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PURPOSE OF THIS MANUAL

This JACKRABBIT instruction manual has been prepared to show you the step by step means to build your JACKRABBIT. Normally the time required to get your car running is about 60 hours. This is based on the parts from the donor car being cleaned and ready to install. A finished car with paint will take about 100 additional hours to complete. We strongly suggest that you READ THIS MANUAL COMPLETELY before attempting any work so you fully understand all aspects of this conversion.

This manual is intended for people with ordinary mechanical skills. If you feel lacking in this area, you might want to consider a class in automotive mechanics at a High School or Junior College.

ORGANIZATION OF MANUAL

This assembly manual is organized to follow the same building sequence you will use in finishing your JACKRABBIT.

The INTRODUCTION section will give you the background information and outline the procedures for getting started.

The DISASSEMBLY AND PREPARATION section will provide step-by-step instructions on how you should remove the needed parts from your donor car and how to prepare the donor parts for use on your JACKRABBIT.

(Since most of these operations can be done before you receive your JACKRABBIT kit, you can get the preliminary work done ahead of time.)

Each of the other sections will provide step-by-step instructions for finishing and assembling your JACKRABBIT.

WHAT THIS MANUAL INCLUDES

This manual includes the information you will need to complete your JACKRABBIT kit. It does not include the basic mechanical information that is included in a good Volkswagen Shop Manual. We have found the Robert Bently Rabbit Shop Manual to be very good. (Price is about $30) Study each section BEFORE you remove any parts from your donor car.

WARNING

Unless noted in this VSE JACKRABBIT Assembly Manual, the fasteners used to attach the components on your donor vehicle also will be used to assemble your JACKRABBIT. Save all the fasteners and label where they are used. You can save many hours looking for lost nuts and bolts if you take the time at disassembly to do this simple task.

It is VERY IMPORTANT that all wiring connections, vacuum connections, fuel line connections, and brake line connections also be labeled to assist in reassembly. You might think you can remember where each wire or where each line goes, but you can't. Your success in being able to quickly and easily get your JACKRABBIT running will be dependent on how carefully you label connections at disassembly.

KIT INVENTORY

When your JACKRABBIT kit arrives you should take the time to inventory all the parts and to label the fasteners. Notify VSE if any parts are missing so replacements can be sent. You have 30 days from time of purchase to do this, otherwise you will be required to purchase the parts.
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<td>ALLEN HEAD BOLT 3/8 FINE X 3/4</td>
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<td>J 1372</td>
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### Jackrabbit™ Parts List

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THE FOLLOWING TOOLS WILL BE REQUIRED TO COMPLETE YOUR JACKRABBIT

- Portable Drill Motor with a 1/2 inch capacity
- Set of Drill Bits 1/16 to 1/2 inch
- Holesaws and Holder 1.00 diameter - 1.25 diameter
  .75 diameter - 2.50 diameter
- Die Grinder with fiber cutoff wheels - Electric or Air powered
- American End Wrenches and Box Wrenches
- Metric End Wrenches and Box Wrenches
- Metric Flares Wrenches 7 mm 11 mm
- Set of American Sockets 3/8 Drive
- Set of Metric Sockets 3/8 Drive
- Screwdrivers - Pliers - Hammers
- Half Round File - 12 inch
- Rat tail - 1/2 inch diameter
- Tape Measure
- Marking Pencils
- Center Punch

TOOLS REQUIRED

- Snap Ring Pliers Internal & External
- Sanding Block & Sandpaper
- Floor Jack & Jack Stands
- Hacksaw
- Pop Rivit Gun

TOOLS YOU CAN RENT

- Cherry Picker
- Spring Compressor
- Brake Bleeder

FINDING A DONOR CAR

Rabbits and Sciroccos built between 1980 and 1984 are recommended donor cars for building your JACKRABBIT. The ideal donor cars are those with relatively low mileage and a rusted or damaged body. You won't need any of the body pieces so cars that look bad are O.K. Obviously, the worse a car looks, the less it will cost. Many suitable donor cars are available in the $300-$500 range. We recommend not using a car that has serious mechanical damage because the cost of Volkswagen replacement parts is quite high.
DISASSEMBLY TECHNIQUES

Before beginning disassembly of your donor vehicle, you may wish to clean the underside and the engine compartment. Use a high pressure spray with a degreasing solvent or a steam cleaner.

Raise the donor vehicle and support it with four jackstands under the frame side rails.

The following parts will be needed from your donor car:
- Drive Axles and Front Suspension
- Complete Rear Suspension
- Shifter and Pedal Assembly
- Steering Box - Column - Wheel
- Parking - Running - Tail Lights
- Complete Fuel System
- Engine and Transaxle
- Brake System
- Battery and All Wiring
- Instrument Panel
- Heater and Control
- Bumpers and Absorbers
- Wheels and Tires

As each component is removed from your donor car it should be cleaned and inspected to determine its condition. This is also a good time to paint and/or lubricate each part so it is ready for installation on your JACKRABBIT.

If any of the parts need rebuilding or replacing this is the time to do it. Rubber parts usually deteriorate with age, so these parts often need replacement. Other likely parts to replace are high wear items like the shift linkage pivots, brake pads, brake hoses, motor mounts, etc.

REAR SUSPENSION

Inspect all brake lines, hoses and fittings for leaks prior to disassembly. Drain the brake fluid into a pan and disconnect the rear brake hoses from the lines on the chassis. Tape over or plug the ends of the brake hoses and lines to prevent dirt from entering during handling and reassembly.

Disconnect the parking brake cable ends from the parking brake handle and slide the cable casings out of the tubes welded to the floor. It is best to remove the parking brake cables with the rear axle.

Use a floor jack to support the rear axle beam and disconnect the upper end of the rear shock absorber strut on each side of the vehicle. Remove the 4 bolts which attach the rear suspension links to the vehicle chassis. Slide the rear suspension out from under the vehicle.

Inspect the rear suspension assembly for bends or cracks. Replace or repair as required. Inspect the rear brakes for brake shoe wear and for leaks at the brake pipe fittings and at the wheel cylinders. Replace or repair as required.

Clean and paint the rear axle assembly, so it is ready for installation into your JACKRABBIT.

The front and rear bumpers can be removed at this time by disconnecting the bolts that hold the absorbers to the chassis.
ENGINE, TRANSAXLE, AND FRONT SUSPENSION

Prior to completing the following steps, you should inspect the engine under operating conditions. Check for abnormal noises, leaks, smooth engine operation, and compression. From the next step through reassembly of your JACKRABBIT, the engine will not be operable.

Disconnect the battery cables and remove the battery.

Disconnect and drain the radiator and hoses. Remove the radiator, radiator hoses, and fan shroud.

Remove the air cleaner or air meter.

Disconnect the speedometer cable.

Disconnect the fuel lines at the engine and mark all connections.

Drain the brake fluid into a pan and disconnect the rubber brake hose at the fitting which connects to the brake pipe on the vehicle chassis. Tape over or plug the brake hose ends to prevent system contamination.

Disconnect the left and right steering tie rods at each front knuckle.

Disconnect all engine and transaxle electrical connections and mark all connections.

Disconnect and remove the exhaust system and its heat shields.

