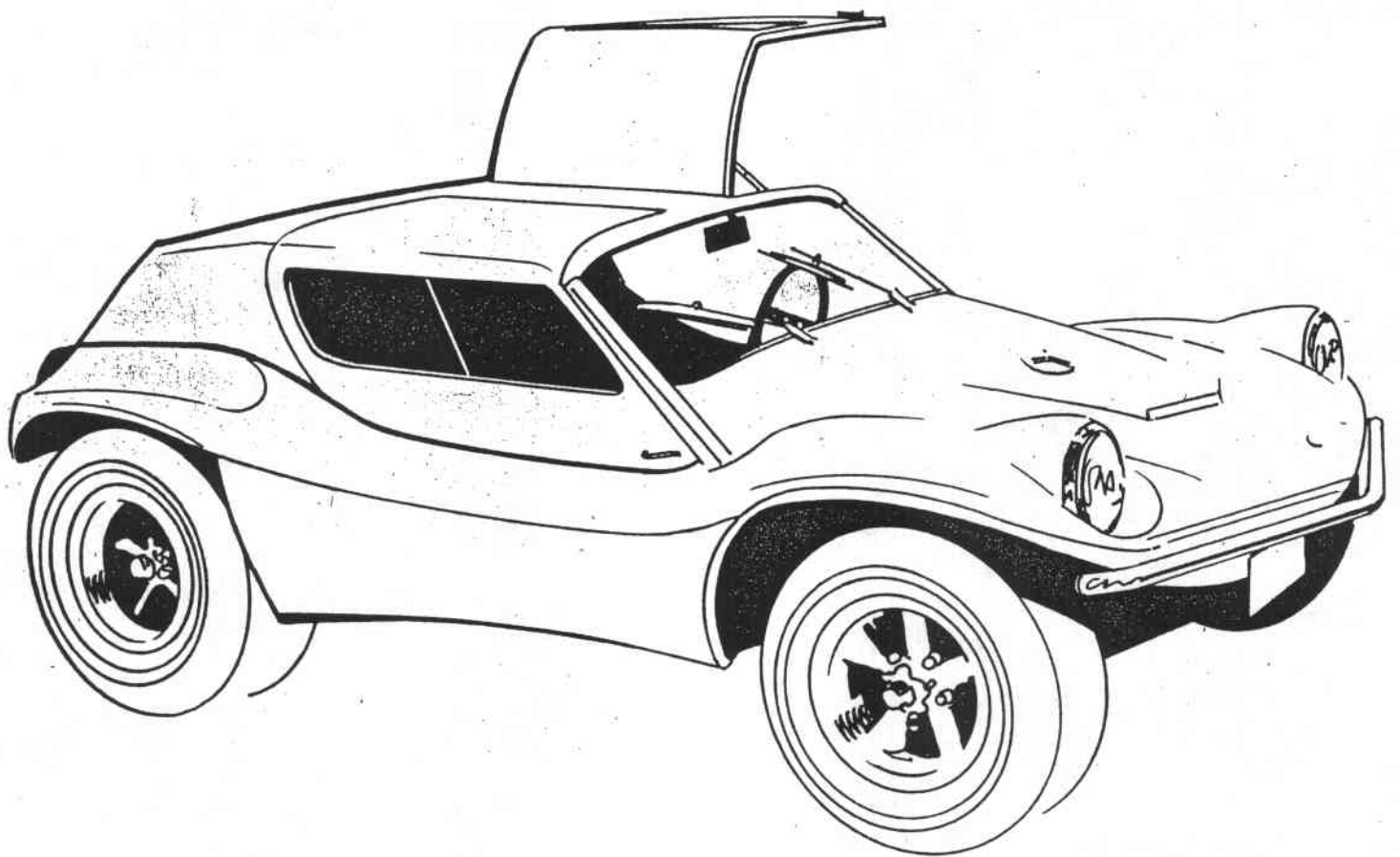


DESERTER GT





DESERTER GT ASSEMBLY MANUAL

NOTE: READ THIS MANUAL THROUGH CAREFULLY BEFORE BEGINNING THE ASSEMBLY PROCESS.

