Typical Install Instructions

WEBER CARBURETORS Distributed by REDLINE

America's premier distributor of Genuine WEBER Carburetors for over 30 years

Read & understand all steps of these instructions before beginning this installation.

Kit is for off-road use, not for use on the highways, or in California.

WEBER Conversion Kit K675 / K675-38 by REDLINE

Mazda Pick-up B2000 84-87 replacing a MIKUNI carb.

Using Weber 32/36 DGEV or 38 DGES

These instructions are intended as a general guide for installation.
Certain steps may vary slightly for different vehicles.

Jetting Specifications

Jetting specifications of carburetors supplied in kits may vary slightly, and will always be correct for the intended application.

Tools Needed

Combination, box or open-end wrenches
Socket set
Screwdrivers (regular and Phillips)
Pliers
6mm Allen wrench
Gasket scraper, Knife
Wiping rags, Cleaning solvent
Gasket sealer

Parts Supplied with Installation Kit

Weber 32/36 DGEV or 38 DGES
Carburetor adapter
Hardware kit
Cable Bracket
Chrome air filter

TUNE – UP SPECIFICATIONS

All engine tune-up specifications for the Weber Carburetor remain the same as those specified by the factory for the original unit. A suitable qualified dealer or independent garage, using infrared gas analyzing equipment, should carry out emission tune-up.

NOTE: Late model vehicles fitted with Emission Control Systems have many vacuum lines and electrical connections in their fuel systems. It is essential when dismantling, that **disconnected lines be identified with a number tag or label system**. Establish function of any device reconnected or disconnected.

RECOMMENDED ADDITIONAL PARTS

1. It is recommended to obtain a new fuel filter and install it when installing this kit.
2. Many late model vehicles use a high-pressure fuel system. The WEBER only requires **3 lbs Maximum**. For aggressive driving or off road use, **REDLINE** recommends the float height of 18mm from the gasket to top of plastic float, DO NOT depress the ball and spring in the needle valve, then set the float drop to 2mm needle travel. Use a fuel pressure regulator #31800.063, adjusted to 2 lbs. for more stable fuel and float control.

Universal Disassembly

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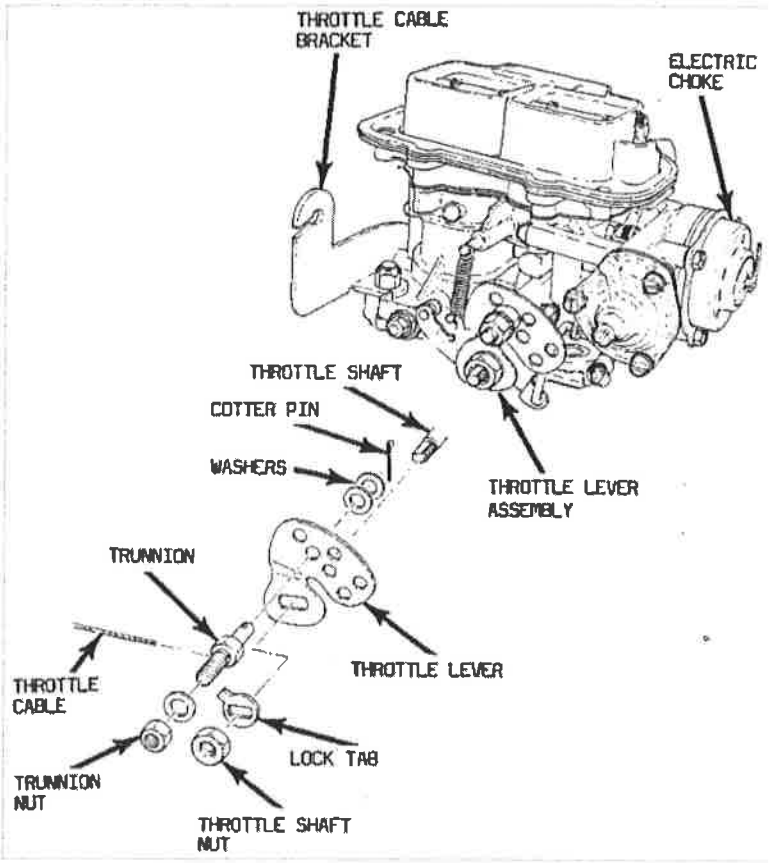
1. Disconnect battery.
2. Remove the gas cap.
3. Using the map inside the engine compartment, or the factory service manual tag.each hose, vacuum line and electrical connector attached to the original carburetor and air filter.
4. Remove factory air filter assembly and all attaching hardware and hoses.
5. Remove factory vacuum lines from carburetor.
6. Remove the fuel line and plug to prevent leakage.
7. Disconnect the throttle cable from the throttle lever and the cable bracket. Vehicles equipped with cruise control should remove the additional cable.
8. Locate the choke wire, measure 1" back from the choke and cut the wire. Install the supplied female adapter to the long piece of wire.
9. Loosen the carburetor mounting nuts, and remove the stock carburetor and spacer. Insert shop towel into manifold opening before cleaning carburetor mounting surface. Clean carburetor mounting surface.
10. Remove the dash-pot assembly from side of intake manifold along with the 3 hoses for connected to the high altitude compensator and plug at source.
11. Remove the carburetor mounting studs from the intake manifold using the double nut method, by installing 2 nuts half way down the stud lock them together to remove turn lower nut to install use upper nut.
12. Clean the intake manifold surface thoroughly.



Bench assembly

Install the new REDLINE lever on the carburetor.
CAUTION: Do not over tighten throttle shaft nut. Proper tightness can be achieved by installing nut just slightly more than finger-tight (finger tight then one more flat of the nut) and bend lock tab. After tightening, open choke and check for full throttle operation from idle stop 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. This may require loosening nut and rapping on the end of the shaft with a small plastic mallet or a screwdriver handle (We are not driving nails here firm, but not abusive).

