

PERFORMANCE CARBURETOR CONVERSION KIT INSTALLATION GUIDE

PART # WK551-34

THIS KIT IS FOR THE FOLLOWING APPLICATIONS:

Jeep Models Originally equipped with the
Carter 2BBL BBD Carburetor 1978-1990

Thank you for purchasing this performance carburetor conversion kit. These kits are designed to enhance the performance of your engine while maintaining both reliability and fuel efficiency.

This installation guide covers vehicle preparation, old carburetor removal, carburetor installation, and new carburetor adjustments. A trouble-shooting guide is supplied.

Before installation please read this guide thoroughly. If you have any questions please call our Toll Free Technical Line at
1 (800) 871-3405.

Please pay extra attention to any items in BOLD FACE TYPE and with a  next to it . This will help to insure an error free installation with optimal vehicle performance.



**THIS CARBURETOR CONVERSION KIT
INCLUDES:
A NEW 34 DGEC CARBURETOR
MANIFOLD BASE ADAPTER
LINKAGE KIT
HARDWARE KIT
CHROME AIR CLEANER**



The Following is a List of the Tools that will be needed to install this conversion kit:

- Socket and Wrench Set
- Allen Key Set 3/16" and 5 mm
- Screwdrivers
- Pliers (needle nose)
- Gasket Scraper
- Wire Brush

The Following is a list of supplies that are needed to install this conversion kit:

- Carburetor Cleaner
- Clean Rags
- Engine Cleaner
- Aluminum Foil
- Tags (these are needed to label hoses etc.)
- Loctite for manifold and base adapter bolts and studs.

The Following is a list of optional items that are very helpful in installing this conversion kit:

- Vacuum Gauge/ Tester
- Fuel Pressure Gauge/ Tester
- Flashlight
- Magnet
- Vehicle Shop Manual

Legal in California only on off road vehicles .

PERFORMANCE CARBURETOR CONVERSION KIT INSTALLATION GUIDE

FOR SAFETY PURPOSES:

- **USE CLAMPS ON ALL FUEL HOSES.**
- **DO NOT USE GASKET SEALERS, USE GASKETS PROVIDED.**
- **WHEN REMOVING OLD CARBURETOR LABEL ALL HOSES AND WIRES.**
- **IF NECESSARY CLEAN ENGINE BEFORE INSTALLATION.**
- **USE LOCTITE ON HARDWARE INSIDE AIR CLEANER AND INTAKE MANIFOLD STUDS.**
- **IF REWIRING IS NEEDED ALWAYS USE AN INSULATED CONNECTOR OR TAP.**
- **NEVER ALLOW DIRT IN THE CARBURETOR.**
- **DO NOT OVERTIGHTEN JETS OR THROTTLE LINKAGE.**
- **NEVER OPERATE THE ENGINE WITHOUT A FUEL FILTER.**
- **DO NOT ALLOW FUEL TO SPILL OR LEAK.**
- **BE CAREFUL NOT TO CUT OR DENT THE ALUMINUM GASKET SURFACES OF THE INTAKE MANIFOLD OR CARBURETOR.**
- **ALWAYS WEAR EYE PROTECTION.**

This section should be completed before you install this Carburetor Conversion Kit.

- Please make sure that the Parts were not damaged in shipment.
- Please check the contents of the kit against the contents listed on page 1.
- If any parts were missing or the parts were damaged in shipping please contact our Tech Department at 1 800 871 3405.
- Replace the fuel filter.
- Verify that the vehicle had a recent tune up and that you do not have any mechanical problems.
- The 34 DGEC Carburetor requires 3.5 p.s.i. of Fuel pressure. If your fuel pressure is more than 3.5 p.s.i, obtain a Fuel Pressure Regulator from your Dealer.
- This carburetor is preset at the Factory.
Only make adjustments to the carburetor after the installation, and running the vehicle for the first time. After the carburetor is installed record the factory settings if needed in the future.
- Make sure that you have the Tools and Supplies available as described on page 1.
- Please save your sales receipt and all carburetor documentation for future reference.

