

Typical Install Instructions



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, K1317, K1319, K1326 by REDLINE

VW T-1 DUAL PORT ENGINES

Using 2 Weber Carburetors

K1317 = 40-IDF, 1.6, 1.8

K1319 = 44-IDF, 1.8 - 2.3

K1326 = 48-IDF, 2.0 & up high performance

These instructions are intended as a general guide for installation.

Jetting Specifications

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

Tools Needed

Combination, box or open-end wrenches (metric)
Socket set with 12mm socket
Screwdrivers (regular and Phillips)
Pliers
Gasket Scraper, Knife
Wiping rags, Cleaning solvent
Gasket sealer
Wire cutters

Parts Supplied with Installation Kit

2 Weber 40-IDF or 44-IDF or 48-IDF
2 Intake manifolds
1 Throttle Linkage and levers
2 Air Filter's

Note:

Fuel Injected conversions **MUST** use a carburetor low pressure fuel pump #99009.131 and a new distributor.

INSTRUCTION / JETTING NOTES:

The following "instructions" are based on a vehicle and engine in stock condition. If you have modified your vehicle and/or engine, some of the following steps may not apply to your application.

The **jetting** in these conversion kits will accommodate engines K1317 to-1835cc, K1319 to-2200cc, K1326 2000cc-up. Engines with modified cylinder heads, camshafts and exhaust may require a **jetting** change. Use the **REDLINE** jet kit #701-IDF-2 (low speed) all IDF's & main/air kit 40-IDF #737-240 or 44-IDF #737-244 or 48-IDF 737-248, if re-jetting your engine is necessary.

RECOMMENDED ADDITIONAL PARTS: (specifically fuel injection conversions)

1. Use a **new fuel filter #99901.525** and a lower pressure carburetor **fuel pump # 99009.131**.
2. Many late model fuel injected vehicles use a high-pressure fuel delivery system. The WEBER carburetor only requires **3 lbs Maximum**. For aggressive driving or off road use, **REDLINE** recommends the float height of 14mm 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.

DISASSEMBLY



1. Disconnect battery and remove the gasoline cap.
2. Remove the stock air filter and attached components.
3. Remove the distributor cap and ignition wires. Identify the wires to cylinders for correct reassembly.
4. Disconnect the ignition coil wires and remove the coil and bracket from the fan shroud. Identify the coil wires for correct reassembly. Retain coil bracket screws for later use (step 19).
5. Remove the fan belt, pulley nut and pulley from the generator.
6. Remove fuel hose from the pump to the carburetor. Plug the fuel pump outlet hose to **prevent FUEL LEAKAGE.**
7. Disconnect the throttle cable and electric choke wire/idle cut-off solenoid wire from the carburetor. ***(Insulate the wire connectors to prevent any shorts. These wires will not be reused.)***
8. Disconnect the stock heat riser tubes.
9. Remove the rear engine sheet metal. (Sheet metal closest to deck lid.)
10. Remove clamps securing the intake manifold boots. Unbolt and remove the end castings from the heads. Insert a clean rag in the intake ports to prevent dirt from entering the engine.
11. Loosen the side bolts on the fan shroud. Remove the manifold center section securing bolt.
12. Loosen the generator retaining strap and slide it back toward the fan shroud. Disconnect the wires from the generator. Identify the wires for correct reassembly.
13. Lift the generator and fan shroud enough to remove the intake manifold and carburetor as a complete unit. ***(Removal of fan and generator completely will make this step easier on some applications.)***
14. Thoroughly clean the intake mounting surface using a gasket scraper.
15. Replace the fan shroud and generator in their original position. Replace the generator pulley, nut and fan belt.
16. Replace the rear engine sheet metal and all screws.
17. Remove the rear fuel pump mounting nut. If the intake manifold was not previously secured to the engine case, remove the engine case nut directly behind the fuel pump. If the intake manifold was secured to the engine case, the stud to which it was attached must be removed. **NOTE:** If the correct stud tools are not available, the "double nut" method can be used. Lock two nuts approximately 1/3 way down the stud. Using suitable wrench on the bottom nut, remove the stud from the flange.
18. Place the coil adapter over the rear fuel pump stud and center the slot over the hole directly behind the fuel pump. Reinstall the fuel pump nut and case nut to secure the bracket. ***(If the case stud was removed, install the 8 x 45mm bolt supplied in the kit.)*** Torque the case nut/bolt to 15 ft. lbs.
19. Reuse the original screws to install the coil on the adaptor (step #4), with the terminals facing towards the #3 & 4 cylinders. Reconnect the coil wires and replace the spark plugs at this time.