Disconnect the shift linkage at the transmission levers.

Remove the shifter and linkage from the car.

Disconnect the clutch cable at the transmission lever.

Remove the lower control arm, the strut and the drive axle from each side.

Support the engine and transaxle with a cherry picker and remove the fasteners attaching the engine mounts to the chassis.

Carefully lower the engine and transaxle from the chassis. Observe carefully to detect any plumbing, wiring, or mechanical connections between the engine, transaxle assembly and the chassis which might still be connected. Raise the front of the vehicle body high enough to slide the engine, transaxle assembly out from under the vehicle.

Carefully inspect the engine, transaxle, and front suspension for damage, leaks, or excessive wear and repair or replace as required.

Since the engine can be exposed to view in your JACKRABBIT, you may wish to dress up the engine with painted, or polished and plated parts. These steps can be done at this time.
BRAKES AND STEERING

Remove the bolts attaching the steering rack to the chassis and disconnect the steering shaft. Remove the steering rack and tie rods as an assembly.

Disconnect the brake pushrod from the brake pedal.

Disconnect all the wires from the turn signal switch and ignition switch at the steering column. Remove the bolts attaching the steering column and pedal assembly and remove them from the vehicle.

Disconnect the brake pipes at the master cylinder. Plug the outlets on the master cylinder to prevent contamination of the system. Remove the brake booster and master cylinder as an assembly from the vehicle.

INSTRUMENT PANEL

Remove the screws attaching the instrument panel cluster to the dash and carefully pull the instrument cluster from the dash.

In order to facilitate reattachment of the wiring harness connectors during assembly, we recommend that all connections be clearly labeled. A good way to do this is to use a piece of duct tape or a label gun on each connector and label each pair with letters or numbers so that they can be matched up during reassembly. Use indelible ink to mark on the tape.

After the instrument panel is out of the car, you can remove the heater assembly.

FUEL SYSTEM

Because of the fire hazard in handling gasoline, appropriate care should be taken in the following steps. Care should be taken to remove any heat source, flame, or spark source from the area around the vehicle.

Disconnect the fuel line at the tank and drain the gasoline into an appropriate container.

Remove all fuel lines and related parts. Plug all open lines and fittings. Label each disconnected fitting so you can get it reassembled without confusion.

Remove the fuel tank retaining straps and lower the fuel tank from under the vehicle. Save the insulating strips.

Check condition of all lines, especially rubber ones, and replace if needed.

Remove the fuel filler neck and vent lines.

WIRING

Remove all the wiring harnesses from the car. Label each connection so you can get them back together correctly. When a connection is broken you must label both ends of the broken connection to be able to tell where they go at reassembly. Inspect all wiring and replace as necessary.

Remove tail lights and running lights from the car.
SQUARE HOLES FOR PEDAL SUPPORT

These two holes must be lined up with the short pieces of square tubing that are welded to the top of the cowl frame tube. The best way to be sure you get these holes in the correct location is to first drill a 1/4 inch hole as close to the center of the square tube as you can. If you miss the center by too much, you can drill another hole that is closer. Once you have a 1/4 inch hole close to the center of the tube, open it up with a 1.00 inch diameter hole saw. You can then use a file to enlarge the holes and to make them square so they align with the tubing pieces under the cowl. (See Photo)

HOLES IN COWL

Layout the holes in the cowl using the dimensions shown on page 3-3. These holes are all located off the square holes. The holes in the cowl can be cut to size using the appropriate sized hole saws. (See Photo)

ENGINE OPENING

The engine opening hole is best trimmed with a die grinder and a small cut-off wheel. The cut line at the rear should be 1.00 inch below the top surface. At the front the trim line should be just below the frame tube (about 2.00 in). The side trim lines should follow the contours shown in the photos.

HOLE FOR PARKING BRAKE HANDLE

The best way to make this cut out is to start with two round holes and then connect them to achieve the final shape. The center line of both holes should be located 3/4 inch toward the passenger side of the center line of the car. The car center line is indicated in the body by a thin line molded into it. (Note you can also find the car center line by measuring across the door sills.)

The top hole should be 1.00 inch in diameter and it should be as far forward as possible and still be located on the top surface of the console. The bottom hole should be 2-1/2 inches in diameter and it should be located as low as possible but still on the angled surface. Use hole saws to make these holes, and use a die grinder to connect them. Use a file to clean up the edges. (See Photo)
HOLE FOR SHIFTER

The hole for the shifter should be 4.00 inches long and 3.00 inches wide. Since we don't want any sharp corner holes if we don't have to, this hole is best formed by hole sawing 4 - 1.00 inch diameter holes in the corners and then connecting the holes with a die grinder. The drawing on page 3-4 shows where to drill the 4 corner holes. Position this template on the wide section of the console to locate the 4 pilot holes. After the 3 x 4 hole is cut you can use your shifter to locate the smaller mounting holes. These holes should be drilled 7/32 diameter. The right side holes should be drilled all the way through the steel reinforcement.

FUEL FILLER HOLES

The main fuel filler hole is located 10.50 inches to the right of the car center line and 6.00 inches above the bottom of the rear panel. There are lines cast into the body to help locate the center line of the car at the rear panel. The main hole is 2.50 inches in diameter so it can be cut easily with a hole saw. After this hole is cut, you can use the fuel filler neck to locate the 3 mounting holes as is shown in the photo. The three mounting holes should be 3/16 inch in diameter.

TAIL LIGHT HOLES

Before you make the cut out holes for the tail lights you should decide which design tail light you want to use. There are many types and styles of tail lights that will work on your JACKRABBIT, so use your imagination. If you decide to use the standard Rabbit tail lights, the drawing on page 3-5 can be used to locate the holes. Use the same procedure to cut the tail light holes as was used on the shifter hole. The template drawing should be used to locate the pilot holes. Use a 1.00 inch diameter hole saw to open up these holes, and then connect the holes with a die grinder.

Time Estimate for Cutting Holes In The Body: 4 to 6 hours
IT IS 20.50 INCHES FROM THIS LINE TO THE CENTER LINE OF THE CAR

LEFT SIDE SHOWN

4.55

.26 DIA
3 PLACES

9.5

.50

2.12

.50

.50

1.00

.38

.70

.38 DIA
6 PLACES

1.00 DIA

BOTTOM EDGE OF BODY

9.00
After the holes have been cut in your JACKRABBIT body you can proceed with finishing and painting.

Before doing any paint or finishing use water to remove the green film that is used to release all the fiberglass parts from their molds.

Paint the interior first, before any other work or assembly is done.

Paint the exterior last, after all assembly work and all other body panels are mounted and the car is running.

Painting the interior and the exterior requires the same procedures.

Block sand all surfaces with #80 sandpaper and trim all edges smooth and straight. Remove just enough of the gel coat to establish a good surface. Try not to break through the gel coat. Any pits or low spots should then be filled with bondo and resanded with #80 dry paper.

Spray on a heavy coat of primer. It is important to use a high quality, catalysed, polyester primer because it will bond well to the polyester gel coat. This type of primer is expensive, but it is well worth the price. You will need between 2 and 4 quarts, so buy a gallon. We use Suntron C-22 primer.

