

# PERFORMANCE CARBURETOR CONVERSION KIT INSTALLATION GUIDE

**PART # WK746-34 and WK752-34 TOYOTA 20R/22R**

THIS KIT IS FOR THE FOLLOWING APPLICATIONS:

PICKUP	20R/22R All Carbureted Models
CELICA	20R/22R All Carbureted Models

Thank you for purchasing a Performance carburetor conversion kit. Our kits are designed to unleash the performance potential of your engine but not at the cost of reliability and fuel Efficiency.

This installation guide covers vehicle preparation, old carburetor removal, carburetor installation, and new carburetor adjustments.

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

**Any items in BOLD FACE TYPE or with a  next to it, Please pay extra attention to. This will help to ensure an error free installation with optimal vehicle operation.**



**THIS CARBURETOR CONVERSION KIT  
INCLUDES:**

**A NEW 34 DGEC CARBURETOR  
MANIFOLD BASE ADAPTER  
HARDWARE/LINKAGE KIT  
CHROME AIR CLEANER**



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

- Metric Socket and Wrench Set
- Metric Allen Key Set
- 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.)

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 racing vehicles which may never be driven on a highway.**

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## 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 Conversion Kit.**

- Please make sure that the Parts were not damaged in shipment.
- Please check the contents of the kit against the picture on page 1.
- If any parts were missing or the parts were damaged in shipping please contact your Dealer.
- Verify that your vehicle had a recent tune up and you do not have any other mechanical problems. The Carburetor can not fix engine, and ignition problems.
- This Carburetor 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 Dealer.
- The electric choke and idle cut-off solenoids require a key hot 12-Volt source.
- Connect the electric choke to the Vehicles existing electric choke power source using a jumper wire.
- 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.
- Please save your sales receipt and all carburetor documentation for future use.

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## 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 and label it.
- Remove the Fuel Return 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 the Float bowl Vent hose and plug it.
- Remove and label all electrical and vacuum connections to the vacuum switching valves and remove them along with the vacuum manifold.
- Remove the PCV hose 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 CARBURETOR**



- Remove the two manifold studs closest to the valve cover 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**





## CARBURETOR INSTALLATION

- Remove the adapter, gaskets and hardware from the packaging. Install the 8mm studs supplied in the hardware kit in place of the two studs that were removed. Install the small plug into the PCV fitting on the bottom of the adapter. When fitting the adapter onto the intake manifold, the PCV fitting will face the Valve cover. Please see pictures at the end of the instruction sheets for more detail. Place the gasket supplied with the adapter plate to the intake manifold and install adapter over the four studs. Tighten down using a criss cross pattern. Install the four studs to the carburetor mounting surface of the adapter with the four studs supplied with the adapter kit. Use loctite on the four studs

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## CARBURETOR INSTALLATION (continued)

- Install the Carburetor on the four mounting studs. Using a criss-cross pattern tighten evenly. Fuel Inlet Faces front of Vehicle.  **DO NOT OVERTIGHTEN** 
- Remove the linkage bracket from the hardware bag. This bracket will be installed on the two Valve cover hold down bolts on the back of the valve cover. Please see picture for details.
- Remove the throttle cable from the existing bracket and linkage and mount the cable in the fork on the new bracket just mounted on the valve cover. Do not tighten the cable until the next step has been completed.
- Attach the cable stop from the hardware kit to the center hole of the new throttle lever  
To attach the cable to the new throttle lever, remove the cable stop from the original throttle cable by cutting the cable as close to the throttle stop as possible. Place the inner cable into the new throttle stop. Tighten the stop screw slowly until cable is secured.
- To adjust the throttle cable have an assistant in the vehicle press down on the accelerator pedal to make sure that full throttle has been achieved. If not reposition the throttle stop on the linkage arm. When full throttle is achieved tighten the throttle cable in the new bracket on the valve cover and double check that the cable is tightened in the throttle stop on the linkage arm.
- When full throttle has been achieved, make sure that there is as little excess cable passing through the throttle stop.
- Locate the fuel inlet pipe (see picture) on the carburetor and connect the supply line to it.
- Using the 3/8" hose supplied, connect the PCV valve and connect the hose to the large Vacuum source below the carburetor adapter. An alternate PCV connection is available on the base of the adapter with the elbow and straight 3/8" pipe fitting included in the hardware bag.
- Locate the vacuum advance hose and connect it to the vacuum advance port on the carburetor. (see picture)
- 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.
- 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.

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## CARBURETOR INSTALLATION (continued)

- Crank Engine without starting and check for fuel leaks.



