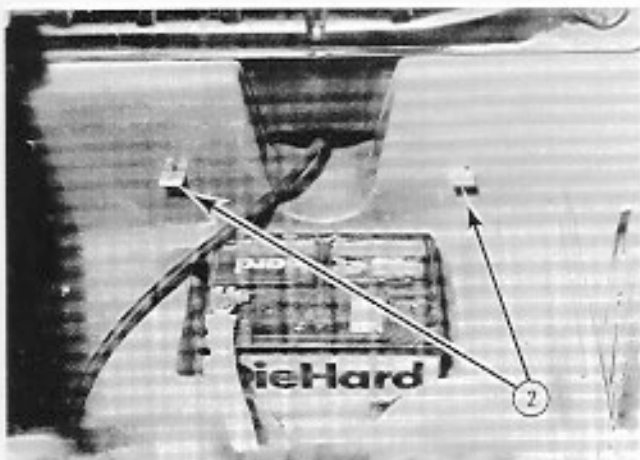
LUGGAGE COMPARTMENT FLOOR



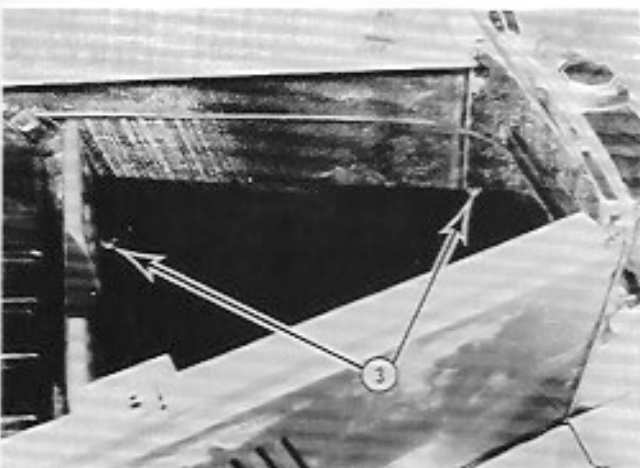
- ① Remove nut and lock washer from the lower front hood side panel attachment bolt (previously installed on page 56, step ②). Install clip angle over bolt and position clip angle stud facing upward.

Reinstall lock washer and nut.

Repeat process on opposite side.



- ② Attach two clip angles to the front body section by inserting 3/16" X 1/2" rivet through the factory pre-drilled holes. Position stud facing upward.



- ③ Place plywood floor in position, allowing studs to pass through the holes in the floor.

Secure with wing nuts.

Builder Option — Carpet Luggage Compartment

(2) 3/16" X 1/2" Pop Rivets

(4) 1/4" Wing Nuts

FINISHING DETAILS

Mechanical

Since the BCW Model 52 is lighter in weight than the VW, it is recommended that the front and rear suspension be realigned to assure proper handling. For obvious safety reasons, all mechanical work that was performed should be checked by a competent mechanic. Also, headlights should be adjusted.

Undercoating

Undercoat the chassis, fenders and running boards for rust protection and sound proofing. The undercoat will protect the fiberglass from being damaged by stones thrown from the tires.

Hood Louvers

To simulate the louver openings on each side of the hood, we recommend blackening the front edge of each louver with a black waterproof marking pen or flat, black paint.

Excess ink or paint can be removed without damage to the finish by using lacquer thinner.

COACHWORK MAINTENANCE

Before driving your new classic, an application of a good quality liquid or paste wax is recommended to give added luster and protection to the finish of the body and the bright metal trim. Light scratches and abrasions in the body can be "touched in" by using a fine polishing compound and a **low** speed buffer before waxing. Do not use abrasives on the bright metal trim. Tar or grease can be removed with mineral spirits.

To maintain the high luster of the body and bright metal trim against the effect of air pollution, the sun and weather, regular attention and care to the finish is necessary, such as washing and waxing. Rubber components should be maintained by treating with a good quality rubber preservative. As with any fine "classic," we do not recommend "homemade" body repairs using gel coat kits, etc. Consult a competent body man for light body damage repairs and major repairs should be carried out by replacing the damaged components with new factory replacement parts.

Interior Maintenance

Clean the carpets in the car, preferably before washing the outside, by using a stiff brush or a vacuum cleaner. The vinyl or leather cloth cushions and door trim may be cleaned periodically by wiping over with a damp cloth. Dust and dirt, if allowed to accumulate too long, will eventually work into the pores of the vinyl, giving a soiled appearance that is not easily remedied.