Block sand all surfaces with #320 dry sand paper. If you are using a solid color, this is all the surface preparation needed. If you are going to do a metallic or a 2 step system, follow the paint manufacturers recommendations.

Paint all surfaces with a high quality catalysed enamel such as Dupont Centari. This type of paint is expensive, but its very durable since it bonds to the polyester undercoats. Let the color coat dry for 3 days before handling. You will need a quart of paint to do the interior and about two quarts to do all the exterior surfaces. Follow the manufacturers recommendations regarding the mixing of reducer, hardener, and fish-eye additives in your paint.

All normal touch up and repair operations can easily be done with catalysed enamel, so don't let this consideration prevent you from using the best paint on your JACKRABBIT.

Some builders might wonder why we don't use Color Gel Coat on our bodies. The reasons are:

1. Each owner will want his own color so there is no reason to try to eliminate painting.

2. Gel Coat is brittle and difficult to repair. Modern painting systems offer excellent durability and surface finish.

3. The Primer Gel Coat we use allows the builder to block sand the exterior surfaces for the preparation of a show car paint job.
Before installing the pedal support assembly on your JACKRABBIT, bolt the master cylinder adaptor bracket to the inside of the angle iron brace. Use the supplied nyloc 5/16 nuts and 1.00 long regular bolts. (See Photo) The top of the bracket has the most offset from the main center hole.

Slide the pedal support into the square holes in the cowl. Telescope each side into the frame tubes until the holes line up. Use self tapping 5/16 bolts to secure the pedal support to the frame tubes. (See Photo) You might need to trim the corner of the angle iron brace if it interferes with the fiberglass.

Attach the pedal assembly to the master cylinder adaptor bracket using the stock nuts. Install the steering column to the support using 1.00 long regular-type 5/16 bolts and nyloc nuts. (See photo)

Position the throttle linkage bracket against the side of the master cylinder adaptor bracket and clamp it so the bottom edges are parallel but the bottom edge of the throttle linkage is .50 inch above the bottom edge of the adaptor bracket. Assemble the stock throttle pedal and bushings to the throttle linkage bracket. (You might need to cut .25 inches off the throttle pedal shaft to prevent the brake pedal from hitting it.)

If the throttle cable has good alignment to the hole in the cowl, mark and drill two holes in the pedal assembly. If alignment is not satisfactory, reposition the throttle linkage bracket and drill two 7/32 diameter holes. Use 1/4 diameter self-tapping bolts to secure the throttle linkage bracket to the pedal assembly.

The pedal support brace is installed by locating one leg on top of the angle iron brace and the other leg against the fiberglass cowl. (See Photo) Mark each hole location and drill a 17/64 diameter hole. Attach the brace with 5/16 self-tapping bolts.

Time Estimate for Pedal and Support Installation: 2 to 3 hours
Use a 1/4 inch self tapping bolt to secure the fuse block on top of the drivers side of the pedal support. The bolt should go into the side of the tube. Position the fuse block 7-1/2 inches behind the fiberglass cowl.

Mount the instrument panel to the pedal support using the stock screws. Drill 1/8 inch holes in the instrument panel hoop and in the pedal support to locate the screws.

At this time, you can also position the heater control in the instrument panel and screw it to the supplied mounting tabs. Drill 3/16 holes in the pedal support panel so you can pop rivet the tabs into position. (See Photo)

The ignition coil can be mounted on the cowl frame tube, or if you have fuel injection, it must be mounted alongside the master cylinder on the left front frame tube. If you mount the coil alongside the master cylinder, you will have to extend the wires that go to the coil. Use 5/16 inch self tapping bolts to attach the coil bracket to the frame tube.

The battery should be mounted behind the right rear wheel. Use the stock hold-down clamp and a 5/16 by 1.00 inch long bolt and nut to secure the battery. The stock ground cable can be used to ground the negative battery terminal to the frame. A new battery cable must be assembled from the supplied parts to connect the positive battery terminal to the starter motor hot post. Route the new cable on the main center frame tube along the passengers side.

All the hot input wires to the car electrical system should be connected to this starter hot post.

The short ground cable is used to ground the engine to the frame. It can be mounted between any engine bolt and any frame bolt.

Route the rear-end wiring harness along the drivers side frame rail using the supplied clips and pop rivets to secure it. This harness includes the tail lights and the electric fuel pump leads on fuel injection cars. The head light wiring harness should be attached to the left front frame rail and routed along the top radiator frame rail. The engine wiring harness should be routed along the cowl frame rail so the leads can run forward to the engine connections.

If you were careful in labeling all the wiring connectors as you removed them from your donor car, it should be easy to reconnect all the wires. If you are unsure of any connections, consult your shop manual.

Time Estimate For Wiring Installation: 6 to 10 hours
HEADLIGHT INSTALLATION

Before installing the headlight bracket to the car, drill all the mounting holes in the bracket. The holes for the adjusters and springs should be 3/16 diameter. (20 holes total) The holes that are used to mount the bracket to the frame should be 5/16 diameter and located 1.00 inch from the corners of both ends of the bracket. (see photo) You might want to paint the headlight bracket at this time.

Use the long pop rivets to secure the adjusters to the bracket. The shorter of the adjusters should be located on the bottom.

Drill 17/64 holes in the bottom of the upper front frame rails so you can use the 5/16 self-tapping bolts to attach the headlight bracket.

After the bracket is attached, you can install the headlights on the adjusters using the springs to hold them in position. The headlights have to be turned upside down inside their mounting rings. To do this you will have to grind the thin flange off each headlight bulb. Adjust each headlight to give the required light pattern.

Attach the short jumper-wire to each headlight and splice it into the appropriate wire on the stock Rabbit harness. The high beam lights should be located together at the center of the car so the low beams can be located at the outboard location.

After the headlight installation is complete, remove them to allow room for engine installation. Reinstall the headlights after painting the exterior.

Time Estimate for Headlight Installation: 1 to 2 hrs.
Cut the fuel filler pipe with a hacksaw so that its length from the cap to the end is 5 inches. (See photo.) File the cut end smooth and bend a small flare around the cut end to keep the hose from slipping off.

Attach the fuel filler pipe to the rear body panel using three 3/16 pop rivets.

The stock fuel tank should be installed using the supplied straps. Be sure to use the stock insulating strips between the tank and the new straps. The front of the straps should be attached to the frame crossmember with 5/16 self tapping bolts in the existing holes. Use 5/16 fine nuts to secure the rear of the straps to the studs on the rear crossmember.

NOTE: Some later model cars use a larger fuel tank. If your fuel tank straps are too short, return them to VSE for longer ones.

Cut the stock rubber inlet hose in half so you can use one piece at each end of the new intermediate fuel filler pipe that is supplied. Use the short rubber hoses and the new pipe to connect the fuel filler pipe to the tank. Reuse 2 of the stock clamps as well as the 2 supplied clamps so there is a clamp at each connection.

NOTE: In order to be sure that the clamps retain the pipe, you must put a small lip on each end of the fuel filler pipe.

All the stock fuel tank vent lines should be connected as shown in the shop manual. Use a small hose clamp to secure the gravity valve to the wire hook on the fuel filler pipe.