Universal Reassembly

Reassembly

13. Remove rag from manifold opening. Install the carburetor adaptor as follows; (Use Loctite on all bolts and studs during installation of adaptor.)
    a. Coat the manifold base gasket with a suitable gasket sealer and position the gasket on the manifold. Apply Loctite to the 8mm Allen bolts and secure the bottom half of the adapter and tighten in a criss-cross pattern to 12 Ft/Lbs.

    b. Coat the intermediate gasket with sealant and position the gasket on the adapter apply Loctite to the 6mm Allen bolts and secure the top adapter half to the bottom.

    c. Apply Loctite to the 8mm studs and install the studs into the manifold adapter, ensuring that the studs go no further then flush with the bottom of the top adapter half.

14. Install the carburetor with gasket to the adapter with the linkage toward the firewall.

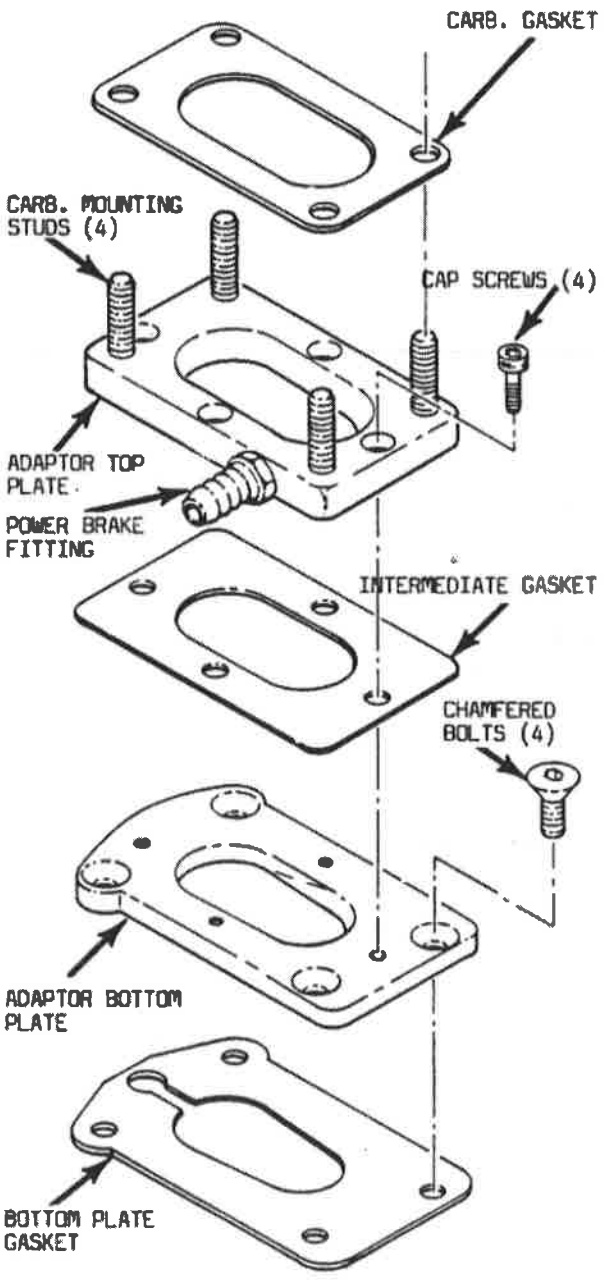
15. Slide the supplied throttle cable bracket over the two adapter studs closet to the valve cover.

16. Using the nuts 13mm and washers supplied, secure the carburetor to the adapter, and then tighten in a criss-cross manner. The original 12mm head nuts work the best.

17. Install the original throttle cable onto the bracket and adjust the cable at the bracket so full throttle can be achieved, and the throttle returns fully to the idle position. (Choke plates should be held open to bypass the idle kick up of choke linkage.)

18. Connect the throttle cable bracket to the valve cover and connect the throttle cable to the linkage. Check for full throttle position and free throttle movement. If there is any throttle bind, correct the problem before proceeding.

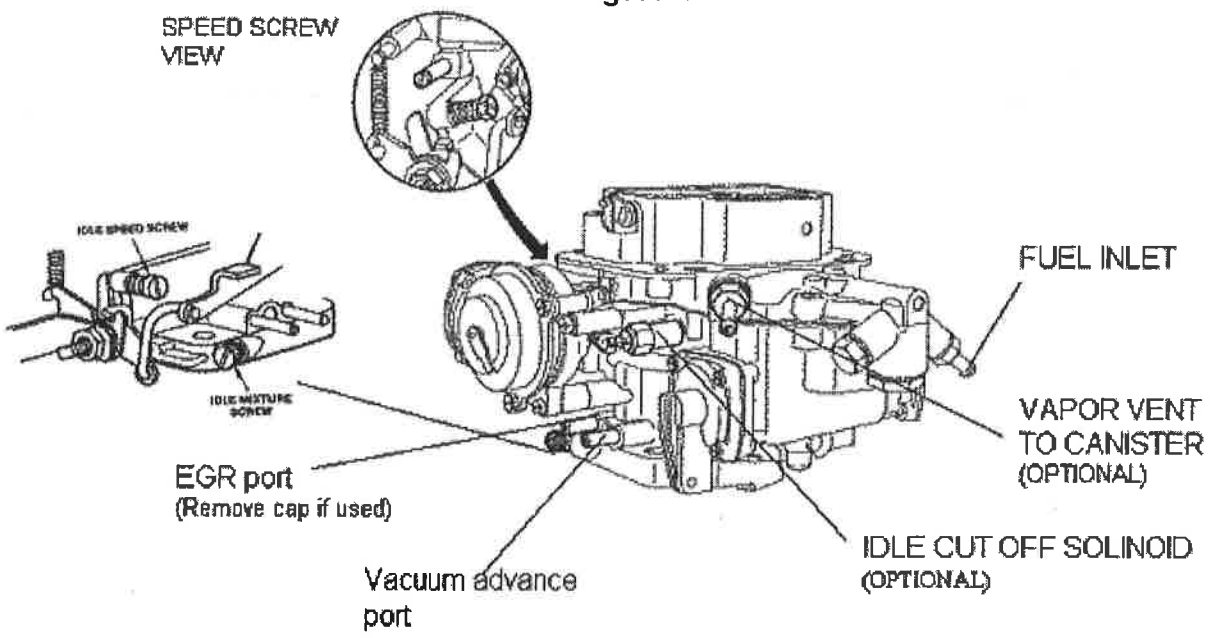
19. Mount return spring tab supplied in kit to the rearmost EGR bolt hole on the manifold. Attach the return spring between the tab and the hole on the underside of the throttle cable lever.



