WEBER CARBURETOR CONVERSION KIT INSTALLATION GUIDE

PART # WK490 and WK491

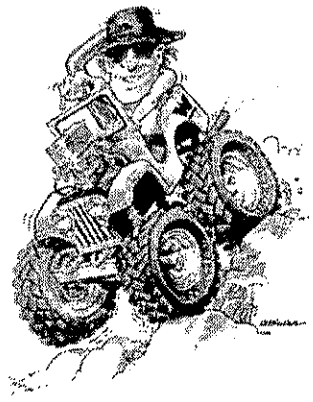
THIS KIT IS FOR THE FOLLOWING APPLICATIONS:

Jeep and GM Models Originally equipped with the
Rochester Varijet 2SE Carburetor 1980-1988

Thank you for purchasing a Weber 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.

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 32/36 DGEV (WK491) or
38 DGES (WK490) CARBURETOR
HARDWARE KIT
AIR FILTER ADADPTER (WK490)
CHROME AIR CLEANER (WK491)



The Following is a List of the Tools that will be needed to install this conversion kit:	The Following is a list of supplies that are needed to install this conversion kit:	The Following is a list of optional items that are very helpful in installing this conversion kit:
• Socket and Wrench Set • Allen Key Set 3/16" and 5 mm • Screwdrivers • Pliers (needle nose) • Gasket Scraper • Wire Brush	• 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. • Electrical Tape	• Vacuum Gauge/ Tester • Fuel Pressure Gauge/ Tester • Flashlight • Magnet • Vehicle Shop Manual • Haynes Weber Book HM393 • HP Weber Book HP774

Legal in California only on off road vehicles.

WEBER 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 Weber 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 your Weber Dealer.
- Replace the fuel filter.
- Verify that the vehicle had a recent tune up and that you do not have any other mechanical problems.
- Weber Carburetors require 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 Weber Dealer.
- Weber Carburetors are 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 use.

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.

WEBER CARBURETOR CONVERSION KIT INSTALLATION GUIDE

REMOVAL OF OLD CARBURETOR

- Remove the Battery's negative cable.
- Remove the gas cap.
- Take off the original Air Cleaner Assembly. It will be reused on the WK490.
- Remove the Fuel Supply hose that is attached to the carburetor.
  Label it and temporarily plug it to prevent fuel leaks. Use two wrenches to remove and be careful not to damage the fuel fitting.
- Remove and label the vacuum and vent hoses from the carburetor. Most applications will have six.
  They are:

Hose #	Hose	Size	Location
1	Fuel Bowl Vent	3/8"	Front of Carburetor (top)
2	PCV	3/8"	Rear of Carburetor **(WK490 ONLY)**
3	Choke Pull Off	5/32"	Rear of Carburetor
4	Vacuum Hose	5/32"	Rear of Carburetor (base)
5	Vacuum Hose	1/4"	Front of Carburetor
6	Vacuum Hose	1/4"	Rear of Carburetor (base)

- Disconnect the throttle linkage from the cable(s). Save all clips and springs. They will be reused.
- Disconnect all electrical connections from the carburetor. Label and identify the wire for the electric choke. This wire will be reused. The TPS, Solenoids and other connecters will not be used with the Weber Conversion.

  MAKE SURE THAT YOU DO NOT HAVE ANY WIRES IN CONTACT WITH ANY GROUNDS.

  TAPE OFF ANY EXPOSED WIRES OR CONNECTERS WITH ELECTRICAL TAPE
- 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 WEBER CARBURETOR
- 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

VACUUM LINE ROUTING

- On the intake manifold locate the 1/4" vacuum hose fitting to the rear of the carburetor base flange. Remove the hose from the fitting. Locate the 1/4" plastic tee from the hardware bag. Install one of the 1 1/4" hoses on the manifold fitting. Take the plastic tee and install one of the double branch fittings on this line. One branch of the tee will point towards the left fender and the other branch vertical. Install the other 1 1/4" hose on the vertical branch of the tee, on the branch that faces the left fender install hose # 6 (this is the 1/4" hose that was removed from the rear of the carburetor base. Locate the 1/4" X 5/32" x 1/4" plastic tee. (continued on next page)

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.