You can use the stock fuel lines on your JACKRABBIT but they must be straightened and rebent to fit. A cleaner job usually results if new lines are used. New lines are available from auto parts stores, but be sure to get metric ones to fit the Rabbit components.

Time Estimate for Fuel System installation: 4 to 8 Hours
Before installing the rear suspension you should shorten the rear springs. This is done by removing them from the rear shocks. Keep track of how all the upper attaching points are disassembled so you can reassemble them correctly. For the proper ride height the springs must be cut one full coil and then an additional full coil must be heated red hot. Let the spring air cool after heating to prevent thermal stresses.

Note: VSE can cut and heat your rear springs for $50.00 a pair for you, or a local welding shop, if you do not feel comfortable doing it.

Reassemble the springs to the shocks using all the stock parts.

The rear control arm assembly is attached to the frame with 3/8 by 1-1/4 inch long bolts and nyloc nuts. As the control arm assembly is positioned under the car, the parking brake cables should be fed up over the central frame tube and inside the small tubes welded on top of the frame. After tightening the control arm to frame nuts and bolts, you can attach the upper shock mounts to the frame brackets using the stock insulators and fasteners.

The parking brake handle uses two bushings to provide a pivot for its mounting to the bracket on top of the central frame tube. When positioning the handle, be sure the notch in the ratchet plate is engaged on the tab that is part of the frame bracket. The parking brake cables should be attached to the handle with stock parts.

Time Estimate for Rear Suspension and Parking Brake Installation:
3 to 4 hours
The first step in installing the front suspension is to disassemble the front spring and shock units. It is a good idea to use a spring compressor as is shown in the photo. (This type of spring compressor is usually available from tool rental shops.) When disassembling the top of the shock to remove the spring, remember the sequence so you can reassemble it correctly.

Once the spring is removed, cut 1-1/2 coils from the bottom, and heat another 1/2 coil red hot. Let the spring air cool to prevent thermal stresses.

Note: VSE can cut and heat your front springs for $50.00 a pair.

Remove the stock shock absorber cartridge from the shock carrier and replace it with the supplied replacement shock. Reassemble the parts that came off the top of the shock including the rubber jounce bumper. It will be necessary to open up the hole in the spring top plate to .80 inches in diameter. This can be done with a rattle file. When the hole is to size, it should fit over the shock rod. Assemble the parts on the end of the shock as shown on the diagram on page 10-3. The mono ball replaces the stock upper shock mounting plate and rubber insulator. Keep the spring compressor in place.

Note: The mono balls are shipped in their receptacles on the frame. Remove them from the frame so you can install them on the shocks. When installing the snap rings be sure they are fully seated in their grooves. At least half of the width of the ring should be inside the groove.

After the springs and shocks are assembled, they can be positioned in the car by sliding the mono ball inside the receptacle welded to the frame towers. A snap ring is used to secure the mono-ball inside this receptacle. After the snap ring is seated, remove the spring compressor.

The front of the stock lower control arms should be attached to the frame brackets with the stock bolt and the 12mm x 1.5 nut supplied. The rear of the stock lower control arms should be attached to the frame using 3/8 by 1-1/4 inch course bolts and nyloc nuts. The lower control arm, the spring/shocks and the front knuckles should be assembled just as they were disassembled from the donor car.

The steering gear should be attached to the frame using 5/16 by 1.00 inch course bolts and nyloc nuts. Position the steering shaft so the gear is in its mid-travel position and attach the tie rods to the steering knuckles using the stock parts.

Cut the steering intermediate shaft in half and slide each end into the supplied steering shaft extender. Install the steering shaft extender with the ends of the intermediate shaft into the car. Position each universal joint just
as it would be on final assembly and mark the position of each hole in the extender on each end of the shaft. This will determine how long your completed shaft should be after it is welded. Remove the shaft extender and the ends of the shaft and reassemble the three pieces. Line up the marks, and plug-weld the shaft ends to the shaft extender. The two U-joints should be aligned radially so they are 90 degrees from each other as shown in the photo.

Note - VSE can cut and weld your steering shaft for $25.00 if you can't find a local welding shop to do the job.

Before installing the welded steering shaft on the car, install the boot extender by pop riveting it to the cowl. (See Photo) Install the boot over the steering gear and the boot extender to provide an air tight seal. This is important to prevent exhaust fumes from entering the car interior. (At this time you should also seal all holes in the cowl for this same reason.) Attach the steering shaft to the column and to the gear with the stock attaching parts.

After all the front suspension parts and steering parts are installed on the car, the front end alignment should be set as is described in your shop manual. Tighten all of the front suspension and steering bolts to the torque specifications given in the shop manual.

Time Estimate for Front Suspension and Steering Installation: 6 to 8 hours
Before installing your engine, you should drain the oil to replace the oil pan gasket with RTV sealer. The engine in your JACKRABBIT is mounted at a lower angle than stock so the static oil level in the pan is above the pan surface. Using RTV at this joint will prevent the oil from seeping through the stock gasket.

When installing your engine and transaxle you should use a cherry picker or similar hoist, to support the engine. A chain between the alternator mounting hole at the front of the cylinder head and the cast hole at the rear of the cylinder head will hang the engine at the proper angle. Locate the cherry picker hook about 6 inches from the front of the engine so the transaxle hangs lower than the engine as is shown in the photo. Remove the transmission mount bracket from the transmission to allow the engine to pass through hood opening.

The best way to bolt the engine to the frame brackets is to install the right side first. Use the 3/8 by 3 1/4 inch long fine bolt with a thin nyloc nut. Next, install the bolt in the left side mount using the 3/8 by 3 1/2 inch long fine bolt with a thin nyloc nut. With the engine supported by these two mounts, you can loosen tension on the cherry picker so the engine can float on the mounts. The next step is to bolt the bottom engine mount to the transaxle using the stock nuts. After this is secure, rotate the top of the engine backward while compressing the rubber in the bottom mount. This should allow you to slide the mount into the holes in the frame bracket. Use the stock nut to secure the mount to the bracket.

Use self tapping 5/16 bolts and large diameter washers to mount the stock front torque arm cup to the lower front frame rail. The torque arm attaches to the engine with the stock upper starter bolt and the supplied 3/8 by 5-1/2 inch long coarse bolt and nyloc nut. Use a 12 mm nut to secure the upper starter bolt to the engine torque arm.

After the engine and transaxle are installed, install the drive axles using the stock bolts and nuts. Torque all fasteners to the specifications listed in your shop manual.

All the wiring, vacuum, and fuel connections to the engine should be the same as on your donor car. If you were careful during disassembly this job is pretty easy. If you are confused on any connection, consult your shop manual for the correct routing.

The radiator and fan shroud from your donor car should be mounted in your JACKRABBIT using all the stock mounts and fasteners. The lower hose is 1-1/4 inch inside diameter and 15 inches long. The upper hose is 19-1/2 inches long and is stepped from 1-1/4 inch inside diameter to 1-1/2 inch inside diameter. Connect the 1-1/2 inch inside diameter end to the supplied filler fitting. Use a short piece of the stock upper radiator hose to connect the filler fitting to the upper water connection on the engine. (See photo) All the other water lines and connections can be installed as they were removed from your donor car.
When filling your system with water and antifreeze it is important to get all the air out of the system. This takes some time and effort but its importance is obvious. The best way to purge the system is to fill it as the engine idles. It is also helpful to remove the cap from the radiator until water flows from this opening.