20. Using figure 2 as a guide connect the following vacuum lines.
    a. Original distributor vacuum advance hose to the Vacuum advance port
    b. Original canister purge hose to from the thermal valve located on the bottom of the intake manifold to the EGR port on the carburetor.
21. Connect the original choke wire with female plug to the choke.
22. Connect the fuel line from the pump to the carburetor with the supplied hose.
23. The vacuum hose that went to the thermo valve (underneath the manifold, has two vacuum ports at an angle) now goes to the EGR port on the Weber carburetor (see Fig 2). This vacuum source on the carburetor must have the little brass screw removed, "IF" you are going to use the EGR valve.
24. Re-connect battery and replace the fuel cap.
25. START ENGINE
    a. Check for vacuum leaks around the carburetor-mounting base and correct as necessary. Use spray can of carburetor cleaner with hose attachment to isolate a leak, by spraying around carburetor mounting base. If any of the spray is entering the induction system, the idle speed will change. Note: Some leakage at the throttle shaft is expected
    b. If engine has poor idle, or will not idle at all, shut engine off and re-set idle by setting the Idle Speed Screw to 1 ½ turns in maximum after contact with the throttle lever. The Mixture Screw after lightly seating it, comes out 2 turns. See tuning procedure page 5 & 6.
26. STOP ENGINE
    a. To install air filter assembly remove the four studs in the carburetor flange. Install the gasket and use the appropriate bolts or nuts (supplied with air filter) to secure to the carburetor. Connect new valve cover vent line using hose and clamps.

27. Check for adequate hood clearance before closing hood.

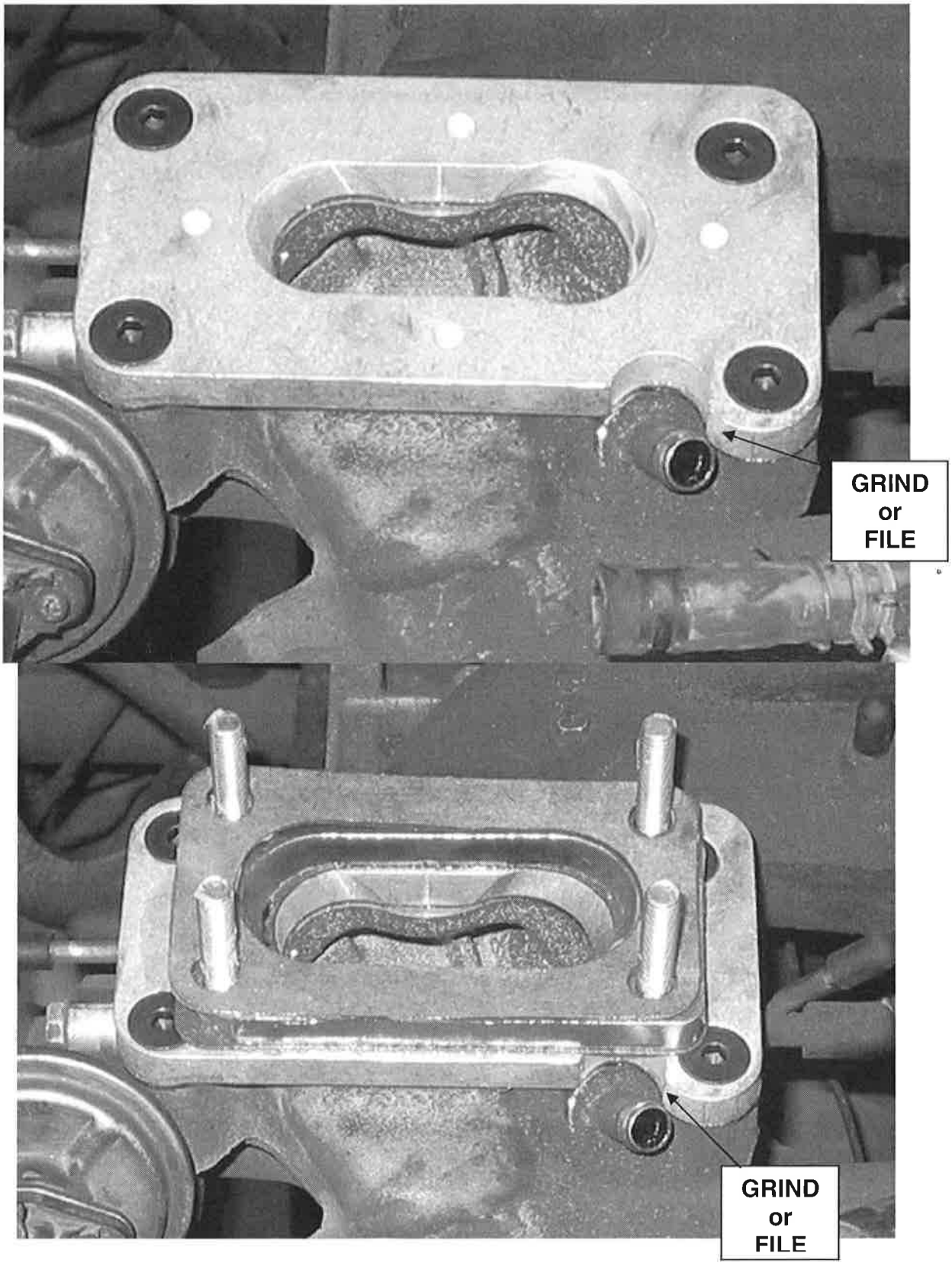
Figure 2



WEBER Model DGV/DGEV FAST IDLE ADJUSTMENT

With the engine warmed up and turned OFF, open the throttle and manually engage the choke plates (butterflies). Release the throttle, and then release the choke plates. The fast idle cam should now be activated and the fast idle speed screw should be positioned on the cam shoulder. Start the engine **DO NOT DEPRESS THE THROTTLE PEDAL OR THE CHOKE WILL BECOME INOPERATIVE.** To adjust the fast idle speed screw "in" (clockwise) to increase speed and "out" (counterclockwise) to decrease the speed.

