



INSTRUCTION SHEET

Part Number

375-982

Application: Ghia 1971-1974, Off Road 1956-1979, Standard Beetle 1971-1974, Super Beetle 1971-1974, Thing 1971-1978



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Dual 34mm ICT Carb Kit for Dual Port Type



Tools Needed



Part Includes

- 1 - Gasket set
- 1 - Hardware kit
- 2 - Linkage mounts
- 2 - Carburetors
- 2 - Intake manifolds
- 2 - Air filter assemblies
- 1 - Alum. hex bar
- 1 - Fuel line

Your carburetor(s) comes equipped with the main, air, and idle jets most often used in the kit's particular application. Although it is a bolt-on kit, with the necessary hardware, gaskets, and linkage to install the carburetor(s) onto the desired motor, the carburetor(s) are not jetted engine size specific. Multiple engine displacements, compression, camshafts, ignition, cylinder heads, and many other items such as operating elevation, will affect the overall requirements of the air/fuel ratio and may require additional jetting and tuning.

The following instructions are based on an engine in stock condition. If you have made modifications to your engine, some of the following steps may not apply to your application.

NOTE: ON CARS WITH ORIGINAL FUEL INJECTION, A LOW PRESSURE FUEL PUMP AND CENTRIFUGAL ADVANCE DISTRIBUTOR MUST BE USED. ALL APPLICATIONS WILL BENEFIT FROM USING A CENTRIFUGAL ADVANCE DISTRIBUTOR.

STEP 1.

Remove the vehicle's gas cap.

STEP 2.

Disconnect the battery.

STEP 3.

Remove the stock air filter and attached components.

STEP 4.

Remove the distributor cap and ignition wires. Identify the wires for correct reassembly.

STEP 5.

Disconnect the ignition coil wires and remove the coil and bracket from the fan shroud. Identify the coil wires for correct reassembly.

STEP 6.

Remove the fan belt, pulley nut and pulley from the generator.

STEP 7.

Remove fuel line from the pump to the carburetor. Plug the outlet to prevent leakage.

STEP 8.

Disconnect the throttle cable and electric choke wire/idle cut-off solenoid wire from the carburetor. Insulate the wire connectors to prevent any shorts. These wires will not be reused.



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STEP 9.

Disconnect the stock heat riser tubes.

STEP 10.

Remove the rear engine sheet metal.

STEP 11.

Remove the clamps securing the intake manifold boots. Unbolt and remove the end castings from the heads. Insert a clean rag in the intake ports to prevent dirt and debris from entering the engine.

STEP 12.

Loosen the side bolts on the fan shroud. Remove the manifold center section securing bolt.

STEP 13.

Loosen the generator retaining strap and slide it back toward the shroud. Disconnect the wires from the generator. Identify the wires for correct reassembly.

STEP 14.

Lift the generator and fan shroud enough to remove the intake manifold and carburetor as a complete unit (removal of fan and generator completely will make this step easier on some applications).

STEP 15.

Thoroughly clean the intake mounting surfaces using a gasket scraper.

STEP 16.

Replace the fan shroud and generator in their original position. Replace the generator pulley, nut, and fan belt.

STEP 17.

Replace the rear engine sheet metal and screws.

STEP 18.

Remove the rear fuel pump-mounting nut. If the intake manifold was not previously secured to the engine case, remove the engine case nut directly behind the fuel pump. If the intake manifold was secured to the engine case, the stud to which it was attached must be removed.

NOTE: IF THE CORRECT STUD TOOL IS NOT AVAILABLE, THE "DOUBLE NUT" METHOD CAN BE USED. LOCK TWO NUTS APPROXIMATELY 1/3 OF THE WAY DOWN THE STUD. USING A SUITABLE WRENCH ON THE BOTTOM NUT, REMOVE THE STUD FROM THE FLANGE.

STEP 19.