Time Estimate for Engine Hook Up: 8 to 12 hours

HEATER INSTALLATION

Before installing your Rabbit heater in your JACKRABBIT you must remove the flange that extends below the bottom of the heater on the drivers side. (See Photo)

Position the heater box as far as it will go to the right side of the car while keeping the lower actuator lever inside the depression in the tunnel. This location should give you adequate foot room around the accelerator pedal.

Use the heater mounting tab to secure the heater box to the pedal support cross tube. (See Photo)

Hook up the heater hoses as they were on your donor car. The stock heater control, cables and wiring can be used to get your JACKRABBIT heater to work.

Note: The heater hose routing on cars with fuel injection should be as outlined in Chapter 13.

Time Estimate for Heater Installation: 2 to 4 hrs.
FUEL INJECTION INSTALLATION

Later model Rabbits use fuel injection so you will need the V.S.E. kit to get the parts needed to install this system.

The fuel pump and its supporting jacket should be mounted between the main rear crossmember and the fuel tank crossmember on the passenger side of the car. Hang the inner pump bracket from the fuel tank crossmember using the predrilled hole just outboard of the fuel tank strap hole. Drill two 17/64 holes in the inner surface of the rear frame extension to locate the outboard fuel pump mounting bracket. Use 5/16 self-tapping bolts to secure the mounting brackets to the frame rails. Use the stock nuts, washers and rubber mounts to secure the fuel pump jacket to the brackets.

The fuel accumulator should be mounted outside the rear frame rail ahead of the right rear wheel. Drill 17/64 holes in the main rear crossmember and in the frame rail and bolt the accumulator mounting brackets to the frame using 5/16 self-tapping bolts. The stock insulators and nuts should be used to attach the accumulator to the mounting brackets.

In order to correctly position the air metering unit next to the engine it is necessary to reroute some of the heater hoses. The first step is to remove the water hose fitting from the back of the cylinder head and tap the larger hole with a 1/2 inch pipe tap. Plug the hole with the supplied pipe plug using teflon tape to seal the threads. Reinstall the water hose fitting and discard the stock heater pipe assembly.

Plumb the heater hoses to the water pump and to the water fitting by making all the components flow in a continuous path. Be sure to include in this system the inline temperature sensor. (See Diagram 13-3)

The two brackets that are used to support the fuel metering unit are mounted on the left front frame rail. The front bracket uses the front engine mounting hole and registers under the frame rail. Drill two 17/64 holes in the front of the left hand spring support tube so you can bolt the rear mounting bracket in position. Use 5/16 self-tapping bolts to secure the bracket to the frame rail. The top of the rear bracket should be 1-1/4 inches below the top of the frame rail.

Disassemble the air metering unit and grind the reinforcing ribs off the ends of the lower cover. Drill 5/16 holes in the ends of the cover so you can bolt the cover to the mounting brackets. Use 5/16 nuts and carriage bolts. After the bottom cover is secured to the mounting brackets you can reassemble the air metering unit. Use the supplied steel pipe to connect the air metering unit to the intake manifold. Rotate the rubber connection on the air metering unit for proper alignment and use the stock clamps and the supplied clamps to achieve an air tight connection at each joint.

The fuel filter should be relocated as shown in the photos. A special bracket is supplied for this purpose. This relocation simplifies the fuel line arrangement while making the total installation more compact.
All the fuel injection connections, fuel lines, vacuum lines, and electrical wires should be as they were on your donor car.

Look in your shop manual if there is any questions on the proper hookups.

Use the bracket supplied and a 5/16 self-tapping bolt to secure the charcoal canister bracket to the frame rail by first drilling a 17/64 hole. The charcoal canister is mounted behind the left front wheel.

The separator tank is mounted behind the right front wheel using the supplied strap. Drill a 17/64 hole in the frame side rail and attach the bottom of the strap with a 5/16 self tapping bolt. The top of the strap can be attached to the fiberglass cowl panel by drilling a 5/15 hole and using the supplied button head bolt, two washers and a nyloc nut. (See Photo)

Time Estimate for Fuel Injection Installation: 6 to 10 hours
In order to use your donor car shift linkage on your JACKRABBIT, you need to remove a 9-1/2 inch long piece of the rod 4-1/2 inches from the shift lever pivot. (See photo) The shift lever can also be cut at this time to shorten it for a better appearance. Cut 4 inches off the lever and rethread the top of the lever with a 12 mm by 1 1/4 thread die.

To mount the shifter on the body, position it in the hole with the rod stub pointing forward and the shifter tight against the right side of the hole. Use 1/4 inch self tapping bolts to secure the shifter to the body. Don’t over tighten the left side bolts because they only are going into the fiberglass.

Install the front of the stock shift rod on the steering gear bracket just as it was on your donor car. Slip each end of the stock shift rod into the supplied shift rod extension. Use the supplied clamps with 5/16 allen-head bolts and nuts to secure each end of the shift rod extension to the ends of the stock shift rod. These connections allow you to adjust the shift linkage by sliding and/or rotating the shift rod connections. The best way to adjust the linkage is to put the transmission into first gear and then set the lever slightly forward while resting the lower guide surface against the shifter lower housing.

Tighten the shift rod clamps in this location to secure your linkage adjustment. You can make minor adjustments in the shift linkage by slightly loosening the clamps and moving the rods a little at a time. If you have difficulty getting clean shifts, check the tightness of the stock shift levers, shafts, and bushings mounted on the steering gear. If these parts are worn or sloppy, they should be replaced.

Use the supplied clutch cable with the supplied clutch cable adapter. (See photo) The clutch lash is adjusted by turning the adjuster at the lower end of the cable per instructions in your shop manual.

Time Estimate for Shift Linkage Installation: 3 to 4 hours
Your JACKRABBIT can use the stock exhaust manifold, header pipe, and related braces and fasteners. Before installing any more of the exhaust system you should fit the stock heat shields to the bottom of the tunnel. These shields will prevent excessive heat build up and reduce the chance of starting your fiberglass body on FIRE. These heat shields are especially important if your car uses a catalytic converter. The stock heat shields can be fitted to the bottom of your JACKRABBIT by using 1/4 inch self tapping bolts to secure the heat shields to the main frame tube and the main frame crossmembers. You might need to trim the length of the shields to achieve a good fit. (See photo)

In order to get the exhaust system to lay alongside the main frame tube you will need to put an "S" bend in the stock flex pipe. This bend can be made by holding the flex pipe in a vise and bending the end with a piece of tubing. (See photo) After the flex pipe is bent to fit, you can install the converter if one was used on your donor car. It is important to install the converter if one was on your donor car because the state inspectors who will approve your JACKRABBIT will require that it be installed. We have found that JACKRABBITS which use a converter are quiet enough that they do not need a muffler.

Attach the supplied exhaust pipe to the converter and hang the end of it using the supplied hangers. (See photo) You can add an exhaust pipe tip if desired.

