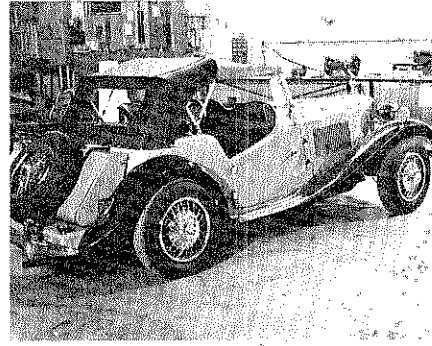
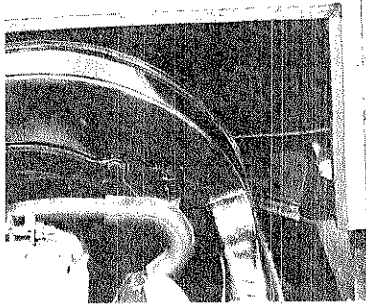


Assembly



Paint each end of the "Z" bar with a quality rust resistant black paint. Snap an end cap in to each end.

Cut rubber extrusion to fit the raw edge of the rear tie-in glass.

To give power to the license light, you will wire power to the latch base on the rear side panel. Jump a wire from the other side of the latch to the license light. Complete the circuit by connecting a ground wire from the tire mount frame to the bolt securing the license light bar.

Final Check List and Test Drive

FRONT END

- All front subframe bolts tight.
- Ball joints tight.
- Shock absorber bolts tight.
- Wheel bearing properly tightened.
- Connecting rods tight.

STEERING SECTION

- Steering extension rod/to gear box tight.
- Steering column clamp tight.
- Steering column shear pin installed.
- Steering column to steering shaft bushing secured.
- Steering column firm at the fire wall.
- Steering column connected securely to the dash.
- Steering gear box adjusted for play.
- Steering stops adjusted.
- Steering column collapsible section is free from cracks or damage.
- Steering wheel nut tight.

Final Check List and Test Drive

BRAKES

- Master cylinder is full.
- Brakes have been bled.
- Brake shoes have been adjusted.
- Pedal play is correct.
- Brake pedal action is firm.
- Emergency brake is adjusted.

WHEELS

- Wheels have been checked for trueness (not bent).
- Tires have been mounted and wheels balanced.
- Tires have been secured firmly to the drums.
- Spare tire has been mounted.
- Tire pressure is 26#.
- Front and rear end have been aligned.

REAR SUBFRAME

- All bolts and nuts tight.
- Shock absorber bolts tight.
- Engine cover hinge bolts tight.

TOP

- Bow hinges tight.
- Set screws tight to secure bows.
- Wind wings secured with lock tight.
- Top up with all snaps secured.

Final Check List and Test Drive

TRANSMISSION

- Transmission mount bolts tight.
- Transmission lube level full.
- Clutch pedal adjustment appropriate.
- Clutch disengages from pressure plate.
- Four gears and reverse shift smoothly.

ACCESSORIES

- Ignition key works smoothly.
- Generator light functions prior to ignition.
- Left and right turn signals operational including dash indicators.
- Parking lights operational.
- Headlight high and low beam operational (including high beam indicator).
- Brake lights operational.
- Wipers, high and low speed operational. (Early models have single speed only.)
- Dash light operational.
- License light operational.

OPTIONS

- Fog lights operational.
- Backup lights operational.
- Windshield washers operational.
- Radio operational.
- Cigarette lighter operational.
- Defroster operational.

Final Check List and Test Drive

ENGINE OPERATION

- | | |
|--|--|
| <input type="checkbox"/> Engine mount bolts tight | <input type="checkbox"/> Oil pressure gauge operational. |
| <input type="checkbox"/> Engine wired per diagram. | <input type="checkbox"/> Amp gauge charging. |
| <input type="checkbox"/> Fuel line connected and securely clamped
(front to tank and rear to engine). | <input type="checkbox"/> Tacometer operational. |
| <input type="checkbox"/> Inline fuel filter installed. | <input type="checkbox"/> Heater operational. |
| <input type="checkbox"/> Five gallons of gasoline in tank. | <input type="checkbox"/> Accelerator operational. (Check carburetor
spring for potential binding.) |
| <input type="checkbox"/> Engine oil full. | <input type="checkbox"/> For additional Safety we recommend you have all your mechanical
work checked by a competent VW mechanic. |
| <input type="checkbox"/> Engine primed. | <input type="checkbox"/> 100-mile test drive. |
| <input type="checkbox"/> Start engine. | |

Final Clean Up

All your Duchess needs to be completed is a quality clean up and waxing. Be careful not to rub abrasive fiberglass, steel, or particles against the surface. Use water or air to clean construction debris from the surface. Acetone is an excellent paint and adhesive remover, however, be careful not to prolong contact with the nylon top material, and **do not** contact any vinyl fabric as acetone will remove the color immediately and melt the fabric.

When waxing use any good quality Carnuba wax, try to avoid contact with the wetting. Dry wax turns white and you will find it difficult to remove from the wetting surface.

If any surface should not be as glossy as you would like, use a white or fine grit rubbing compound and a buffer to bring the surface to the desired luster. Be careful not to push too hard, and do not use high RPM's or you may burn the surface or buff through the gel coat.

After vacuuming install the wheel covers, step back and admire your craftsmanship.