Place the coil adapter over the rear fuel pump stud and center the slot over the hole directly behind the fuel pump. Reinstall the fuel pump nut and case nut to secure the bracket. (If the case stud was removed, install the M8 x 45mm bolt supplied.) Torque the case nut/bolt to 15ft/lbs.

STEP 20.

Reuse the original screws or use the M6 x 10 bolts and washers supplied to install the coil on the adapter with the wire terminals facing towards the #3 and #4 cylinders. Reconnect the coil wires.

BENCH ASSEMBLY

- Install the studs into the intake manifolds.
- Install the throttle levers and spacers onto carburetors (Figures 2, 3, & 4). Prior to installing throttle lever, inspect throttle shaft spacers on carburetor. The thicker spacer must be between the throttle return spring arm and the newly installed throttle lever. If thicker spacer is not towards the outside position, swap it with the narrower spacer. This will provide ample clearance for the nylock nut that holds the throttle lever spacer on (Figure 4). Install long spacer on left carburetor and shorter spacer on right carburetor. Reinstall throttle shaft nuts on each carburetor. **DO NOT OVER**



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TIGHTEN NUTS, 4-5 FT/LBS MAXIMUM.

- Install the flange gaskets and carburetors onto the manifolds. Secure them in place using the lock washers and nuts from the kit. **DO NOT OVER TIGHTEN THE CARBURETOR HOLD DOWN NUTS, 12-14 FT/LBS MAXIMUM.**
- Slide the center pull-lever and the left and right extension arms onto the hex bar so there is approximately 60 degrees between the centerline of the arms compared to the center pull lever (Figure 1). Install retention hardware onto the parts, but **DO NOT** fully tighten at this time. Install the jam nuts onto the ball-ends and thread the ball-ends into each end of the hex bar.

STEP 21.

Remove the rags from the intake ports and install the manifold gaskets supplied in the kit. Install the left side (driver's side) manifold and carburetor assembly first. Secure the manifold in place using the nuts from the kit. Install the right side (passenger's side) manifold and carburetor in the same manner.

STEP 22.

Reinstall the distributor cap and ignition wires.

STEP 23.

Install the linkage mount on the left side (driver's side) carburetor, using the lockwashers and bolts provided. **NOTE: DO NOT INSTALL THE RIGHT SIDE COMPONENTS AT THIS TIME. DUE TO THE LENGTH REQUIRED FOR THE HEX BAR TO SEAT PROPERLY IN THE BRACKET, THE RIGHT AND LEFT SIDE ASSEMBLY OF PARTS CANNOT BE DONE SIMULTANEOUSLY.**

STEP 24.

Install the self-centering spring inside the left bracket bushing.

STEP 25.

Insert the left hand ball-end of the hex bar assembly into the left bracket bushing and centering spring. Temporarily support to perform next step.

STEP 26.

Install the linkage mount on the right-side carburetor using the lockwashers and bolts provided. Install the centering spring. Unbrace the hex bar and insert the ball-end into the right bracket bushing. **NOTE: THE HEX BAR AND BALL-ENDS HAVE BEEN DESIGNED WITH SUFFICIENT THREAD LENGTH TO ACCOMMODATE CUTTING THE BAR IF NECESSARY OR EXTENDING THE BAR ENDS OUT TO GAIN PROPER INSTALLATION. BAR CAN BE CUT APPROXIMATELY 1" ON EITHER END AND STILL HAVE SUFFICIENT THREAD FOR BALL-END INSTALLATION.**

STEP 27.

Adjust the hex bar ball-ends to achieve a 1/32" clearance between the bushing flange and ball flange. Once the ball-ends are adjusted correctly, lock the jam nuts in place (Figure 2).

STEP 28.