Time Estimate for Exhaust System Installation: 4 to 6 hours
BUMPER INSTALLATION

The JACKRABBIT bumper skins mount onto the stock front and rear rabbit bumpers. Mount the stock bumpers on the JACKRABBIT using the stock mounting bolts and 1-1/2 in dia. washers keeping the brackets centered in the holes in the frame. Before mounting the stock bumpers, scuff the face surface of the bumper with #36 sandpaper. This operation can be done on the car, but it is safer to do it off the car.

After the stock bumpers are mounted and aligned, hold the fiberglass skins in place and align them with the body. When proper alignment is achieved, drill 5/32 holes thru the fiberglass skin and the bumper face. Use sheet metal screws to hold the bumper skin in position and recheck alignment to the body.

Remove the screws and the skin. Clean all the dust from inside the skin where the stock bumper rests.

Mix about a half pint of Bondo with less then normal catalyst and spread the Bondo over the face surface of the stock bumper. While the Bondo is still wet, screw the fiberglass skin into place. Let it set overnight and then remove the screws. Bondo the screw holes and cut the hole for radiator air.

The lower edge of the front bumper skin can be screwed to the lower radiator frame tube for added structure and support, if desired.

ROCKER PANEL INSTALLATION

The JACKRABBIT uses the same piece for the left and the right rocker panel. You might have to trim the end caps to fit chassis components on each side. To establish alignment it is best to use sheet metal screws to locate the top of the panels and tape to hold the bottom of the panels. You may have to trim the bottom lip of the body to get the rocker panel to fit snug against the side.

After alignment and fit is perfected, use Bondo to glue the rocker panel at the top. The screws should be used to hold the panel in place while the Bondo hardens. The bottom of the rocker can be attached to the bottom of the car with a couple layers of fiberglass or with a coat of Bondo between the rocker and the bottom of the car.

There are two ways to hide the seam between the body and the rocker panel if you want to do so. One way is to fill the seam with Bondo and then sand it smooth and paint it the body color. If you plan to use a rub strip along the side of the car, there is no need to fill the seam since the rub strip will cover it.
REAR SPOILER INSTALLATION

Drill two 5/16 diameter holes in each end of the JACKRABBIT rear panel about 3/4 inch from the edges. (SEE PHOTO). Hold the spoiler in position and align all the edges for the best fit. With the spoiler in position, mark the hole locations on the spoiler inner flange by reaching from under the rear panel.

Remove the spoiler and drill 5/16 holes at these locations. Locate the elevator bolts from the inside of the spoiler and Bondo the bolt flanges to the spoiler flange. Let the Bondo harden overnight and then use the 5/16 nuts and washers to secure the studs and the spoiler to the JACKRABBIT rear panel.

HOOD INSTALLATION

Before mounting the hood, install a 1/4 inch male rod-end bearing in each end of the tubing that is bonded to the leading edge of the hood. Position the hood in the opening and adjust its location to provide the best fit. When the hood is located, mark the center of the rod end bearings on the body shell. Remove the hood and drill 1/4 inch diameter holes all the way through the fiberglass and the metal reinforcement. Use the 1/4 inch diameter button head bolts with the 1/2 inch spacers and lock nuts to secure the front of the hood to the body.

The hood latch is best mounted 4.00 inches toward the drivers side. Drill a 1/4 inch diameter hole 3/4 of an inch from the rear edge of the hood at this location.

Use this hole to find the proper location of the hood latch bracket. Drill 1/4 inch holes in the engine opening flange and use the 1/4 inch nuts and bolts to secure the hood latch bracket to the backside of the flange. Open up the hole in the hood to accept the hood lock and install the lock and latch assembly.

Install the supplied water temperature fitting to relocate the temperature sender at the water outlet fitting on the engine.

Time Estimate to install Bumpers, Rockers, Rear Spoiler and Hood: 6 to 8 hrs.
Before installing the steel windshield support frame on your JACKRABBIT you should check to see if it is diagonally square. Shipping can sometimes damage parts, so spend a few minutes to be sure yours is square. Use a tape measure to determine if the distance from one diagonal corner to the other is the same as the opposite corners. (SEE PHOTO) If one dimension is more than 1/8 inch different from the other, your windshield support frame is not square. The easiest way to bend it square is to drop the frame on pavement from a distance of about 6 inches. Drop the frame so it lands on a corner with the long diagonal dimension. This will cause the frame to bend slightly. Remeasure and rebend until the diagonal measurements come out equal.

Once you have confirmed that your windshield support frame is square, you can place it in position at the front of the cockpit. Use a piece of wood 30-1/2 inches long to support the rear edge of the frame. (Be careful not to scratch the paint.) The windshield support frame is designed to be located 1/4 inch behind the front wheel humps in the body. Use pieces of 1/4 inch thick wood to keep the frame in this position. Before drilling the mounting holes, you must align the windshield support frame side to side in the car. This is done by measuring from each corner of the windshield support frame to the body crease-line at the front fender.

When the windshield support frame is properly located there might be more clearance to one of the mounting tabs than to the other. This is normal and is compensated for by using more or less washers between the windshield support frame and the pedal support frame.

Double check all the alignment dimensions and mark the hole centers in the pedal support frame and in the rocker panels. Remove the windshield support frame and drill 17/64 diameter holes at each location. Use the 5/16 self tapping bolts to secure the windshield support frame to the car. Use as many washers as necessary to shim the proper gap between the windshield support frame and the pedal support frame.

Place the fiberglass windshield skin over the frame to determine the approximate fit. You might need to trim the front flange slightly to clear the wiring coming through the cowl. (Leave at least a 3/4 inch flange.) The fiberglass windshield skin should fit with a 1/16 to 1/8 inch gap to the cowl. (This gap will be filled with 3/16 thick foam weather seal.)

Use a sanding block to put a 1/8 inch radius on the front edge of the windshield skin.

Use one screw in each upper corner of the windshield opening in the fiberglass skin to hold it to the steel frame. Then put one screw in each lower corner at the door tube. (See Photo)
Don't clamp the fiberglass or you will warp it and the windshield won't fit properly. You can use tape to hold it in position while you fit it.

After the windshield skin is in position, mark the wiper hole locations from the bottom. Remove the windshield skin and hole saw 3/4 inch diameter holes in the marked locations. The holes for the defroster outlets can also be made at this time. Fit the stock Rabbit defroster duct to the bottom of the windshield skin and glue it in place with Bondo.

Center the defroster across the car and position it so it is as far to the rear of the car as possible keeping the holes open to the duct.

While the windshield skin is off the car, install the Rabbit windshield wiper as a unit. Connect the wires to the motor and check its operation.

Before reinstalling the windshield skin, bolt the right hand instrument panel support to the pedal support. (SEE PHOTO) Drill 17/64 holes in the right side tube and in the side of the instrument cluster hoop so you can use the 5/16 self tapping bolts to secure the support.

After the right hand instrument panel is installed, you can glue the ash tray into the small rectangular opening. Trim the rear of the stock Rabbit glove box so it will fit through the large rectangular opening and use Bondo to glue it in place. You can drill a hole in the lower panel to install the stock Rabbit cigarette lighter if desired.