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PERFORMANCE CARBURETOR CONVERSION KIT INSTALLATION GUIDE

REMOVAL OF OLD CARBURETOR

- Remove the Battery's negative cable.
- Take off the original Air Cleaner Assembly.
- Remove the gas cap.
- Remove the Fuel Supply hose that is attached to the carburetor
Label it and temporarily plug it to prevent fuel leaks.
- Remove the Fuel Return hose (if equipped) and plug it.
- Remove and label the vacuum hoses connected to the carburetor.
- Remove and label all of the electrical connectors attached to the carburetor.
Identify the electric choke wire.
- Remove the Float bowl Vent hose and label it.
- Remove and label all electrical and vacuum connections to the
vacuum switching valves and remove them along with the
vacuum manifold.
- Remove the throttle linkage from the carburetor.
- Remove carburetor and all spacers and gaskets from the intake manifold.
Place a clean rag in the intake opening to keep dirt and tools etc. out.



DO NOT FORGET TO REMOVE THE RAG BEFORE INSTALLING THE 34 DGEC CARBURETOR



- Remove the manifold studs from the intake manifold. Double nut each stud to remove.



DOUBLE NUTTING MAY RUIN THE NUTS BUT WILL NOT DAMAGE THE STUDS



- Remove any excess gasket material from intake manifold. You can use a gasket scraper,
wire brush and carburetor cleaner.



DO NOT USE A WIRE WHEEL OR ANY POWER TOOLS AS THEY MAY DAMAGE THE MANIFOLD



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34 DGEC CARBURETOR INSTALLATION

- Remove the adapter plates, gaskets and hardware from the packaging. Please see picture #'s 3 and 4 for order of installation.
- Mount the first adapter and gasket to the intake manifold making sure that the allen head bolts are flush. Mount the top adapter and gasket to the bottom adapter plate. Thread the pcv fitting into the top adapter. The PCV port on the adapter faces the front of the vehicle. Use the 3/8 " hose provided in the kit and connect the hose to the original PCV source. Clamp the hose to the fitting on the adapter with the clamp provided. On some models this is not needed so thread the pipe plug in the adapter kit into the threaded hole. Look at picture #'s 3 and 4 for additional details.
- Install the 34 DGEC Carburetor on the four mounting studs. Attach linkage bracket on the studs of the carburetor that face the Valve Cover. Using a criss-cross pattern tighten evenly.
Fuel Inlet Faces front of Vehicle.  **DO NOT OVERTIGHTEN** 
- At this time check that the linkage is not binding. Hold the choke plates open to make sure that the throttle opens and closes freely.
- (Manual Transmissions Only) Remove the accelerator cable from the bell crank bracket on the intake manifold. Remove the throttle rod that attached to the original carburetor(it will not be used). Mount the accelerator cable into the new bracket that was installed on the carburetor. Attach end of cable to the throttle bracket that is on the carburetor (The ball snap's onto this bracket) Linkage installation is complete.
- For Automatic transmission vehicles please see separate instructions to install linkage (this is in the bag marked for Automatic Transmission vehicles only).
- Locate the fuel inlet pipe (picture # 5) on the carburetor and connect the supply line to it.
- Locate the vacuum advance hose and connect it to the vacuum advance port on the carburetor. (see Picture 1B)
- Locate any open vacuum ports and hoses and plug them. (check local laws)
- Locate the wire for the electric choke and connect it to the electric choke.
- At this point make sure that all hose clamps are tightened and that all of the electrical connectors are connected and insulated.
- Reconnect the Battery's negative cable.
- If you have a 77-78 model you have to remove the vacuum lines that attach to the EGR valve, and the CTO switch. The EGR Valve will not be used.
- On 79-88 models remove the vacuum line that attached to the EGR and the TVC switch (in air cleaner). Plug any open vacuum lines with the plugs supplied in this kit.