COACHWORK MAINTENANCE *(Continued)*

Door Lock and Hinge Maintenance

Occasionally, apply a few drops of oil on the moving parts of all door locks and hinges. A light touch of grease should be smeared on the lock striker plates to insure free movement and reduce wear of the locks.

For safety reasons, the tightness of door hinges, locks, and striker plates should be checked periodically.

Convertible Top Maintenance

Since the convertible top is made from canvas, as was the original TD, a certain amount of care must be used to maintain the top.

CAUTION: When washing car, **DO NOT** use soap of any kind on the top.

DO NOT scrub top with brush when **WET**. This will remove the waterproof treatment.

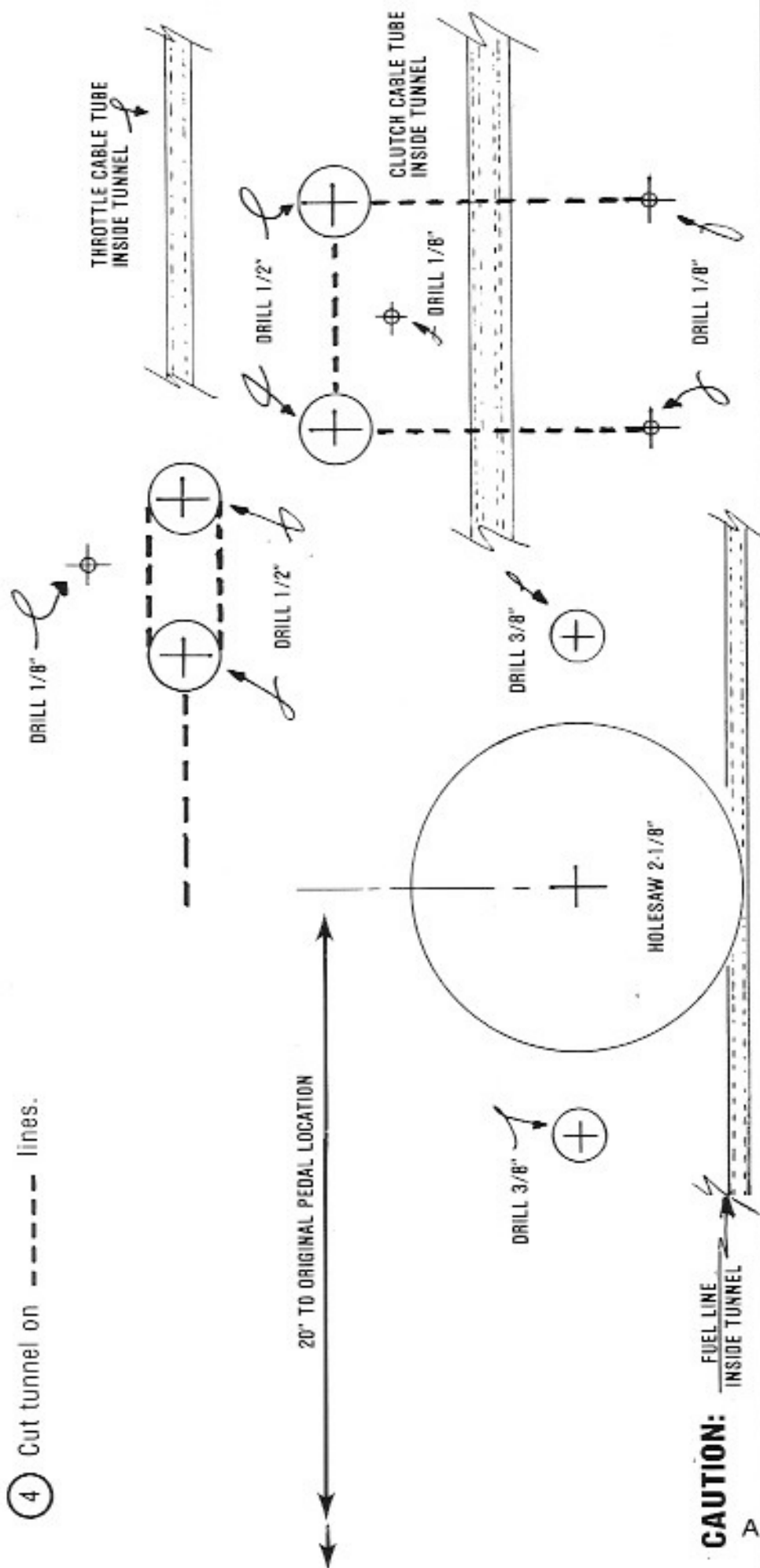
Light surface dirt can be brushed from the top when dry.