Before reinstalling the windshield skin place 1/2 inch foam weather stripping around the top and sides of the instrument cluster. This foam will support the top of the instrument panel.

Reinstall the windshield skin and recheck all fits and alignments. If everything looks good, use Bondo to glue the windshield skin to the windshield support frame just like was done with the bumper skins.

Let the windshield frame set for a day and then glue the windshield in place using regular windshield installation butyl tape.

As an added appearance consideration you can paint a 1.00 inch border around the inside of the glass to hide the butyl tape. This requires special glass paint available from your automotive paint store.

The windshield used in your JACKRABBIT is the same as the one used in 1987 SCIROCCO'S. The stock Rabbit windshield wiper arms and blades can be used on your JACKRABBIT.
After the windshield frame is reinstalled on the car you can fit the windshield corners to clean up the appearance of the windshield frame attachment. These fiberglass parts are attached with Bondo as shown in the photos.

You can also use Bondo to fill the gap between the windshield frame skin and the steel frame. But, don't fill the frame at the outer edge because this is where the door seal will be attached.

You can remove the entire windshield and frame from the car as an assembly by removing the 6 attaching bolts.

Time Estimate for Windshield Assembly and Installation: 12 to 16 hrs.
The JACKRABBIT doors mount to the windshield frame cross tube so you cannot install the doors until the windshield installation is completed.

The first step is to cut a hole in the fiberglass skin to align with the windshield frame cross tube and to clean up the inside ends of the windshield frame cross tube with a 1/2 round file. Remove all the burrs so the nylon bushings slide smoothly into place when they are on the door pivot tubes. Note that the nylon bushing with the flange goes against the door tube.

Bolt a latch plate to the end of each door tube and then bolt a stock Rabbit door latch to each plate. Slide the plate back and forth until there is 3/8 inch clearance between the end of the plate and the rear door jamb. This dimension should be maintained while the top of the tube and the plate are 1/4 inch below the top surface of the rear fender. Tighten the bolts that hold the plate to the tube to maintain this alignment.

Attach the stock Rabbit door latch pin to the latch bracket and snap the pin into the latch. Mark the hole positions on the rear door jamb and drill all the way through the frame steel with a 17/64 drill. Use the 5/16 x 1-1/4 long self-tapping bolts to secure the latch to the car.

If there is a gap between the fiberglass and the frame steel, open up the holes in the fiberglass to 1/2 inch dia. and use Bondo to secure the 3/8 long spacers to the frame steel.

When the door pivots and latches are working correctly, you can install the torsion bar springs.

Remove the door tubes and retain the torsion bars at the center with the wide anchor and a 3/8 fine allen head bolt on each bar. The torsion bars should be installed so that the door attaching bolt is on the bottom pointing rearward at a 30 degree angle. It is usually easier to install these parts if you remove the windshield frame from the car.

Reinstall the door tubes and secure them to the outer torsion bar anchor with a 3/8 allen head bolt. Install the bolt when the door is up at a 45 degree angle so the torsion bar holds the door open.

If you want to incorporate inside door latches, bend the stock Rabbit actuating rod in a hook as shown in the photo. This rod can be capped with the plastic door lock button where it will stick through the inner fiberglass panel. The outer door latch will stick through the outer fiberglass as shown in the photos. You will have to cut holes in the fiberglass panels for these latch releases.

Clean up the door inner and outer fiberglass panels so the inner panel nests inside the outer panel. Place the panels around the door tube and close the door. You will have to trim the inner panel for access to the latch mechanism. (See Photo) Use 1/8 inch thick pieces of wood to shim the fiberglass door panel away from the body. Carefully align the door panels so you have a good fit to the door opening in the body. When this is achieved, screw the inner panel to the frame tube with 4 sheet metal screws along its length. Then screw the outer panel to the inner panel with about 6 more screws. Open and close the door a few times to be sure everything is properly aligned.
When fitting the fiberglass door panels, drill a 3/4 inch hole at the front corner so you can get at the bolt that holds the door tube to the torsion bar anchor.

Remove the inner and outer door panels. Scuff the door tube with 36 grit sandpaper and use Bondo to glue the inner door panel to the door tube. Reinstall the screws to hold the panel in place and close the door while the Bondo is hardening and use 1/4 thick pieces of wood to keep the door panel aligned with the door opening in the body. Also use a 1/8 inch thick piece of wood to keep the inner edge of the door away from the rocker panel recess. Let this set overnight and then Bondo the outer door panel to the inner panel. Reinstall the screws and close the door again to insure proper alignment. Use the 1/8 inch shims to maintain the proper door gap.

Let the Bondo harden overnight and remove the door. Fill all the seams between the door inner and outer panels, smooth the seams and paint the doors.

It will add to the appearance of your JACKRABBIT if you install the door extensions to the top of the front fender. These pieces must be fiberglassed in place leaving a 1/4 inch gap to the doors. Grind a bevel on the fender and on the extension about 1.00 inch wide and 1/16 inch deep to give the fiberglass some thickness at the joint. Use Bondo to finish the joint after fiberglassing.

Time Estimate to Assembly and Install Doors: 20 to 24 hrs.
SEAT BELT INSTALLATION

Note: You can use your stock seat belts but we recommend using race-type belts as offered in this kit.

Drill a 3/8 inch diameter hole in each side depression of each seat. The hole should be located approximately 3/4 inch from the bottom and 3/4 inch from the rear of each depression. This will locate the hole so it is at the center of the depression. Use a 3/8 inch diameter bolt, washers and a lock-nut to secure a belt in each hole. (See Photo.)

The passenger seat belt on the tunnel side will require the installation of the Rivnut in the main frame tube. The Rivnut is installed by opening up the hole in the fiberglass to 1.00 inch in diameter and opening up the hole in the frame tube to .50 inch in diameter. The Rivnut can be installed with a Rivnut installation tool or by tack welding the flange to keep the Rivnut from turning while you tighten the bolt.

Use 2 washers between the rivnut and the seat belt to space the seat belt away from the fiberglass.

Shoulder belts can be added if desired.

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SEAT PAD INSTALLATION

The seat pads are held to the car body with Velcro. Use 2 pieces to hold each large pad and one piece to hold each small pad.

Seat pad thickness can be changed to suit drivers of various heights. Our recommendations are:

<table>
<thead>
<tr>
<th>Driver Height</th>
<th>Seat Pad Thickness</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-10 to 6-2</td>
<td>1.50 in</td>
</tr>
<tr>
<td>5-6 to 5-9</td>
<td>2.50 in</td>
</tr>
<tr>
<td>5-2 to 5-5</td>
<td>3.50 in</td>
</tr>
</tbody>
</table>

SHIFTER BOOT AND PARKING BRAKE BOOT INSTALLATION

Both the parking brake boot and the shifter boot attach to the car with Velcro. Each boot requires that the attaching plate be cut to shape and installed around their respective holes in the body. (See Photos) The holes attach to the body with 5/16 self-tapping bolts. You can paint the attaching plates flat black so they match the boots.
OPENING UP SQUARE HOLES IN COWL FOR INSTALLATION OF PEDAL SUPPORT TUBES

USING A DIE GRINDER AND A CUTOFF WHEEL TO TRIM ENGINE OPENING LEFT FRONT CORNER

USING A HOLE SAW TO CUT HOLES IN COWL

ENGINE OPENING TRIM LINE AT REAR AND ON RIGHT SIDE

PARKING BRAKE AND SHIFTER HOLES CUT IN CONSOLE

HOLES FOR GAS FILLER CUT IN REAR PANEL
TAILLIGHT HOLE CUT IN REAR PANEL. USE TEMPLATE TO MAKE HOLE.