Install the carburetor linkage rods to each of the extension arms on the hex bar and to the spacers on carburetor throttle levers (Figures 2 & 3). **NOTE: LINKAGE RODS, ROD ENDS, AND JAM NUTS ARE LEFT HAND AND RIGHT HAND THREAD TO FACILITATE EASE OF CARBURETOR LINKAGE ADJUSTMENT. GOLD NUTS AND ROD ENDS WITH GROOVE ARE LEFT HAND THREAD.** At this time, tighten rod ends fully at carburetor spacers, set linkage rod length to center of adjustment with jam nuts loose, and fully tighten rod ends at hex bar extension arms. Location of hex bar arms should be positioned so down rods are "centered" vertically. Extension arms (on hex bar) should be fully tighten at this time. **CAUTION: BE SURE CENTER PULL LEVER IS POSITIONED FOR CORRECT THROTTLE CABLE HOOK-UP, AT IDLE AND FULL THROTTLE POSITIONS.** Install carburetor return springs in holes on carburetor arms and linkage mounts. **CHECK THROTTLE OPERATION FOR FREE MOVEMENT. IF THERE IS ANY INDICATIONS OF STICKING OR BINDING, CORRECT AS NECESSARY BEFORE PROCEEDING.**

STEP 29.

Remove the plug from the fuel pump outlet and install the new fuel lines supplied in the kit. **BEFORE STARTING ENGINE TO SYNCHRONIZE THE CARBURETORS, BE SURE CARBURETOR LINKAGE MOVES FREELY AND IGNITION PLUG WIRES HAVE BEEN REPLACED IN PROPER FIRING ORDER.**



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Replace the gas cap and reconnect the battery.

STEP 31.

Start the engine and check for fuel and vacuum leaks. Correct, if necessary, before proceeding.

STEP 32.

Synchronize and set idle mixture as per the special instructions included with this kit.

STEP 33.

After carburetor synchronizing is completed, turn engine off and proceed with throttle cable installation.

STEP 34.

Install the throttle cable trunion and shortner. Align the center pull lever on the hex bar with the throttle cable and tube. Secure it in place by tightening the set screw.

STEP 35.

Position the stock throttle cable next to the shortner and measure the excess cable to be cut.

STEP 36.

Once you have correctly measured the amount of cable in place by tightening down the set screw. **NOTE: WHEN SETTING THE CABLE ADJUSTMENT AT CENTER PULL LEVER, BE SURE TO SET AT "FULL THROTTLE POSITION". THIS MEANS THE ACCELERATOR PEDAL SHOULD BE AT "FULL STOP". THIS WILL KEEP YOU FROM OVER-EXTENDING YOUR CARBURETOR LINKAGE AND THROTTLE SHAFTS.**

STEP 37.

Complete the installation of the air filter assemblies.

STEP 38.

A 90 degree plastic elbow is included in this kit for crank case breather hookup. If desired, you can drill a 9/16" hole into the top of the air cleaner (Do this off the engine!) and install the elbow for breather hose hookup.