I. GENERAL INSTRUCTIONS

A. About This Manual

Autodynamics has taken every step to insure that the parts, kits and accessories we supply are of the highest quality available. If your Deserter is to have this same high standard of quality, it must be constructed carefully. This requires more patience and thoughtful work habits than experience or skill. Allow yourself plenty of time to do each job and re-read the appropriate section of the manual. This will tell what tools and materials are required so that they can be obtained before-hand.

In addition to this manual you will need a service manual for the Volkswagen* model you are using for the chassis. These are available from Autodynamics and most Deserter dealers. We can also supply books and manuals for special applications such as preparation for off-road vehicles, engine modifications, etc.

While building your Deserter, keep all appropriate manuals handy to avoid needless work redoing things. If further explanations or instructions are required, call Autodynamics or your local Deserter dealer. We are always happy to help. When required, instructions are also provided with our accessory kits, tops, etc. These may be purchased separately before ordering the parts. The price of the instructions will be credited upon subsequent purchase of parts.

Instructions, manuals, etc., may not be returned for refund or credit.

B. General Work Procedures

As parts are procured for your Deserter, whether new or used, they should be thoroughly cleaned and inspected.

Inspect all work thoroughly before you consider it completed. It is a good idea to have someone else inspect a job, or to recheck it yourself in a day or two. Inspection requirements are included in each section of this manual.

It is advisable to take each VW sub-assembly apart (front end, brakes, steering, etc.) clean, inspect and repaint parts - order replacement parts or overhaul kits as required at this time. Then proceed with the next step while awaiting parts.

* The terms Volkswagen and VW are used only to identify parts and parts applicability. They do not indicate any approval or other involvement by Volkswagen of America or any other manufacturer or agent in this country or abroad.



- C. The terms left and right and front and rear in this manual refer to those directions as seen from the normal driver's position.
- D. In some sections (like wiring, fuel tank installation, etc) two or more optional ways of assembly are offered. Use the one that satisfies your taste and budget. Autodynamics or your local Deserter dealer can offer many optional suggestions if you have special requirements.
- E. Whenever bolting or riveting anything to a fiberglass part (body, hood, side panel, etc) use a large washer from the hardware kit. If space is limited, cut an edge off the washer to fit or make a "back-up" plate of a shape that will fit. Always spread out loads over as much surface area as is possible.
- F. As you disassemble your VW keep all the parts and hardware for each sub-assembly in an appropriate container and label it. This will save you a lot of time and searching for clips, screws, brackets and other small components when assembling your Deserter.

II. SELECTING A CHASSIS

A. Inspection of Chassis Prior to Purchase

We recommend using a 1962 or newer VW chassis for Deserter cars. These models have the best components for durability and performance. It is often less expensive to buy a late model chassis which will require little or no repair than to falsely economize by buying an early model that requires a lot of work.

- B. To decide if a given chassis is worthwhile it is best to buy a running VW wreck that can be driven, that's the best test. When this is not possible, inspection should be accomplished by a mechanic or knowledgeable VW enthusiast.
- C. When selecting a chassis, inspect it thoroughly for rust. Body rust can be ignored, but floorpans with anything more than light surface rust should not be used. The following is a check list of major components you should and test, if possible, before buying a chassis or wrecked VW.

<u>Component</u>	<u>Inspect For:</u>
1. Floorpan	Rust, bends, cracks, evidence of serious collision damage.
2. Front End	Rust, bent parts, cracks, excess wear.
3. Suspension-Front & Rear	Broken torsion bars, bent trailing arms, worn shocks, evidence of proper lubrication. Wheel Bearing play.
4. Transaxle	Smooth shifting, noises, metal in oil, leaks.
5. Engine	Compression test, noises, oil leaks, metal in oil, parts intact, oil in tail pipe or blue/gray thick exhaust (oil smoke). General running



6. Brakes

condition.

Lining material, worn drums, loud noises, pulling or shudder. Leaks.