BOLTING MASTER CYLINDER ADAPTOR BRACKET ON TO PEDAL BRACKET

BOLTING TELESCOPING TUBES TO FRAME

PEDAL SUPPORT INSTALLED IN CAR

PEDAL ASSY AND STEERING COLUMN INSTALLED

THROTTLE LINKAGE INSTALLED, PEDAL SUPPORT BRACE
SEAT BELTS INSTALLED

SEAT PADS ATTACHED WITH VELCRO

SHIFTER BOOT ATTACHING PLATE

PARKING BRAKE BOOT ATTACHING PLATE
FUSE BLOCK MOUNTED ON PEDAL SUPPORT

HEATER CONTROL BRACKETS POP RIVETED TO PEDAL SUPPORT

INSTRUMENT PANEL MOUNTED TO PEDAL SUPPORT

BATTERY MOUNTED

IGNITION COIL MOUNTED
HOT WIRES ON STARTER MOTOR GROUND STRAP

DRILLING HOLES FOR HEADLIGHT ADJUSTERS

DRILLING BRACKET MOUNTING HOLES

POP RIVETING ADJUSTERS

HEADLIGHT BRACKET WITH ADJUSTERS INSTALLED

HEADLIGHTS RETAINED BY SPRINGS
FUEL FILLER PIPE CUT TO 5.00 INCH LENGTH

PUTTING LIP ON FUEL FILLER PIPE

FUEL FILLER PIPE INSTALLED

FUEL TANK VENT LINES INSTALLED

FUEL LINE ROUTING - RIGHT FRONT

COMPUTER MOUNTED TO CAR
VAPOR SEPARATOR INSTALLED

FUEL PUMP AND ACCUMULATOR INSTALLED

PLUGGING WATER FITTING HOLE

FUEL FILTER STRAP AND MOUNTING

AIR METER BRACKETS INSTALLED ON CAR

AIR METER AND INLET TUBE MOUNTED ON CAR
CUTTING COIL OFF REAR SPRINGS

HEATING ONE COIL OF SPRING

TIGHTENING CONTROL ARM TO FRAME BOLTS

TIGHTENING UPPER SHOCK MOUNT

BRAKE CABLE ROUTING

PARKING BRAKE MOUNTING
INSTALLING NEW SHOCK CARTRIDGE

USING SNAP RING TO HOLD MONO BALL IN FRAME

USING SNAP RING TO RETAIN MONO BALL

STEERING GEAR MOUNTED ON FRAME

WELDED STEERING SHAFT

BOOT EXTENDER INSTALLED
INSTALLED BRAKE EXTENSION ROD

REAR BRAKE LINE ROUTING

MASTER CYLINDER INSTALLED

FRONT BRAKE LINE ROUTING

MASTER CYLINDER WITH LINE ATTACHED

INSTALLED LOWER SNAP RING
WHERE TO CUT SHIFT ROD

SHIFTER INSTALLED ON CAR

SHIFT ROD INSTALLED

SHIFT ROD CLAMP INSTALLED

CLUTCH LASH ADJUSTMENT

CLUTCH CABLE ADAPTOR
BENDING FLEX PIPE

CONVERTOR AND HEATER SHIELDS

TAILPIPE HANGER AND TIP ON CAR

TRIMMING BOTTOM OF HEATER

TAB TO HOLD HEATER IN POSITION

OVERALL ENGINE INSTALLATION
SCREWING BUMPER SKIN IN PLACE

BONO STOCK BUMPER TO HOLD SKIN

SCREWING ROCKER IN PLACE

GLUING BOTTOM OF ROCKER

HOLES IN BODY FOR REAR SPOILER

GLUING ELEVATOR BOLTS TO SPOILER
HOOD HINGE INSTALLATION WITH SPACER

MEASURING STEEL FRAME FOR SQUARENESS

BENDING FRAME

USING 30½ INCH PIECE OF WOOD TO SUPPORT WINDSHIELD FRAME TOP

USING ½ INCH WOOD SHIMS TO LOCATE WINDSHIELD FRAME AT COWL
MEASURING TO CENTER WINDSHIELD FRAME ON CAR BODY

BOLTING WINDSHIELD FRAME TO PEDAL SUPPORT

BOLTING WINDSHIELD FRAME TO ROCKER TUBE

SCREWING CORNER OF SKIN TO STEEL FRAME

SCREWING SKIN AT DOOR TUBE PLATE

FRONT EDGE OF WINDSHIELD SKIN WITH FLANGE CUT TO 3/4 INCH
WIPER AND DEFROSTER HOLES IN WINDSHIELD FRAME SKIN

DEFROSTER DUCT ATTACHED TO BOTTOM OF WINDSHIELD FRAME SKIN

WIPERS INSTALLED ON CAR

BOLTING RH INSTRUMENT PANEL SUPPORT TO PEDAL SUPPORT

FOAM STRIP ADDED TO TOP OF INSTRUMENT PANEL SUPPORT

USING BONDO TO GLUE WINDSHIELD SKIN TO STEEL FRAME
WINDSHIELD AND WIPERS INSTALLED

WINDSHIELD FRAME CORNERS READY TO BE INSTALLED - TRIM AS NECESSARY

USING BONDO TO GLUE CORNERS IN PLACE

USING BONDO TO FILL GAP BETWEEN WINDSHIELD SKIN AND STEEL FRAME

INSTALLING WEATHER SEAL ALONG WINDSHIELD POST

HOLE IN WINDSHIELD SKIN FOR DOOR TUBE
**Door Tubes with Nylonliners Installed**

**Bolt Door Latch to Door Tube**

**Alignment of Door Tube and Latch Plate to Door Jam**

**Rabbit Latch Bolted to Latch Plate**

**Using Spacers to Shim Latch Bracket to Door Jamb**

**Latch Bracket and Pin Installed**
INSIDE LATCH RELEASE WIRE TO RABBIT LATCH

TORSION BAR INSTALLED IN WINDSHIELD CROSS TUBE

BOLTING DOOR TUBE TO OUTER TORSION BAR ANCHOR

INSIDE LATCH RELEASE WIRE AND BUTTON THROUGH INNER PANEL

INNER PANEL SCREWED TO DOOR TUBE
NOTE USE OF 1/4 INCH THICK SHIMS

SCREWING OUTER PANEL TO INNER PANEL
DOOR LATCH RELEASE HOLE IN OUTER PANEL

DOOR EXTENSION IN POSITION ON FENDER

DOOR OPENING SHOWING 1/2 INCH TO CLEARANCE TO DOOR EXTENSION

FINISHING DOOR ON CAR. NOTE NYLONER FLANGE IS VISIBLE