Bottom Plate Modifications
99004.675



32/36 Progressive

Lean Best Idle Adjustment

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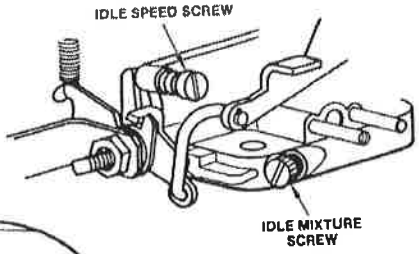
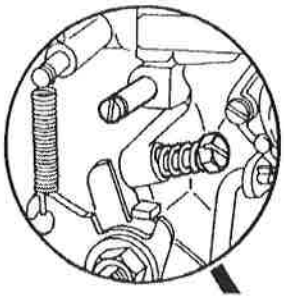
Base line Settings
Speed Screw: **11/2 turns MAXIMUM**
Mixture Screw 1 ½ turns out
Your settings with engine running
Speed Screw _____
Mixture Screw _____





It is important to verify all linkage and levers are installed without binding and the linkage opens to full throttle and closes to the Idle Speed Screw. The number one and two reasons for tuning errors are improper linkage installations and over tightened linkage nut, causing a binding in the linkage assembly.

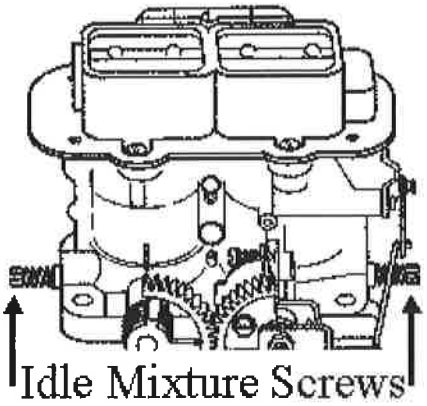
All settings are done with engine warmed up so that the choke is fully opened and disengaged.

1. Back out the Idle Speed Screw until it does not touch the throttle lever. Cycle or Snap the linkage again to be sure that the linkage and lever comes to complete close. (Checking for linkage bind) Turn in the idle speed screw until it contacts the throttle lever, and then continue to turn the idle speed screw in 1 1/2-turn maximum.
2. Set the Idle Mixture Screw by turning it in until it **lightly** seats. Then back out the mixture screw 2 full turns out. **DO NOT FORCE THE MIXTURE SCREW, AS THIS WILL CAUSE DAMAGE TO THE SCREW AND Its SEAT IN THE BODY OF CARBURETOR.**
3. * With the engine at operating temperature, choke fully open and engine running, turn in the mixture screw until the engine starts to run worse, then back out the screw (recommend ¼ turn at a time) until the engine picks up speed and/or begins to smooth out. Back out 1/4 turn more, or until the screw does nothing or runs worse then turn back to the point where it ran its best. We are looking for the Lean Best Idle or the "sweet spot".
4. Recheck timing and vacuum hook ups. Then, recheck mixture screws to lean best idle again. If all is still the sweet, best and smoothest idle then confirm and note the final settings.
5. If the mixture screw is out more than 2 turns, then the idle jet is too lean (too small). If the mixture screw is out 1 1/4 of a turn or less, then the idle jet is too rich (too large).

   These assumptions are based on the fact that the Idle Speed Screw is not more than 1 1/2 turns in. If the Idle Speed Screw has to be opened more than 1 1/2 turns then this is also an indication of a lean condition usually requiring jet change. "At times" it may appear to be showing signs of richness or flooding this could also be the float level is too high, 18mm from gasket surface to the tip of the float, and, check the fuel pressure, MAX. 3 PSI, **USE** a pressure regulator #31800.063!

CARBURETOR SET UP AND LEAN BEST IDLE ADJUSTMENT

Base line Settings
Speed Screw: **1/2 turn MAXIMUM**
Mixture Screws 1 turn out
Final Settings Engine Running
Mixture _____
Speed _____



It is important to verify all linkage and levers are installed without binding and the linkage opens to full throttle and closes to the Idle Speed Screw. The number one and two reasons for tuning errors are improper linkage installations and over tightened linkage nut, causing a binding in linkage assembly.

CALIBRATIONS MAY VARY DUE TO REGIONAL FUELS AND STATE OF ENGINE TUNE AND PERFORMANCE. POOR RUNNING DOES NOT ALWAYS MEAN A BAD OR POORLY ADJUSTED CARBURETOR. AN ADVANTAGE OF THE WEBER CARBURETOR IS ITS EASE OF ADJUSTMENT AND TUNING.

SET UP ADJUSTMENTS

1. Start set up by confirming carb base line settings. Do not depend on the existing settings.
2. All settings are done with choke disengaged and warmed up so that the choke is fully opened and disengaged. This is done on automatic choke carburetors by first opening the choke butterfly by hand and inserting a wood block or wedge of some kind to hold open while the linkage is cycled (linkage operated through its full movement) to clear the choke cam. (You will hear a metallic click as the choke cam is released. You can check the choke fast Idle screw under the choke assembly to confirm that it is not in contact with the choke fast idle cam.)
3. Set the Idle Speed Screw by backing out the Idle Speed Screw until it is not in contact with the throttle stop lever. Cycle or Snap the linkage again to be sure that the linkage comes to close without any assistance. (Checking for linkage bind) Now bring screw back into contact with the lever and continue to open or screwing in, no more than 1/2 turn in, maximum.
4. Set the mixture screws by turning each screw in until it lightly seats. **DO NOT FORCE OR BIND AS THIS WILL CAUSE DAMAGE TO THE SCREW AND IT'S SEAT IN THE BODY OF CARBURETOR.** Back out the screw 1 full turn.

TUNING:

1. BE SURE TO FOLLOW THE NEXT INSTRUCTIONS IN THE PROPER SEQUENCE, DEVIATION WILL CAUSE THE CARBURETOR TO NOT FUNCTION TO ITS IDEAL SPECIFICATIONS AND MAY NOT PROVIDE THE PERFORMANCE AND FUEL ECONOMY AS DESIGNED.
2. Start the engine, the engine will run very slowly more like a tractor. As long as the engine stays running the idle speed is not important at this point.
3. The first thing is to set the Idle mixture screw to lean best idle setting , do not set "up" the idle speed. First, turn in the mixture screw until the engine dies or runs worse, then back out the screw (recommend turning ¼ at a time). The engine should pick up speed and begin to smooth out. Back out 1/4 turn more, or until the screw does nothing or runs worse then turn back to the point where it ran its best.