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PERFORMANCE CARBURETOR CONVERSION KIT INSTALLATION GUIDE

34 DGEC CARBURETOR INSTALLATION (continued)

- On 77-82 models connect the vacuum advance line to the vacuum source on the 34 DGEC Carb. See pictures 1B for more details. It is not necessary to install a vacuum advance line to the carburetor on models after 1982. This is controlled by manifold vacuum. Plug the vacuum advance port on the 34 DGEC with the plug supplied in the kit.
- Crank Engine without starting and check for fuel leaks.
 **DO NOT GO ANY FURTHER WITHOUT INSPECTING AND FIXING** 
- The air injection system on the 77-82 uses an air pump and is not affected by the installation of the 34 DGEC Carb.
- 83 and later models use a pulse air injection system. To use this with the 34 DGEC Carb you will have to drill two holes in the air filter top and place the two white plastic fittings in the air filter top. The system must receive filtered air. With the hoses and connectors supplied connect the air injection system to the fittings.
- Remove Air cleaner from packaging. Connect plastic breather tube to air filter base and bolt air filter base to carburetor using the four screws provided.
- Attach the breather hose from the valve cover to the air cleaner.
- Put the air filter element on the air filter base and attach the air cleaner top with the clips provided.
- To check the clearance between the hood and air filter, place some crumpled up aluminum foil on the air cleaner top and slowly lower the hood and check clearance.

CARBURETOR ADJUSTMENTS (see pictures for identification of components)

- Only make the adjustments discussed here if necessary.
- To adjust the idle speed make sure that the engine is warm, set the speed to the vehicle manufacturer's setting. To raise the speed turn the idle screw (clockwise) in, and to lower the speed turn the speed screw (counter clockwise) out.
- To adjust the idle mixture turn the idle mixture screw in slowly (clockwise) counting the amount of turns you make until the idle speed drops off. Turn the screw out (counter clockwise) counting the turns until the idle drops off again. Turn the screw back in half the distance that you turned it out. Now the mixture is set.
- To adjust the fast idle make sure that the engine is cold. Press the accelerator pedal to the floor and let go. Start the engine (do not touch the accelerator pedal) once you touch the accelerator after the engine is running the fast idle cam is disengaged. The engine should be running between 2000 and 2500 Rpm's. Turn off the engine. To adjust the fast idle speed turn the fast idle screw in (clockwise) to increase engine RPM, to decrease engine RPM turn the fast idle screw out (counterclockwise) Do not touch the accelerator and restart engine to check RPM.
- The electric choke is pre-set. To adjust the electric choke make sure that the engine is cool (below 68F) Turn the throttle linkage all the way open to set the choke. The plates should be closed. Make a mark on the plastic choke cap and the carburetor where the two surfaces meet. Loosen the three screws one turn. Hold the throttle about one third open and start twisting the thermostat cap (counter clockwise) until the choke plates fully close, then slowly turn the cap 1/8" (you should feel the spring tension in the choke tightening). Retighten the three screws (do not over tighten). You may now have to go back and check the fast idle speed and adjust if necessary.

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TROUBLE SHOOTING GUIDE

In order to properly trouble shoot any suspected carburetor problems please double check the following:

Please read through this Carburetor Installation section.

Go over any item that has **BOLD FACE TYPE** Or has a  next to it.

If the vehicle will not start please check the following:

Check that the fuel pump is functioning properly. Check with pressure gauge.

Make sure that the ignition system is functioning properly.

If the engine idles too fast or too slow or stalls please check the following:

Make sure that you have no vacuum leaks. You should check all engine vacuum line connections and at the carburetor base (including the adapter plates).

Check all Carburetor adjustments. Idle mixture, idle speed, and fast idle. In this order.

If the engine idles fine but acts as if it is running out of fuel when driving please check the following:

If new fuel filter was not installed install one now. The old fuel filter may be clogged.

Check that the fuel pump is functioning properly. Check with pressure gauge.

Check all fuel lines. Make sure that the lines are not pinched or kinked.

Check that the vehicle has not run out of gas.

Check the fuel tank venting system. (Refer to vehicle shop manual)

If the engine runs rough or sounds like it is missing at idle please check the following:

Make sure that you have no vacuum leaks. You should check all engine vacuum line connections and at the carburetor base (including the adapter plates).

Check the idle mixture adjustment.

If you were not able to correct the problem with the information provided above contact your Dealer or call our Toll Free Techline line at 1 800 871-3405.