**DO NOT GO ANY FURTHER WITHOUT INSPECTING AND FIXING**



- 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, with the ½ hose supplied.
- 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 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 set 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 set 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 now back in half the distance that you turned out. Now the mixture is set.
- To set 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 revving 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 choke is Factory set. To adjust 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 to 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 the 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.

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 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.**

 **Also please remember that any additional engine modifications such as Headers, Hi Performance camshafts, free flow exhaust systems may require that the carburetor be recalibrated.**

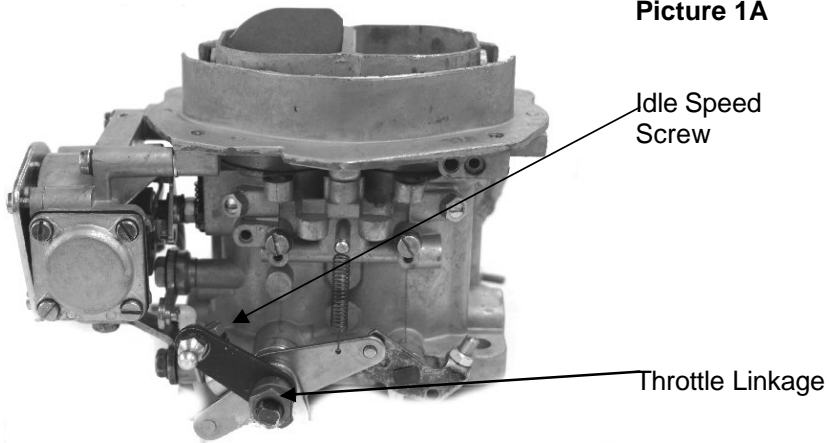
**If this is the case please contact your Dealer or call our Toll Free Techline line at 1 800 871 3405.**

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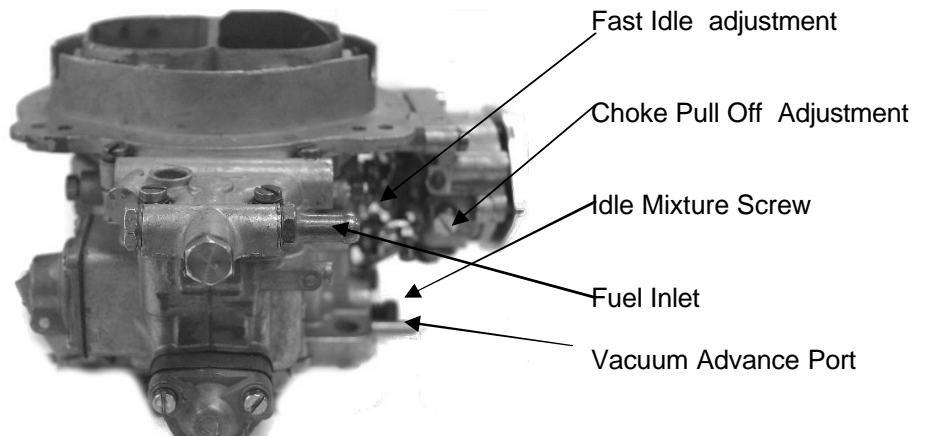
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## 34 DGEC CARBURETOR

Picture 1A



Picture 2A

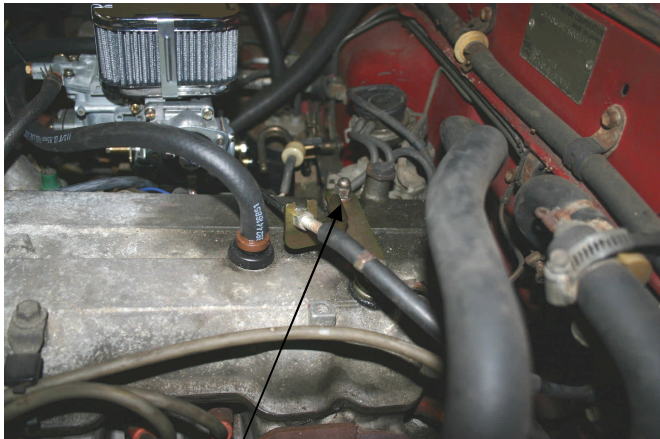


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Installed on Vehicle

Installation Views on the Vehicle.



Linkage Bracket Installed



Breather Hose

PCV Hose



# PERFORMANCE CARBURETOR CONVERSION KIT INSTALLATION GUIDE



Linkage Bracket

Throttle Arm



Vacuum Advance

Idle Mixture Screw

Electric Choke