Stubborn stains can normally be removed with a "canvas eraser."

To prevent dry rot, treat every two years with waterproofing material, available at sporting goods stores.

PEDAL RELOCATION TEMPLATE

- 1 Position template on driver's side of tunnel, 20" to the rear of the original pedal location.
- 2 Center punch all holes on tunnel.
- 3 Drill all holes in tunnel.
- 4 Cut tunnel on ----- lines.

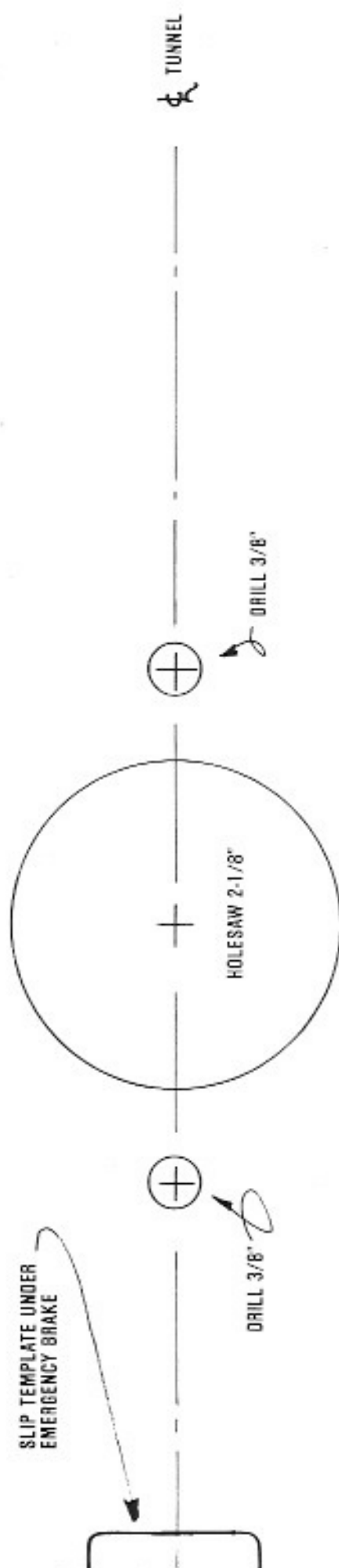


CAUTION:

Appendix B

SHIFTER RELOCATION TEMPLATE

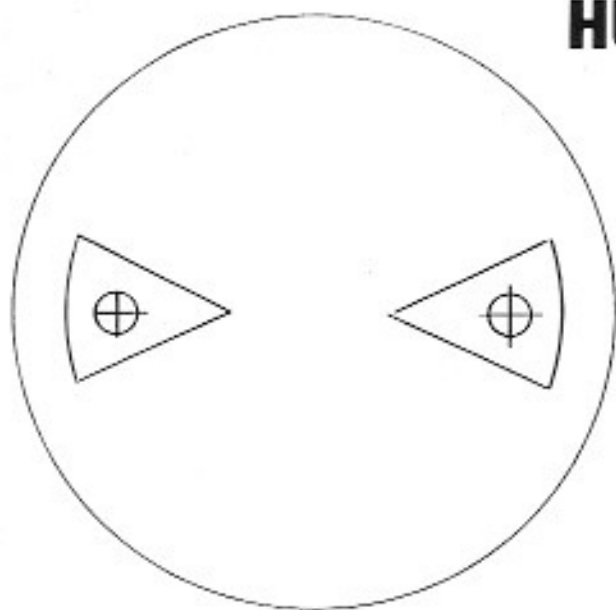
1. Position template behind emergency brake and center on tunnel.
2. Center punch holes on tunnel.
3. Drill holes through tunnel.



FRONT

Appendix
A

HUBCAP EMBLEM TEMPLATE



1. Cut out disc shaped template for each hubcap.
2. Position template on hubcap center and align template triangles with hubcap triangles.
3. Center punch and drill (2) 5/16" holes in each hubcap.
4. Mount BCW emblem on each hubcap and secure with sheet metal nuts.