4. Use your ear, not a scope or tuning instruments at this point. You want to tune the engine by sound. Adjust to best, fastest and smoothest running point.
5. Now that the mixture screw is at its best running location, you can adjust the idle speed the screw. The idle speed screw will be sensitive and should only take ¼ turn to achieve the idle speed you like.
6. Check and set idle to your driving preference. Put the car in gear and apply slight load, (AC on) and set the Idle as you like it. Don't set it too high, (more than ¾ turn in is TOO much) as this will cause causes excessive clutch and brake wear. The Idle only needs to be 650 to 800 RPM with light load or AC on.
7. Recheck timing and vacuum hook ups. Recheck mixture screw to lean best idle again. If all is still best and smoothest idle then confirm and note the final settings.
8. To confirm settings with the engine running. Start by screwing in the mixture screw and count the number of turns it takes to bottom out and note if the engine dies. If Idle Mixture screws are with in ½ turn of base line setting then all is well. Also check the speed screw and note how many total turns from initial contact. You may have opened (turned in) the speed screw. Your final setting should be under 3/4 turn in. Reset the screws (back in) to the best final settings (Per your notes) and go on a test drive. If the settings are other than described then you may want to recalibrate the Idle circuit (low speed circuit) to your engines needs. This is done by following the rule of thumb BELOW.

Simple Rules for low speed calibration
If the mixture screw is more than 11/2 turns out turns then the idle jet is too lean (too small). When the mixture screw is ½ turn or less, then the idle jet is too rich (too large). These assumptions are based on the fact that the speed screw setting is not opened more than 1/2 turn in. If the speed screw has to be opened1/2 or more turns then this is also an indication of a lean condition usually requiring greater change. At times it may appear to be showing signs of richness or flooding it is really a lean condition. Please understand the need to keep throttle plate as near to closed as possible so as not to prematurely expose the transition holes. This is what causes the visible rich condition, and confirms the need to increase the jet size. JET KITS are available if needed.
EXAMPLE: With the idle speed screw set at **no more than 1/2 turn in** after contact with the stop lever; and the best idle occurring with the idle mixture screw set at 1 1/2 turns from lightly seating, indicates the need for a larger Idle jet. Achieving the best idle at less than 1/2 turn indicates the need for a smaller idle jet.

Technical Support

We offer free **technical support service** for the first 90 days after your purchase of this conversion kit. Provide us with the, kit part number and the production code on the label on the outside of the box.

Additional assistance for special performance tuning AND **non-warranty service** is available **for a fee,** based on each problem resolution and the service charge will be confirmed at the time of the call, if applicable.

All Warranty and technical assistance is provided through the manufacture, REDLINE.
No part will be credited or exchanged through the retailer.

ALL technical support and warranty issues will be handled through the manufacture REDLINE @ 1-800-733-2277 ext 7457.

Progression Hole's Throttle Plate Adjustment Diagram

REDLINE FUEL MANAGEMENT

SPECIAL NOTE:

The following describes the importance of having the Throttle Plate(s) below the fuel enrichening progression holes that are drilled in the throat of the carburetor.

Progressive Carburetors: 32/36, DGV, DGAV, DGEV, DFAV, DFEV etc.
Shown in Figure "A", the idle speed screw **isn't** turned in more than 1 ½ turns. The throttle plate (F) is below the enrichening progression holes (2), the carburetor would be at "curb" idle.
Also, there would be zero vacuum at the distributor "ported" vacuum source.

Shown in Figure "B", the idle speed screw **IS** more than 1 ½ turns in. The throttle plate **IS** exposing the enrichening progression holes. Also, you would have vacuum at the distributor "ported" vacuum source. The extra fuel at curb idle, from the exposed enrichening holes, is 95% of the tuning problems we experience. The Idle Speed Screw **CAN NOT** be turned in more than 1 ½ turns MAXIMUM, or, you will experience a rich idle condition, a stumble of idle and at around 1800 RPM.

Synchronized Carburetors: 38-DGES, IDF, IDA, DCOE, DCNF etc.
Shown in Figure "A", the idle speed screw **isn't** turned in more than a ½ turn. The throttle plate (F) is below the progression holes (2), the carburetor would be at "curb" idle. There is not a distributor "ported" vacuum source with these carburetors.

Shown in Figure "B", the idle speed screw **IS** more than a ½ turn in. The throttle plate **IS** exposing the enrichening progression holes. The extra fuel at curb idle, from the exposed enrichening holes, is 95% of the tuning problems we experience. The Idle Speed Screw **CAN NOT** be turned in more than ½ turn MAXIMUM, or, you will experience rich idle condition, a stumble off idle and at around 1800 RPM.