WEBER CARBURETOR CONVERSION KIT INSTALLATION GUIDE

VACUUM LINE ROUTING (continued)

- Install the tee fitting to the 1 1/4" hose to the tee so that the 5/32" leg faces the left fender. Install the 1/4" hose that you removed from the manifold fitting and install it on the vertical branch of the tee fitting. Install the 5/32" hose (vacuum hose #4 removed from rear of carburetor base) to the 5/32" branch.
- Take the vacuum hose that was attached to the choke pull off (Hose # 3) and plug with the vacuum cap supplied.
- Locate the small 3/8" hose. Remove the PCV hose (Hose # 2) from the plastic Y fitting. Replace this hose with the 3/8" hose supplied. **(WK490 ONLY)**

WEBER CARBURETOR INSTALLATION

- Locate the 5/16" fuel line supplied. Cut into two pieces and install the fuel filter between. Clamp off with the clamps supplied.
- Locate and remove the float bowl vent line. (Hose # 1) Replace with the 3/8" hose supplied.
- Remove the rags in the intake and install the base gasket on the intake manifold.
- Install the Weber Carburetor on the four mounting studs. Using a criss-cross pattern tighten evenly. The linkage will face the right side fender. **DO NOT OVERTIGHTEN**
- Locate the original fuel bowl vent hose and attach it to the fitting on the Weber Carb. See picture # 4A and 4B for more details.
- Locate the vacuum advance hose (Hose # 5) and connect it to the vacuum advance port on the carburetor. (see Pictures 1B and 2B)
- 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. Use supplied extension wire if needed.
- Connect all throttle cables and springs to the throttle linkage using the original hardware.
- Locate the 5/16" fuel line and connect it to the Weber fuel inlet and clamp it off with clamp supplied. Route hose on the outside of the oil fill pipe.
- At this point make sure that all hose clamps are tightened and that all of the electrical connectors are connected and insulated.
- Reinstall Gas Cap.
- Reconnect the Battery's negative cable.

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.

WEBER CARBURETOR CONVERSION KIT INSTALLATION GUIDE

WEBER CARBURETOR INSTALLATION (continued)

- Crank Engine without starting and check for fuel leaks.
  DO NOT GO ANY FURTHER WITHOUT INSPECTING AND FIXING
- Place original Air Cleaner assembly on Weber Carburetor. **(WK490 ONLY)**
- 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. **(WK491 ONLY)**
- Attach the breather hose from the valve cover to the air cleaner. **(WK491 ONLY)**
- Put the air filter element on the air filter base and attach the air cleaner top with the clips provided. **(WK491 ONLY)**
- 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. **(WK491 ONLY)**

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 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.

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.

WEBER CARBURETOR CONVERSION KIT INSTALLATION GUIDE

TROUBLE SHOOTING GUIDE

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

Please read through the Weber 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 Weber Dealer

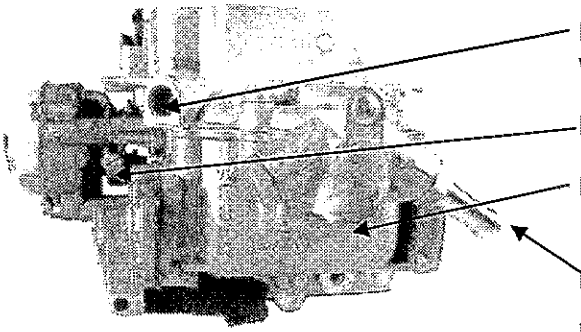
☞ **Any additional engine modifications such as Headers, Hi Performance camshafts, and free flow exhaust systems may require that the carburetor be recalibrated.**

If this is the case please contact your Weber Dealer

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.

WEBER CARBURETOR CONVERSION KIT INSTALLATION GUIDE

32/36 DGEV CARBURETOR



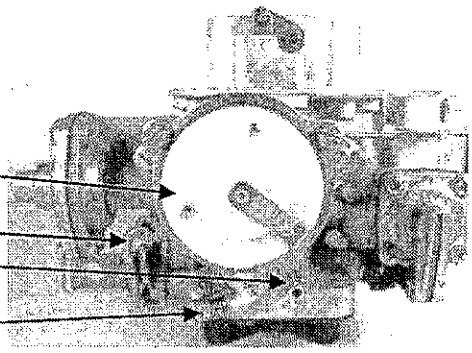
Picture 1A

Float Bowl Vent (shown w/o fitting)

Fast Idle Screw

Fuel Filter Inspection Plug

Fuel Inlet



Electric Choke

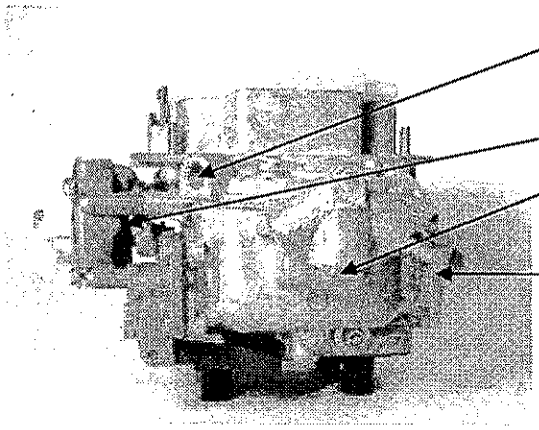
Idle Speed Screw

Vacuum Advance Port

Idle Mixture Screw

Picture 2A

38 DGES CARBURETOR



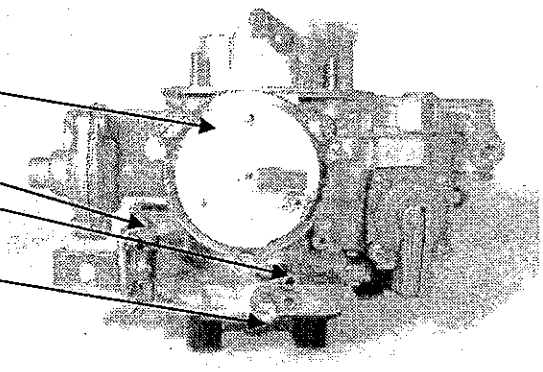
Picture 1B

Float Bowl Vent (shown w/o fitting)