D. In addition, the following components should be intact and undamaged, unless you plan to use accessories or other parts in their place:

Fuel Tank, Sending Unit & Gauge
 Wiring Harness & Fuse Box
 Wipers
 Switches
 Speedometer
 Lights
 Front Seats (or at least frames)
 Battery
 Pedal Assembly
 Handbrake
 Heater Controls & Heater Boxes
 Horn
 Steering Wheel & Steering Linkages
 Floor Mats

E. Additional VW components you may choose to install may also be inspected at this time:

Windshield Washers
 Radio
 Wheels & Tires (hub caps)
 Mirrors
 Other Accessories & Options

F. It is wise to approximate repair costs for any malfunctions you may find and add this cost to the chassis price. This procedure allows more direct comparison to a chassis in different condition.

G. Deserter bodies manufactured after January, 1972 will fit VW chassis through 1972. Earlier bodies require minor modification to battery boxes to fit late model VWs with independent rear suspension. (Automatic '68 and on, Standards '69 and on). If you have an early body and wish to install it on an IRS chassis, send for special instructions.

H. In general, condition of the chassis is more important than year of manufacture. 1962 to 1965 chassis are virtually identical and have the makings of a fine Deserter. 1966 cars increased engine size from 1200 cc and 40 h.p. to 1300 cc and 50 h.p. 1967 cars increased to 1500 cc and 53 h.p. and constitute a "vintage" year for the VW. A good 1967 chassis is a real find. IRS late model VWs (see paragraph G) handle exceptionally well and have 1600 cc engines.

The Deserter is not compatible with the Super Beetle without extensive modification.



III. PREPARING THE CHASSIS

A. Removing the Body

1. Remove fuel tank.
 - a. Pry the cap off the gas gauge sender unit in the center of the tank ('62 and later).
 - b. Loosen the gas tank by loosening the four bolts and square washer.
 - c. Unhook the gauge wire, lift the tank a little, and pull the fuel line off at the bottom.
 - d. Remove the tank.
2. Remove two bolts which hold the body to the front axle tubes.
3. Disconnect the steering shaft from the universal coupling above the steering box.
4. Remove wires from stop light switch on brake master cylinder.
5. Drain the brake fluid reservoir by disconnecting the feed pipe to the master cylinder. (It just pulls out of the sealing rubber grommet).
6. Disconnect the wire to the turn signal indicator light on the speedometer housing.
7. Remove the U-shaped bracket which fixes the steering column to the underside of the dash.
8. Remove the steering wheel, column and shaft as an assembly (without further dismantling).
9. Remove the steering column sealing grommet from the firewall - (used on Deserter)
10. Release snap ring and pull speedometer cable out of front spindle.

NOTE: Regardless of which of the following (or other) wiring options you choose, it is prudent to take your VW manual in hand and locate the appropriate diagram for your car. Follow the circuits and familiarize yourself with the way a standard VW is wired.

Note that on many components the "second wire" of the circuit, or ground wire, is the bodywork or chassis. With a fiberglass car only the chassis can be so used, which necessitates running ground wires to a chassis ground from components mounted on the body.

Further familiarize yourself with those components which you will re-wire on your Deserter and take notes on the hook-ups of at least the following circuits:

Ignition Primary & Electric Choke
 Generator and Regulator
 Lighting (including directionals)
 Indicator Lights for Generator, Oil, Flasher
 Fuse Box - and fuse ratings for each circuit
 Horn
 Wipers

11. If you intend to use the wiring harness from this VW, disconnect it now - trace it around the car diagram in hand - and mark every wire with an identification tag to simplify re-installation.
 When a Deserter wiring harness is to be used, cut the old harness where it appears near the fusebox and switches.
12. Remove front seats by sliding them forward off the seat rails and unhooking the spring underneath the seats. (Deserters use these same springs and rails, usually cut-down and bolted to fiberglass bucket seats. Several styles are available.).
13. Remove the rear seat cushions.



14. Remove body to chassis bolts and washers all around the perimeter of the floorpan underneath the car.
15. Remove two bolts which fasten body to the rear shock absorber mounts.
16. Check to assure that all wires, lines, etc., that run from body to chassis are disconnected.
17. Three or four men can now lift-off the body. If help is not available, the body may be cut into manageable pieces and dismantled for easy removal.