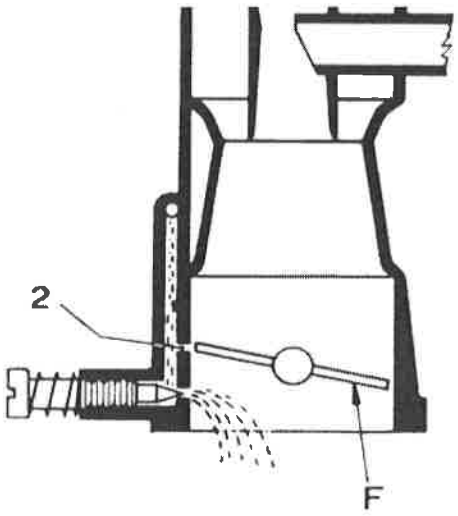


Figure A
Correct Throttle Position

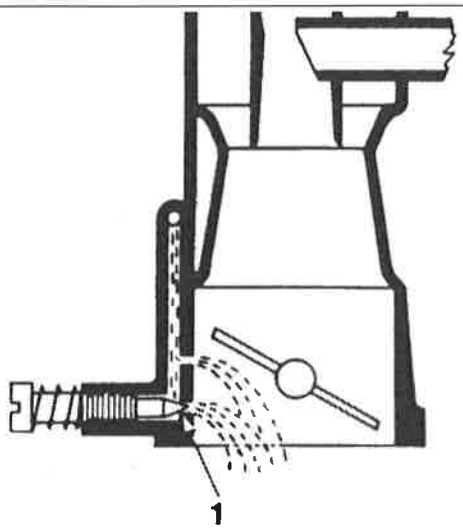


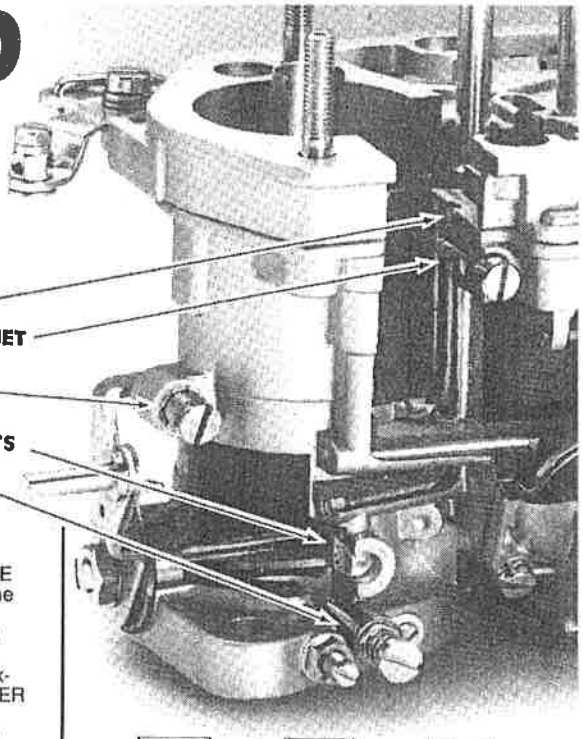
Figure B
Enrichening Holes **Exposed**

WEBER 2

TECH SERIES

LOW SPEED CIRCUIT

"Where Performance Begins"



WEBER Carburetors are smart. Unlike any other in the world. A WEBER can be fine tuned to perform almost any way you want. Try tuning a WEBER like other carburetors—it generally won't react the way you expect. So in order to gain the most performance, power and overall efficiency—understanding the difference is vital.

55 MPH CRUISE AT IDLE!

WEBERs are really two carburetors in one. Each independently covers their part of the operating range. Even though the first is naturally called the "IDLE CIRCUIT"—in a WEBER it is actually the LOW SPEED CIRCUIT and controls a very broad range of performance. It's also the most important difference. Other carburetors are designed to rush into the high speed circuit. WEBER thinks this approach wastes fuel and is less manageable. WEBERs are designed to efficiently operate in the LOW SPEED CIRCUIT until the engine really needs high volumes of fuel. It is this precise management of fuel and air, at critical RPMs, that promotes the exceptional throttle response and fuel economy associated with a properly tuned WEBER carburetor.

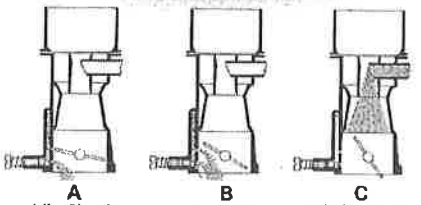
WHEN IS A MIXTURE SCREW NOT A MIXTURE SCREW?

Until they're WEBER-WISE most mechanics will swear our IDLE VOLUME ADJUSTING SCREW is the same as the familiar air bleed/mixture screw found on other types of carburetors. It's a natural misunderstanding. They almost look the same. Our IDLE SPEED FUEL JET is also mistaken for a simple air bleed. It is in fact the heart of the WEBER LOW SPEED CIRCUIT—a changeable mini jet, air bleed and emulsion tube that precisely premixes fuel and air. The IDLE VOLUME SCREW actually distributes the premixed fuel/air mixture to the engine. Other carburetors rely totally on coarse threaded adjuster screws that open the butterflies to control idle speed and mixture. Only the tapered edge of the WEBER IDLE VOLUME SCREW gives your customers virnier-like management of complete mixture and engine speed.

Idle Speed Fuel Jet

TRANSITION: SLOTS AND BIG HOLES—GREAT PERFORMANCE DO NOT MAKE!

Instead of a slot or indiscriminately placed progression holes, WEBER chooses closely defined TRANSITION PORTS positioned in the lower part of the throttle bore to ensure smooth engine operation during throttle opening stages. Most manufacturers that mass-produce carburetors today use slots or several large holes because they can be easily cast into the carburetor. It seems they are willing to let your customers pay the price of reduced performance for their convenience. We're not. Our TRANSITION PORTS are precisely located and individually positioned in a fully machined bore. Port location is critical. The ports must correspond to the exact position of throttle plate's beveled edge. There is absolutely no room for sloppy manfacturing of the WEBER carburetor. The construction process often requires extra steps—but we believe the results are incredibly important to those that demand uncompromised performance.



A — Idle Circuit operation

B — Transition Stage

C — Priming of the main circuit/idle circuit cut-off

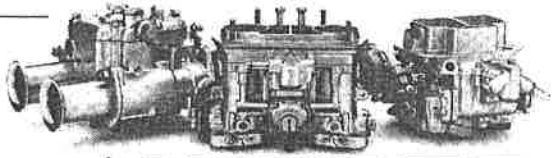
COPIES DON'T WORK AS WELL AS THE ORIGINALS!

It's been more than 70 years since WEBER developed the criteria for many of the now popular carburetor styles. In some cases with our blessing, a number of companies make their own version of the original design. Either because of mass production techniques or difference in basic philosophy—the WEBER carburetor is the clear performance choice in open racing competition and specific street applications.

Legal in California for racing vehicles which may never be used upon the highway.

WEBERS ARE FOR WINNERS!

You can bet WEBER-WISE Champions like "Mike Gillman, Ivan Stewart and the TOYOTA RACING TEAM" understand and rely on the WEBER attention to detail and subtlety of design. WEBER...the overwhelming performance choice of winning racing teams—worldwide!



WEBER

Carburetor & Fuel Injection Specialists

Trouble shooting guide

This guide in intended for diagnostic purpose only. Specific procedures and adjustments should be obtained from factory service manuals or the carburetor specification sheet.