Have the wheels, both front and back, aligned and retest each function on the Duchess.

When you are satisfied that the car is truly completed and road worthy, the time has come for your unveiling.

All Duchess owners swell with pride when showing their beautiful handcrafted machine. The public response will be overwhelming and rightfully so. Few people will take the challenge of building an automobile, and few will take the time to detail a product in the quality way we have instructed you to. Even though we may say congratulations on a job well done, your own eyes and heart will reinforce the satisfaction that can only come to the man who builds his own Duchess.

Care and Repair of the Fiberglass Car Body

KEEP IT LOOKING LIKE NEW

You have only three relatively easy maintenance rules to follow to keep your car looking like new.

- A) Each year clean and wax the exterior of the car.
- B) Touch up and patch scratches, scars and small cracks.
- C) Repair any major cracks and chips as soon as possible, to avoid additional damage to the parts.

Most fiberglass cars are manufactured of two "layers" of material, permanently bonded together. The outside surface is formed by air inhibited paint called gel coat. It provides a smooth, weather resistant surface.

The second layer is made up of polyester resin reinforced with laminations of fiberglass mat. Both the gel coat and polyester resin are "cured" by a chemical catalyst which causes them to form a hard, strong mass.

When buffing the car to restore its finish, care should be taken not to cut through the gel coat surface. This is especially true on corners and edges of the parts. A power buffer may be used or the work done by hand, using a lightly abrasive rubbing compound. Any high-quality paste wax may be applied after buffing.

TOUCH-UP AND SURFACE REPAIRS (Scratches, chips or gouges)

These repairs are easy because only the surface of the car is damaged. You will need a small can of gel coat of the same color as your car, and a small amount of catalyst.

Step 1.

Using a power drill with a burr attachment or sandpaper, roughen the damaged area and feather the edge surrounding the scratch or gouge.

Step 2.

In a jar lid or on a piece of cardboard, pour enough gel coat to fill the area being worked on. Using a putty knife or small flat stick, add a few drops of catalyst to the gel coat and mix completely.

Step 3.

Work this mixture of gel coat into the damaged area with a putty knife or stick. Fill the scratch or hole above the surrounding undamaged area about 1/16".

Step 4.

Lay a piece of cellophane or waxed paper over the top of the gel coat and let stand for about 2 hours. You will eliminate the finishing time depending on how neatly you apply the cellophane.

Step 5.

With wet/dry sandpaper (400 grit) sand patch smooth, clean and resand with 600 grit wet/dry sandpaper. Buff with a light abrasive rubbing compound until shine returns. (Always use clean water when sanding.)

Care and Repair of the Fiberglass Car Body

TOOLS AND MATERIALS NEEDED FOR SURFACE REPAIRS

TOOLS

White cloth
Sanding block
Putty knife
Cellophane
Single-edged razor blades
Drill with burr attachment

MATERIALS

Fine rubbing compound
Acetone for cleaning (purchased at local chemical house)
Water
Gel coat
Catalyst (M.E.K.) (purchased at local chemical house)
Sandpaper — 400 and 600 grit wet/dry

Electrical Components



Large Ring Terminal



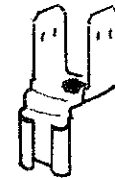
Small Ring Terminal



Female Slide Terminal



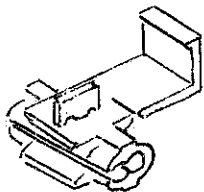
Male Slide Terminal



One to Two Adapter



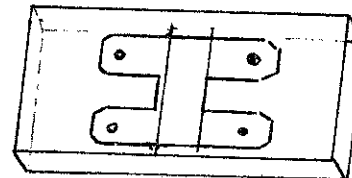
Piggyback Adapter



Scotch Lock Splice



Two-way Splice



Four-way Inline Splice



Wire Tie

Washers



Flat



Spring Lock

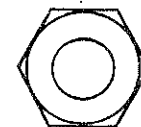
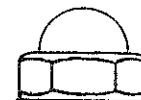
Nuts



Hex Nut



Push Nut
(grill slats only)

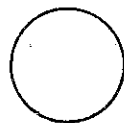


Acorn Nut

Screws and Bolts



Phillips Drive



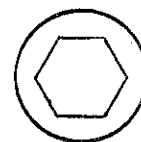
Carriage Head



Hex Head



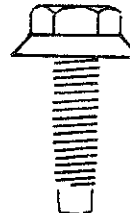
Flat Head
Slot



Spin Lock



Flat Head
Hex Drive



Rubber Extrusions



Bumper override extrusion
and grill grommet



Windshield gasket



Running board



Running board
trim



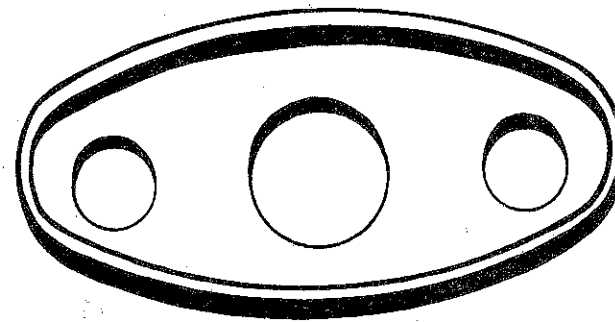
Engine cover
and
rear tie-in



Rear tie-in leg



Windshield
mounting gasket



Headlight cradle