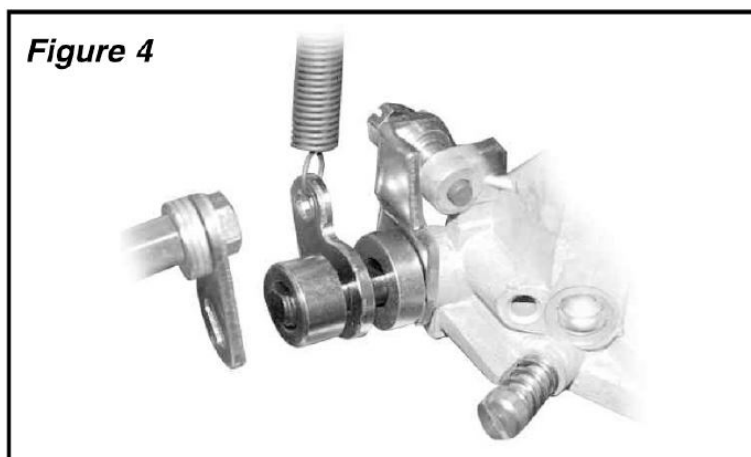
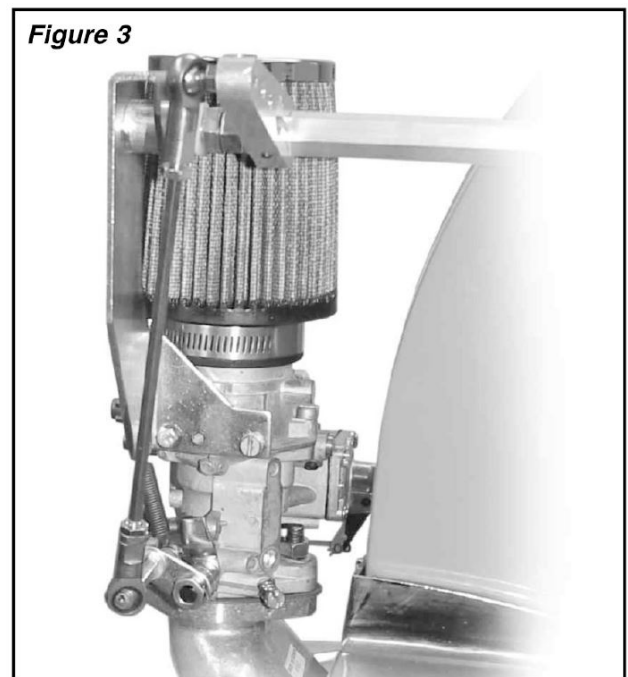
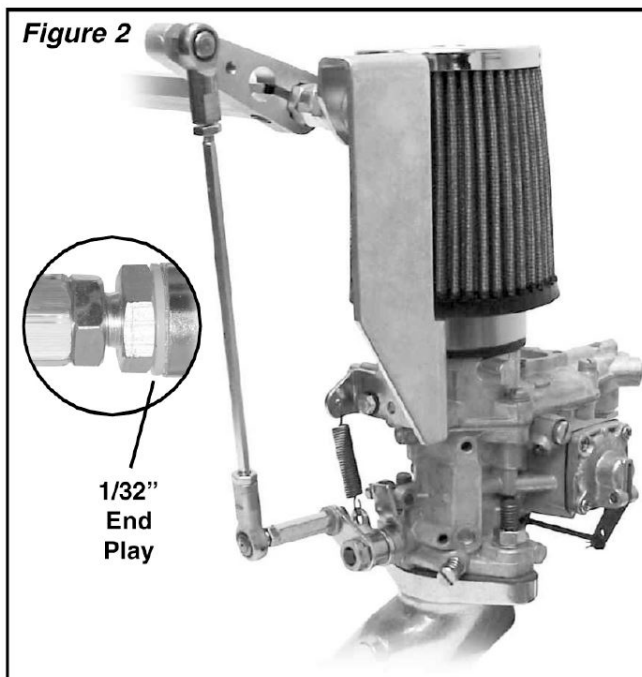
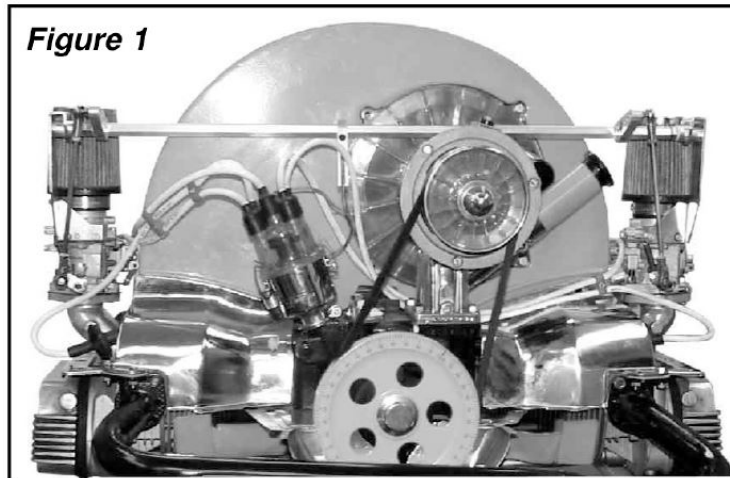
STEP 39.