Every REDLINE Conversion Kit is thoroughly tested at the factory and meets high quality and performance standards.

Since other engine components problems affect the performance of the carburetor it is strongly recommended to perform the general engine checks of this guide BEFORE making any carburetor adjustments.

GENERAL ENGINE CHECKS

IGNITION SYSTEM
1. Cracked, broken wires
2. Incorrect ignition wire location (firing order)
3. Timing improperly adjusted
4. Distributor cap cracked, arcing
5. Low coil output
6. Corroded plug terminals
7. Incorrect vacuum advance hose connection
8. Points corroded, wrong gap
9. Incorrect spark gap

EMISSION SYSTEM
1. Cracked, loose vacuum hoses
2. Improper vacuum hose connections
3. Faulty EGR valve operation
4. Air pump diverter valve anti-backfire valve faulty
5. Faulty PCV valve operation
6. Dirty breather filters (Charcoal canister, Valve cover breather, PCV filter inside air filter assembly)
7. Faulty feedback system operation
8. Vacuum delay valves (switches) faulty

FUEL SUPPLY SYSTEM
1. Dirty fuel filter
2. Incorrect fuel pump pressure (1.5 – 3.5)
3. Restricted, kinked fuel lines
4. Fuel lines in contact with hot surface
5. Contaminated fuel

SPARK PLUG ANALYSIS

Normal spark plug condition is a sandy brown deposit on the insulator surface with no signs of electrode damage. The following conditions will help you analyze your plugs condition.

OIL DEPOSITES – WET FOULING
1. Worn piston rings, bearings, seals
2. Excessive cylinder wear
3. Leaking- damaged head gasket

BLACK CARBON BUILD-UP, DRY FOULING
1. Fuel mixture to rich
2. Dirty air filter
3. Engine over heating
4. Defective ignition wires
5. Sticking valves, worn seals
6. High carburetor float level
7. Damaged, sticking needle and seat assembly
8. Incorrect fuel pump pressure (1.5 - 3.5)
9. Spark plug heat range to cold

BLISTERED, BURNED ELECTRODES
1. Spark plug range to hot
2. Timing improperly adjusted
3. Engine overheating
4. Incorrect spark plug gap
5. Burned engine valves
6. Wrong type of fuel

INSULATORS CHIPED
1. Incorrect spark plug gap
2. Improper spark plug installation
3. Severe detonation

PLUG GAP BRIDGED
1. Lead deposits fused to electrode
2. Engine overheating
3. Spark plug heat range to hot

GASOLINE FOULING
1. Distributor cap cracked, arcing
2. Loose, broken ignition wires
3. Low coil output

Carburetor troubleshooting guide

WEBER CARBURETORS Distributed by REDLINE

America's premier distributor of Genuine WEBER Carburetors for over 30 years

This is a guide for diagnostic purposes only

ENGINE WILL NOT START

Over 90% of engine failure to start conditions are ignition system related

1. Open circuit between starter and solenoid, or between ignition switch and solenoid
2. Starter motor faulty
3. Battery charge to low

ENGINE HARD TO START WHEN COLD
STARTS & STALLS

1. Incorrect choke operation (worn coil, electrical connection faulty)
2. Fast idle speed to low
3. Improper choke pull off operation
4. Low carburetor float level
5. Timing improperly adjusted
6. Damaged sticking needle and seat
7. Engine flooded

ROUGH IDLE, SURGING, MISSING, STALLING

1. Incorrect idle speed and idle mixture adjustment
2. Timing improperly adjusted
3. Vacuum leak
4. Incorrect vacuum advance hose connection
5. Faulty EGR valve operation
6. Faulty PCV valve operation
7. Incorrect choke operation (coil settings)
8. Improper choke pull off diaphragm operation
9. Improper vacuum hose connection
10. Low carburetor float level
11. Restricted, kinked fuel lines
12. Restricted fuel filter
13. Distributor cap cracked, arcing
14. Loose, corroded, or broken ignition wires
15. Damaged idle mixture adjusting screw
16. Distributor shaft worn
17. Faulty idle solenoid operation
18. Restricted carburetor jets or air bleeds
19. Restricted air, breather filters
20. Incorrect spark plug gap

ENGINE KNOCKS, PINGING

1. Timing improperly adjusted
2. Incorrect vacuum hose connections
3. Distributor malfunctions
4. Carburetor jets to lean, restricted
5. Low carburetor float level
6. Poor quality fuel
7. Faulty EGR valve operation
8. Faulty feedback system operation

ENGINE KNOCKS, PINGING (Cont.)

9. PCV system malfunction
10. Loose fan belts
11. Faulty vacuum delay valve (switch)

DIESELING, ENGINE RUN ON

1. Faulty idle solenoid operation
2. Carburetor linkage binding
3. Incorrect idle speed and idle mixture adjustment
4. Timing improperly adjusted

HESITATION, POOR ACCELERATION, FLAT SPOT

1. Vacuum leaks
2. Improper vacuum hose connections
3. Timing improperly adjusted
4. Low carburetor float level
5. Loose, corroded or broken ignition wires
6. Low ignition coil output
7. Fouled or damages spark plugs
8. Incorrect accelerator pump operation
9. Incorrect fuel pump pressure (1.5 – 3.5)
10. Restricted or kinked fuel lines
11. Restricted fuel filter
12. Carburetor power enrichment system malfunction

POOR LOW SPEED OPERATION

1. Indirect idle speed and idle mixture adjustment
2. Dirty air filter
3. Timing improperly adjusted
4. Loose, corroded, or broken ignition wires
5. Distributor cap cracked or arcing
6. Restricted idle jets or air bleeds
7. Incorrect carburetor float level

POOR HIGH SPEED OPERATION

1. Incorrect vacuum advance hose connection
2. Incorrect distributor centrifugal advance
3. Incorrect spark plug gap
4. Incorrect carburetor main jets, air correctors
5. Incorrect vacuum hose connections
6. Dirty air, or breather filters
7. Incorrect fuel pump pressure (1.5 – 3.5)
8. Worn distributor shaft
9. Incorrect carburetor float valve
10. Incorrect carburetor float level
11. Restricted or kinked fuel lines
12. Restricted fuel filter

Typical REDLINE Conversion Kit

The parts will vary from kit to kit. Shown below is a typical installation kit with two piece adapter. Also included are fuel hose, chrome air filter and all mounting hardware. Not shown are general installation instructions and tuning information.