B. Inspecting the "Rolling Chassis"

Now that all the chassis components are uncovered and easily accessible, a more thorough inspection may be performed with ease. Referring again to your VW shop manual, completely clean, inspect, adjust and lubricate the suspension, drive train, brakes, etc.

1. Begin by washing the rolling chassis with strong detergent and water. Use a solvent in the "tough to clean" areas. Rinse off chassis with water.
2. As you remove all major components in preparation for the chassis shortening operation, pay particular attention to the following:
 - a. Check front end for wear, excessive play and damage. VW dealers have a fixture to check trailing arms for accident damage, if you suspect they might be bent, have them checked.
 - b. Inspect all brakes, check linings, drums, cylinders, hoses, lines, etc.
NOTE: If your chassis is '66 or later and you intend to use oversize wheels and tires, replace the rear brake drums with stronger '61-'65 drums.
 - c. Pack wheel bearings and adjust for correct preload.
 - d. Check transaxle rubber mounts for deterioration. (Solid mounts and transaxle locating straps are available for racing, off-road and other rough service applications).

C. Preparing Chassis for Shortening

1. Remove major mechanical components including:
 - a. Front End Assembly
 - b. Transaxle
 - c. Chassis tunnel front cover plate
 - d. Loosen handbrake cables by removing 10mm nuts on each. Slip-off rubber boot remove snap ring on handbrake lever pin, remove pin and lever.
2. Move shift rod forward of the area to be cut, (see Fig. G-2) by inserting a tube or rod through the hole at the rear of the tunnel and pushing the shift rod forward as far as the handbrake location. (If the shift rod is pushed beyond this point, it may fall out of the plastic retainer bushing, and may be troublesome to relocate).
3. Move the handbrake cables away from the area to be cut by pulling them rearwards through their tubes and out the exit holes in the sides of the rear fork of the chassis.
4. Accelerator, brake and clutch cables must be removed to prevent damage during chassis shortening. They may be shortened later.
5. The clutch cable and throttle tubes should be freed at the rear end and allowed to slide rearward out of the tunnel. They may be shortened later.



D. Marking the Chassis for Cutting

Follow the diagram in Figure G and mark the chassis for cutting as follows:

1. Lip A is the top edge of the lowest crease in the floorpan at the rear of the chassis. Draw a line parallel to lip A and one inch forward of the top edge of lip A. This is line B.
2. Draw another line parallel to line B and 10 3/4 " forward of it. This line, line C, extends across the entire width of the chassis, and is perpendicular to the center line of the tunnel. In order to accurately extend this line over the tunnel, use a piece of thin sheet metal as a straightedge.
3. Measure another 10 3/4" forward of line C and draw a line parallel to line C at this point. This is line D.
4. Line E should then be drawn down the center (approximately) of each deep well, and parallel to the center line of the tunnel.

E. Cutting the Chassis

1. Make an inspection hole in the top of the floorpan tunnel somewhere between line C and D about two inches wide. This will enable you to see inside the tunnel with a light when cutting the chassis, and to avoid damage to fuel line, cables, tubes, etc. Cut this hole with a low flame and caution to keep cut shallow.
2. The handbrake tubes (the two upper tubes) should be cut loose from the inner top of the tunnel where they may be seen through the top of the handbrake lever opening. If these tubes are freed at the front end and permitted to slide rearward and back while the sections of the floorpan are being pulled together, the rear section of these tubes can be cut off at the back and the remainder tack welded in place.
NOTE: If these handbrake cable tubes are damaged or cut in the chassis shortening process, the existing tubes may be replaced with 1/2" BX flexible tubing after removing all of the old tubing from the chassis fork cable exit forward to the handbrake lever location. This BX tubing can be welded to the old tubing stub near the handbrake handle.
3. Cut chassis in two pieces along line C.
4. Now slide the shift rod rearward again and scribe a straight line along a section of the rod which has no bends in it. Mark off a 10 3/4" section along the scribe line and cut out with a hack saw. Line up the scribe marks perfectly and reweld. It is critical that only the length of this rod be changed, not its angles, bends, etc. An improperly shortened rod will cause shifting problems.
5. Cut along line B to line E on each side of the rear half of the chassis.
6. Cut backward along line E to line B.
7. Cut along line E to line D on the forward half of the chassis (on both sides).
8. Then cut along line D to complete the cutting.

