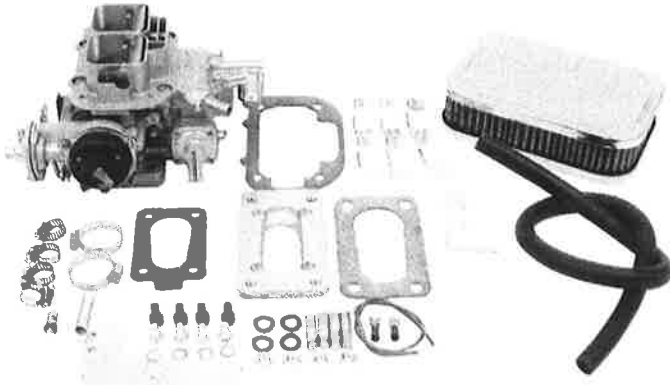




# EMPI CARBURETOR CONVERSION KIT INSTALLATION INSTRUCTIONS

**PART # 47-1624 (EPC 32/36E)**

**(Legal in California only on off-road vehicles)**



**THIS KIT IS FOR THE FOLLOWING APPLICATIONS:**

**\*HONDA CIVIC NON CVCC 1200CC, 1300CC**

EMPI's (EPC) Performance Carburetors conversion kits will enhance the performance of your engine while maintaining reliability and fuel efficiency. The installation instructions cover old carburetor removal, carburetor installation, and new carburetor adjustments. Before installation please read this guide thoroughly.

**\*Honda® and its associated models are registered trademarks of the Honda Corporation.**

The list of tools that will be needed to install this conversion kit are as follows:

- Socket and Wrench Set
- Allen Key Sets SAE & Metric
- Screwdrivers
- Pliers (needle nose)
- Gasket Scraper
- Wire Brush

The list of supplies that are needed to install this conversion kit are as follows:

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

The list of optional items that are very helpful in installing this conversion kit are as follows:

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

## PLEASE FOLLOW THE SUGGESTED SAFETY PRECAUTIONS BELOW:

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

## PLEASE PERFORM THE FOLLOWING STEPS BEFORE INSTALLING YOUR EMPI CONVERSION KIT:

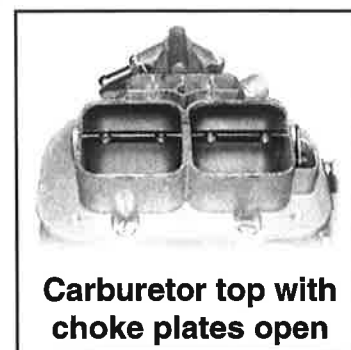
- Replace or clean the fuel filter.
- Verify that the vehicle does not have any mechanical problems.
- EMPI carburetors require 3.5 p.s.i. of fuel pressure. If your fuel pressure is more than 3.5 p.s.i, obtain a fuel pressure regulator from your EMPI dealer.
- The electric choke requires a key 12-Volt source.
- Connect the idle-cutoff solenoid and electric choke to the vehicles existing electric choke power source using a jumper wire.
- EMPI 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.

## REMOVAL OF OLD CARBURETOR

- Remove the Battery's negative cable.
- Take off the original Air Cleaner Assembly.
- 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 the Float bowl Vent hose 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 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. **PLEASE MAKE SURE THE RAG IS REMOVED BEFORE INSTALLING THE EMPI 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.

## EMPI CARBURETOR INSTALLATION

- Remove the adapter plates, gaskets and hardware from the packaging. Please refer to photos on page 4 for order of installation.
- Mount the first adapter and gasket to the intake manifold making sure that the allen head bolts are flush.
- Remove the carburetor from the box, locate the throttle lever and fold back the lock tab and install return spring tab that is supplied with the kit. **DO NOT OVERTIGHTEN THE THROTTLE LEVER LINKAGE.**
- Install the EMPI carburetor on the four mounting studs. Using a criss-cross pattern tighten evenly. Fuel inlet faces the front of the vehicle. **DO NOT OVERTIGHTEN.**
- On vehicles equipped with shaft operated throttle linkage. It is necessary to remove the 12mm throttle lever nut and install the original throttle arm over the existing throttle arm. If the threads on the throttle shaft are too short, you will have to remove and reduce the thickness of the black loose lever bushing by 1/8", reduce the side of the bushing on the carburetor side. When reinstalling the throttle arm on the EMPI carb **DO NOT OVERTIGHTEN.**
- On vehicles equipped with cable operated throttle linkage. Remove the original throttle arm and replace it with the arm supplied in the kit. **DO NOT OVERTIGHTEN.**
- Throttle linkage adjustments (cable or rod): While holding the choke plates open turn the throttle linkage by hand to release the fast idle cam from the screw then release the throttle lever. Adjust the rod or cable until you have some free play. To check for full throttle operation have a helper hold the accelerator pedal to the floor and check the throttle lever by hand for additional travel, you can shorten the cable or lengthen the rod as required to eliminate additional travel. Hold the choke plates open and release the accelerator pedal and check again for any free play. You must have free play in the cable or rod and throttle lever must return to the idle position every time you press on the accelerator pedal.
- If vehicle is equipped with an automatic transmission, make sure that the A/T kickdown cable pulls till it ends when the accelerator is to the floor.
- Locate the fuel inlet pipe (See photos) 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 photos)
- Locate any open vacuum ports and hoses and plug them (Check local laws).
- Locate the wire for the electric choke and connect to the electric choke and use a jumper wire to connect to the idle-cutoff solenoid.
- Please 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.
- Crank engine without starting and check for fuel leaks.
- Remove air cleaner from packaging. Connect plastic breather tube to air filter base then 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.



**Carburetor top with  
choke plates open**

## CARBURETOR ADJUSTMENTS (Refer to photos for identification of components)

- If necessary, make the following adjustments:
- 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.

### **TROUBLE SHOOTING GUIDE (If there is a problem starting the vehicle, please perform the following:)**

#### **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 high or too low, 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.
- Check that the idle cut-off solenoid is working. You can check this by listening for a clicking noise coming from the solenoid when the key is turned on or off.

#### **If the engine 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 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.
- Please remember any additional engine modification may require the carburetor be recalibrated.

### **THROTTLE LEVER INSTALLATION**

1. Remove the stock throttle lever from the Carburetor.
2. Install the throttle lever and components on the carburetor as shown in photos. CAUTION: Do Not Over tighten Nut. Proper tightness can be achieved by installing nut just slightly more than fingertight. After tightening, open choke and check for full throttle operation from idle to wide-open throttle. If any sticking or binding occurs, loosen nut and re-tighten with reduced torque. If excessive torque has been applied, re-centralization of the throttle plate may be necessary. Check operation as above again. When proper tightness of the nut and centralization of the throttle plate have been achieved, secure the nut with the lock tab.
3. Connect the throttle cable to the lever. NOTE: check throttle operation for free movement. If there is any indication of sticking or binding, correct as necessary BEFORE proceeding.