Accessories:

Performance 32/36 DFEV & 32/36 DGV Jet Kit: 701-DFV Small Engine and Altitude 32/36 DFEV & 32/36 DGV 4 cyl Jet Kit: 701-DFV4A
Performance 32/36 DGEV 4 cyl Jet Kit: 701-DGV4 Small Engine and Altitude 32/36 DGEV 4 cyl Jet Kit: 701-DGV4A
Performance 32/36 DGEV 6 cyl Jet Kit: 701-DGV6 Small Engine and Altitude 32/36 DGEV 6 cyl Jet Kit: 701-DGV6A
38-DGES Outlaw Jet Kit: 701-DGS Small Engine and Altitude 4 cyl. Jet Kit: 701-DGS4A

Filters:

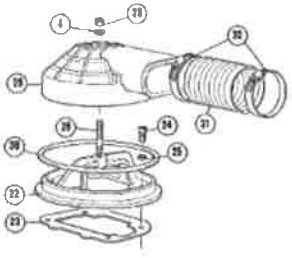
2 5/8" chrome filter: 99217.332S
Element only: 99400.292
Filter Clips (4each): 99217.000S

Universal Air Filter Adapter: 99010.457

To mount traditional high performance filter

Remote Air Filter Snorkel Kit: 99010.357

This kit allows you to move the air filter to a remote location or above the water line for the tough river forge or just to get the filter out of the dust and mud Zone into the passenger compartment or up on the roll bar.



Making The Right Choice

32/36 mm progressive or 38 mm Synchronous Facts and Information

In the past there have been questions and much miss information put out on the choice of a 32/66 DGEV carb or the 38 DGES.

To help make the right choice for your future needs.

1) **The Conversion Kit utilizing the 32/36 Progressive Weber is designed to provide a Jeep with an aftermarket carburetor with *"economical"* performance, while increasing HP, improving drivability, and fuel economy over the original Mikuni carburetor. REDLINE conversion kit's using the 32/36 progressive carburetor is an *"economical"* carburetor for use as a performance replacement carburetor for a worn out or hard to maintain factory Mazda / Mikuni carburetor.**

2) **When purchased in a conversion kit form, the Redline conversion kit K675-38 using the Weber 38mm DGES carburetor will perform very well on a stock unmodified engine. This is not considered to be "over carbureted". This Weber 38-DGES *is very close to the same size as the Mikuni* that was designated by Mazda as the original equipment carburetor. The 38-DGES is a logical replacement.**
The REDLINE Conversion Kit will provide considerably more initial torque, power and acceleration. The top end performance will not be significantly improved over the 32/36 when used on a stock engine.

3) **The Weber 38-DGES carburetor should be the only consideration *"if"* the engine has been modified, or, in the future will have *"any"* level of additional engine modifications. Such as headers, free flowing exhaust, a cam, or rebuilt engine. Usually these rebuilt engines will be improved over the stock engines with oversize pistons and towing cam. The WEBER 38-DGES will enhance your engine modifications. All 6 cylinder engine applications are particularly enhanced by this application and *"ALL"* JEEP and LANDCRUISER applications with any upgrades this becomes the *"mandatory"* choice in carburetors.**

4) **When using a WEBER 32/36 DGEV with the same above engine modifications, will require additional calibration and re-jetting to attain the limited performance improvements. There is a jet kit available for just this reason. The re-jetting is required due to the performance enhancements of the additional items usually requiring more fuel. Although the 32/36 DGEV does out perform the original carburetor, to receive the full benefit of your modifications will require helpful re-calibration. The 38 DGES on the other hand is the *"optimum choice"* and has a larger fuel delivery system and the calibration to handle the stock engine and any range of improved performance modifications. The 38-DGES conversion will substantially improve your other performance product investments.**

5) **The Weber 32/36 DGEV progressive carb will improve your fuel economy, with some performance gains on a stock engine compared to the OEM Mikuni carburetor. The Weber 38-DGES synchronous carb will not get less fuel economy than the original Mikuni carburetor and will improve initial torque, power and acceleration.**

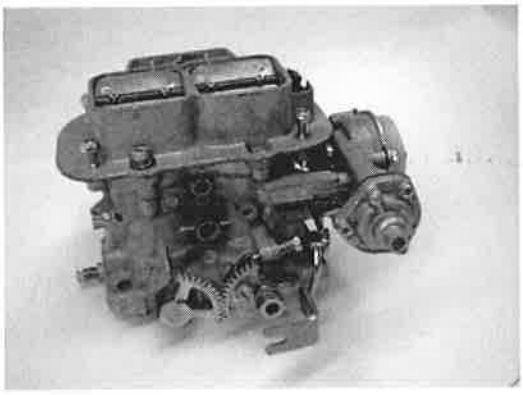
RECAP:

The 32/36 DGEV progressive carburetor as used in any Redline Conversion Kit # K675 is pre-calibrated and set to run on most normal stock engines and will provide some performance and fuel economy improvements. If that engine has been upgraded or improved with other performance items there will be a need to recalibrate and re-jet the carburetor in most situations. There is a performance jet kit for the 32/36 DGEV applications Pt No. 701-DGV4 or 701-DGV6.
The REDLINE Conversion Kit # K675-38 using the Weber 38-DGES synchronous carburetor is also pre-calibrated and used on stock Mazda engines and with any performance modifications. This 38-DGES is very close to the same size as the original equipment Mikuni carburetor, the Carter BBD and is not considered over carbureted by the manufacture. It also provides the best starting point for engines that are ultimately going to be upgraded with additional performance Items with performance over fuel economy being the ultimate goal. For re-jetting the 38 DGES for a 4 cyl engine use the REDLINE jet kit # 701DGS4A.

32/36 DGEV

Progressive Series carburetor	
22680.005	Manual choke
22680.051B	Water choke
22680.033B	Electric choke

38 DGES
Outlaw



Synchronous Series carburetor	
18930.032	Water choke
18930.020	Electric choke
18930.086	Manual choke