CHECK FOR ADEQUATE HOOD CLEARANCE BEFORE CLOSING THE HOOD.



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CARBURETOR SYNCHONIZING & IDLE MIXTURE ADJUSTMENT

STEP 1.

Remove the air filter assemblies.

STEP 2.

Disconnect the throttle linkage rods on ALL carburetors.

STEP 3.

Turn "out" (counter clockwise) the idle speed screw, on each carburetor, until the tip of the screw is flush with the casting. Check for binding or sticking of the throttle plates. With the idle speed screw in this position, the throttle plates should be completely closed in the bores. Correct any misalignment or binding BEFORE proceeding.

STEP 4.

Turn "in" (clockwise) the idle speed screw, on each carburetor, until the tip of the screw just touches the carburetor lever. From this "contact" position, turn each idle speed screw exactly one (1) full turn "in". This is your preliminary set point.

STEP 5.

Start the engine. **CAUTION: BE SURE THE LOOSE THROTTLE-RODS ARE NOT INTERFERING WITH OTHER LINKAGE COMPONENTS.**

STEP 6.

To synchronize the carburetors, adjust each idle speed screw until a balanced airflow reading is obtained on the syncrometer.

STEP 7.

After the carburetors are synchronized, reinstall the linkage rods. If the linkage rod length is not correct, the throttle lever position will be affected. To adjust linkage rod length loosen the right and left handed nuts and turn the rod shaft to shorten or lengthen the rod as necessary. **NOTE: WHEN LINKAGE RODS ARE PROPERLY ADJUSTED, THE SYNCROMETER READING WILL REMAIN AS ORIGINALLY SET. WHEN RODS ARE ADJUSTED, LOCK THE ROD NUTS IN PLACE.**

STEP 8.

If idle mixture and idle speed adjustments are not required, turn engine off and remove syncrometer. Replace air filter assemblies and this procedure is complete. If idle speed adjustment is necessary, see next step.

IDLE MIXTURE & IDLE SPEED ADJUSTMENT

This "Lean-Best" idle setting procedure can be used to adjust your carburetor in the absence of an Infrared Exhaust Analyzer. Those with an analyzer can set idle mixture to the engine manufacturer's specification.

STEP 9.

If tachometer is available, install it prior to starting the engine. If a tachometer is not available, set idle mixture "by ear".

STEP 10.

Start engine. Be sure engine is at operating temperature and choke is not engaged.

STEP 11.

Turn "in" (clockwise) the idle mixture screw until the engine RPM begins to fluctuate on the tachometer. (If adjusting "by ear", until a noticeable change in speed is heard.)

STEP 12.

Turn "out" (counter clockwise) the idle mixture screw slowly, until the engine idle speed becomes steady. Try to obtain the leanest setting without affecting the idle speed. If necessary repeat steps 12 and 13 until best setting is achieved. Repeat this procedure for each carburetor. Try to maintain a balanced setting between all carburetors. Example: Each carburetor idle mixture screw should be within 1/4 turn of each other.

**Dual 34mm ICT Carb Kit for Dual Port Type 1****375-982****STEP 13.**

Once the idle mixture has been set, fine tune the idle speed, if necessary, to meet the engine manufacturer's specification using the idle speed screw. Try to keep the adjustment equal on all carburetors.

STEP 14.

Recheck the carburetor synchronization if any idle speed adjustment is made and check the linkage rod position.

STEP 15.

Turn the engine off. Remove tachometer and synchronizer. Replace the air filter assemblies.