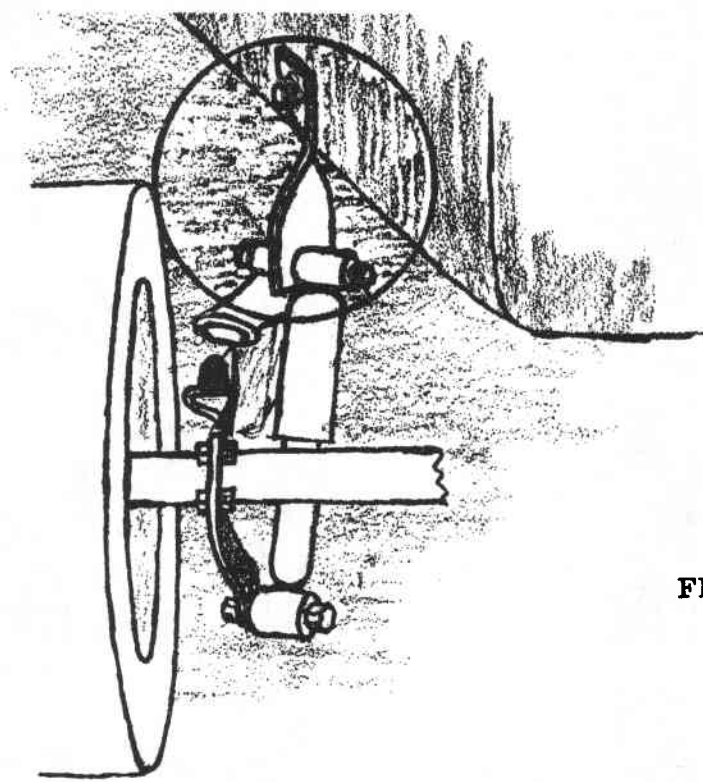


FIG. E6

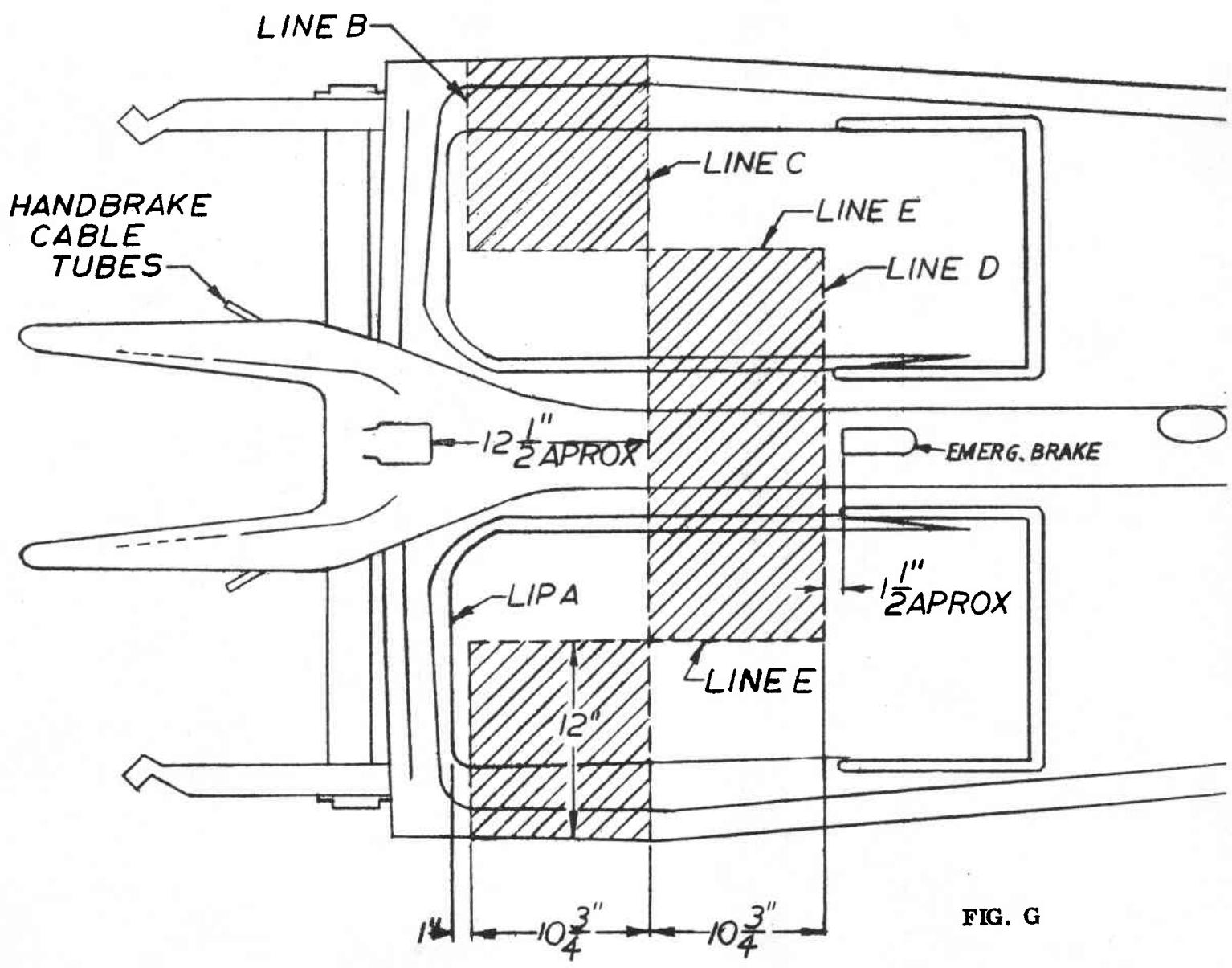


FIG. G

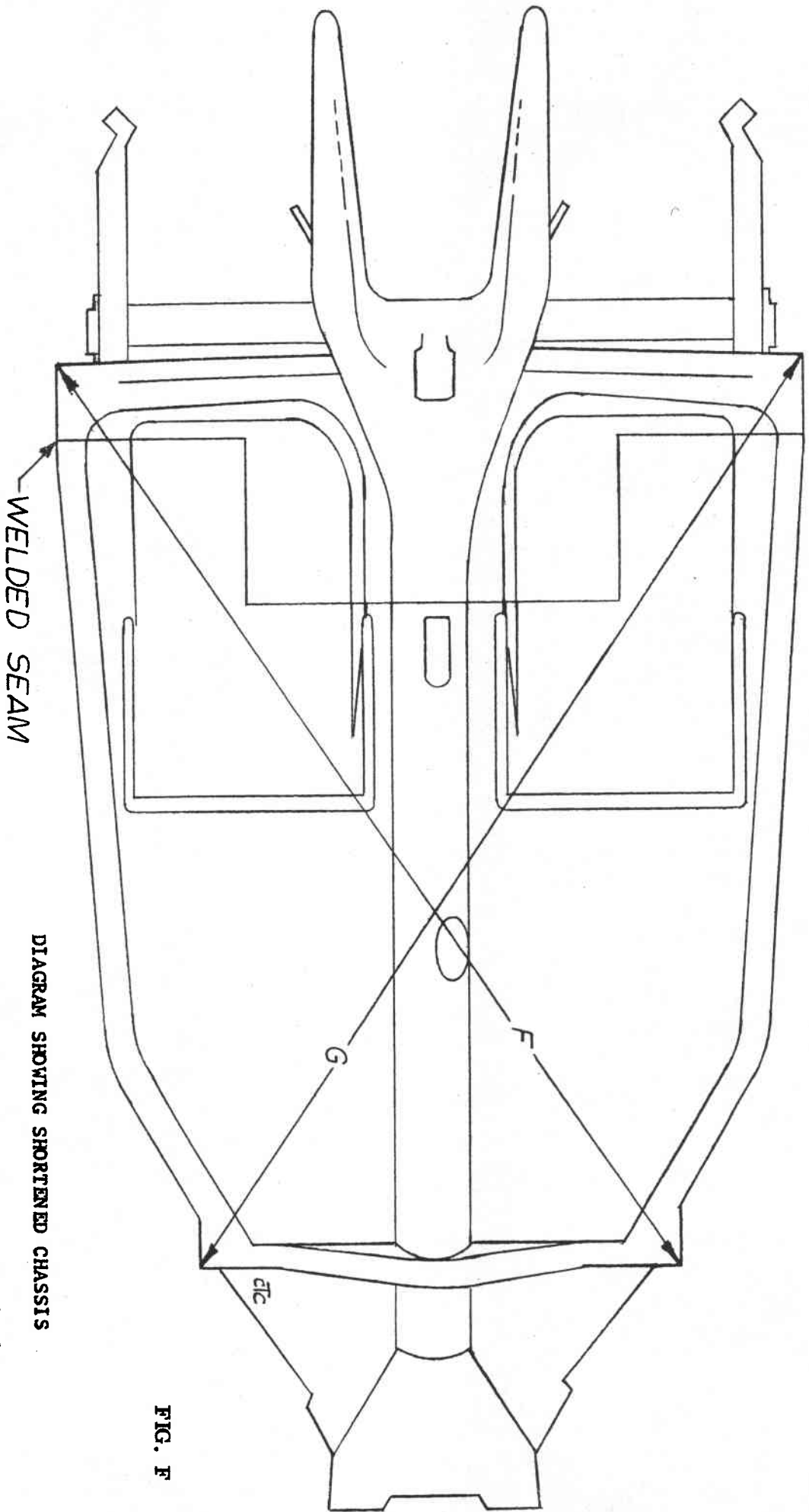


DIAGRAM SHOWING SHORTENED CHASSIS
Lines F and G are measurement checks.

FIG. F



F. Welding Up the Shortened Chassis

1. Remove the parts shown as shaded sections in the diagram, and fit the front and rear halves together.
2. Smooth off rough edge left by the cutting process.
NOTE: KEEP CHECKING THE ALIGNMENT WITH A TAPE MEASURE as you weld. Careful checks of diagonal measurement (see Figure F) would also be strongly advised.
3. Place the chassis on a flat surface and tack weld alternate sides of the chassis; that is, tack once on the far left of the tunnel, once on the far right; then once near the tunnel on the left, and once near the tunnel on the right, etc. When welding on the tunnel, tack weld once on the top, then once on the bottom, etc.