Fast Idle Screw

Fuel Filter Inspection Plug

Fuel Inlet



Electric Choke

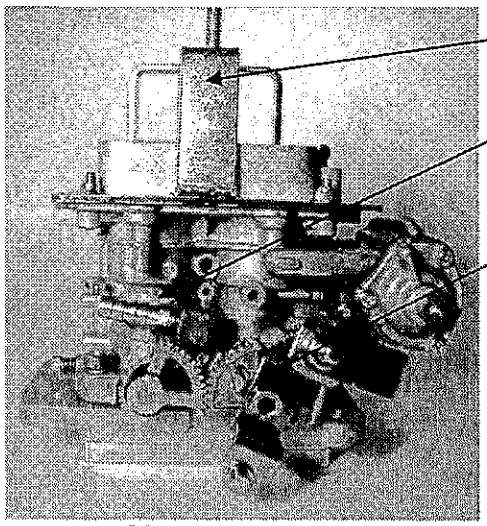
Idle Speed Screw

Vacuum Advance Port

Idle Mixture Screw

Picture 2B

WK490 CARBURETOR



Picture 3A

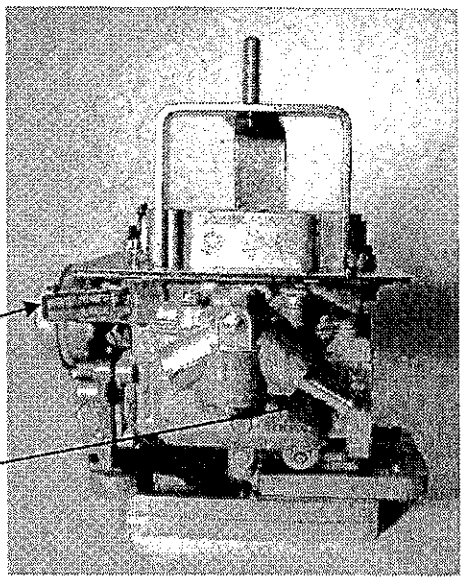
AIR FILTER ADAPTER

PCV FITTING

THROTTLE LINKAGE

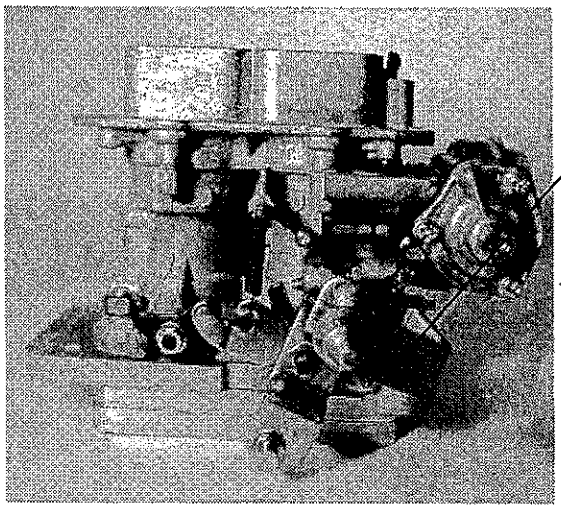
FLOAT BOWL VENT

FUEL SUPPLY FITTING



Picture 4A

WK491 CARBURETOR

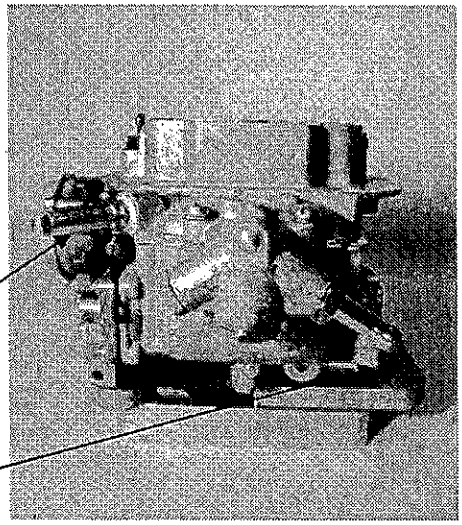


Picture 3B

THROTTLE LINKAGE

FLOAT BOWL VENT

FUEL SUPPLY FITTING



Picture 4B