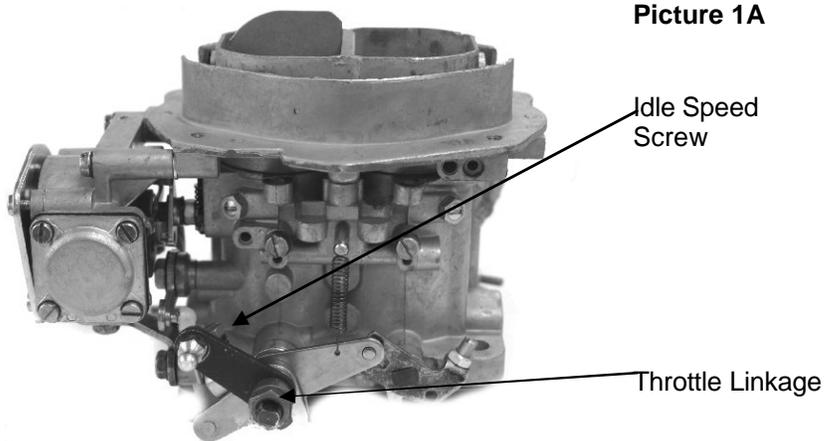
Any additional engine modifications such as Headers, Hi Performance camshafts, and free flow exhaust systems may require that the carburetor be recalibrated.

If this is the case please contact your Dealer or call our Toll Free Techline line at 1 800 871-3405.

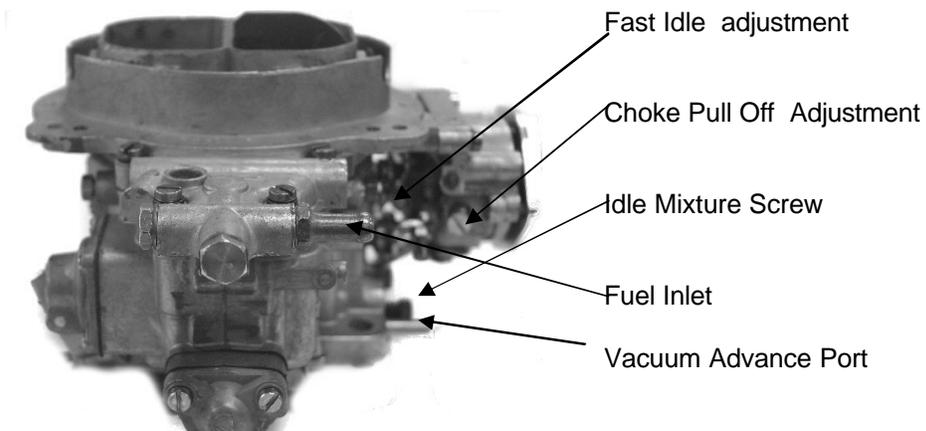
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34 DGEC CARBURETOR

Picture 1A



Picture 2A



PERFORMANCE CARBURETOR CONVERSION KIT INSTALLATION GUIDE

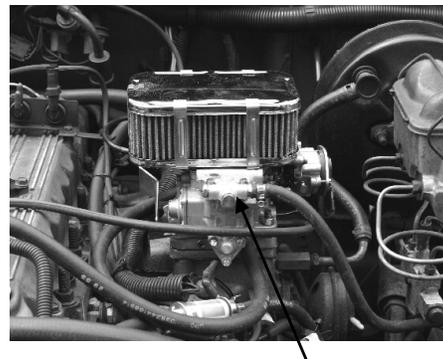
Installation Views on the Vehicle.



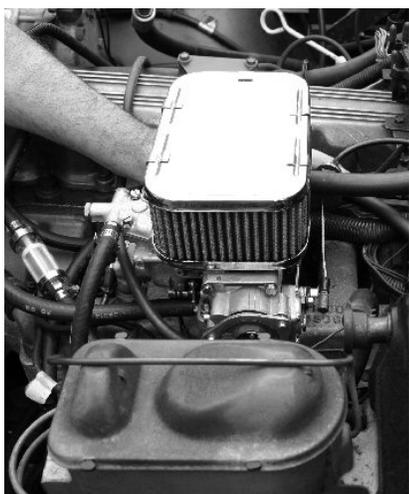
Adapter View 1
Picture 3



Adapter View 2
Picture 4



Fuel Line
Carburetor Mounted on Adapter
Picture 5



Linkage View 1
Picture 6



Linkage View 2
Picture 7



Electric Choke and Idle
Adjustment
Picture 8