4. Once the chassis is spot welded securely in perfect alignment, finish the welding process, welding 2-3" on each side of the tunnel, alternating sides to minimize warping.
5. When rejoining brake cable and other tubes, they may be sleeved to insure even fit.

G. Pre-Assembly of the Chassis

Before re-installing the suspension and drive-train, install a Deserter Adjust-A-Drop or other front end lowering device. This is necessary because the car is so much lighter than the original. Instructions for installation are packed in the Adjust-A-Drop kit.

If a heater is desired, a Deserter heater kit is available to inexpensively adapt the stock VW heater. VW and Porsche "gas heaters" may also be used. Instructions for installing the Deserter Heater Kit include a method for rigging a windshield defroster. Electric defroster units are also available.

NOTE: If you plan to use the VW heater and a special exhaust system (duals, extractor, etc) be sure to select an exhaust system which will mate with your VW heater box.

H. Final Assembly of Chassis

Now, re-install the drive-train, suspension, engine, etc. Use your VW manual to assure proper assembly and adjustment.

1. Install front end.
2. Install transaxle and engine (fill with correct lubricants).
3. Using a Deserter Cable Kit or other suitable clamps, etc., reconnect the clutch and handbrake cables and adjust.
4. Shorten the throttle cable and solder or crimp a piece of 1/8" copper tubing securely on the end - hook-up and adjust.
NOTE: Be sure that the throttle cable is adjusted so that it will pull the throttle fully, and especially sure that the throttle return spring will positively return the carburetor to the idle stop when the gas pedal is released.
5. Connect all brake lines. Bleed air out of brakes and adjust. Replace main brake line. Pedal should be firm (not spongy). Check wheel for brake drag and re-adjust as required.