RE-ASSEMBLY

BENCH ASSEMBLY

- (A) Use thread locking compound (Loctite) to install the carburetor mounting into the flanges of the new intake manifolds. **NOTE:** If the correct stud tools are not available, the "double nut" method can be used. Lock two nuts approximately 1/3 way down the stud. Using suitable wrench on the bottom nut, remove the stud from the flange.
- (B) Install the throttle lever spacers and lock nuts on each carburetor. (FIGURE C)
- (C) Install the flange gaskets and carburetors on the manifolds. Secure them in place using the lock washers and nuts from the kit. **DO NOT OVER TIGHTEN THE CARBURETOR HOLD DOWN NUTS. MAXIMUM TORQUE SHOULD NOT EXCEED 10 FT LBS.**
- (D) Slide the center pull lever and the left and right extension arms onto the crossbar so there is 60 degrees between the centerline of these parts. Install the jam nuts onto the ball ends and thread the ball ends into each end of the cross bar. (FIGURE A)
(Later in this assembly, the throttle cable, inserts into the throttle cable shortner, this shortner slides into the throttle cable trunion, both are locked by the set screws. Shown in FIGURE G)

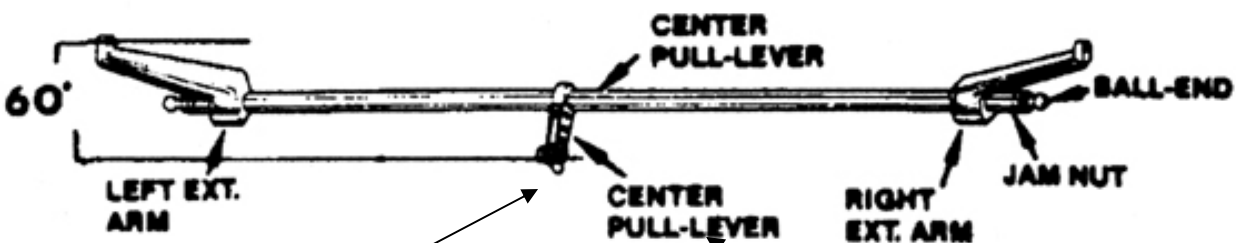


FIGURE A

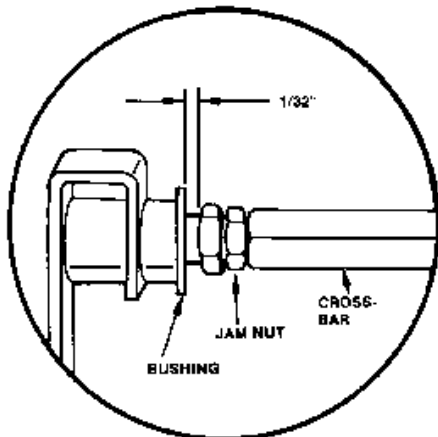


FIGURE D

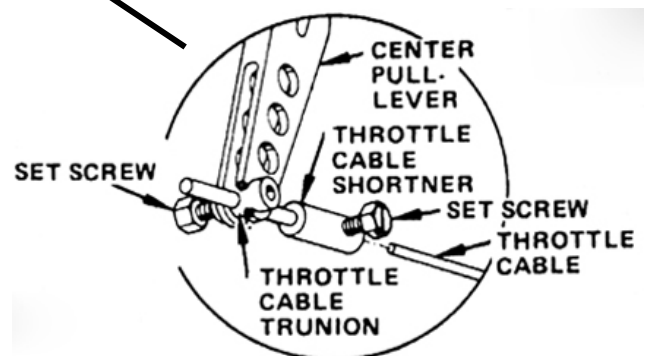


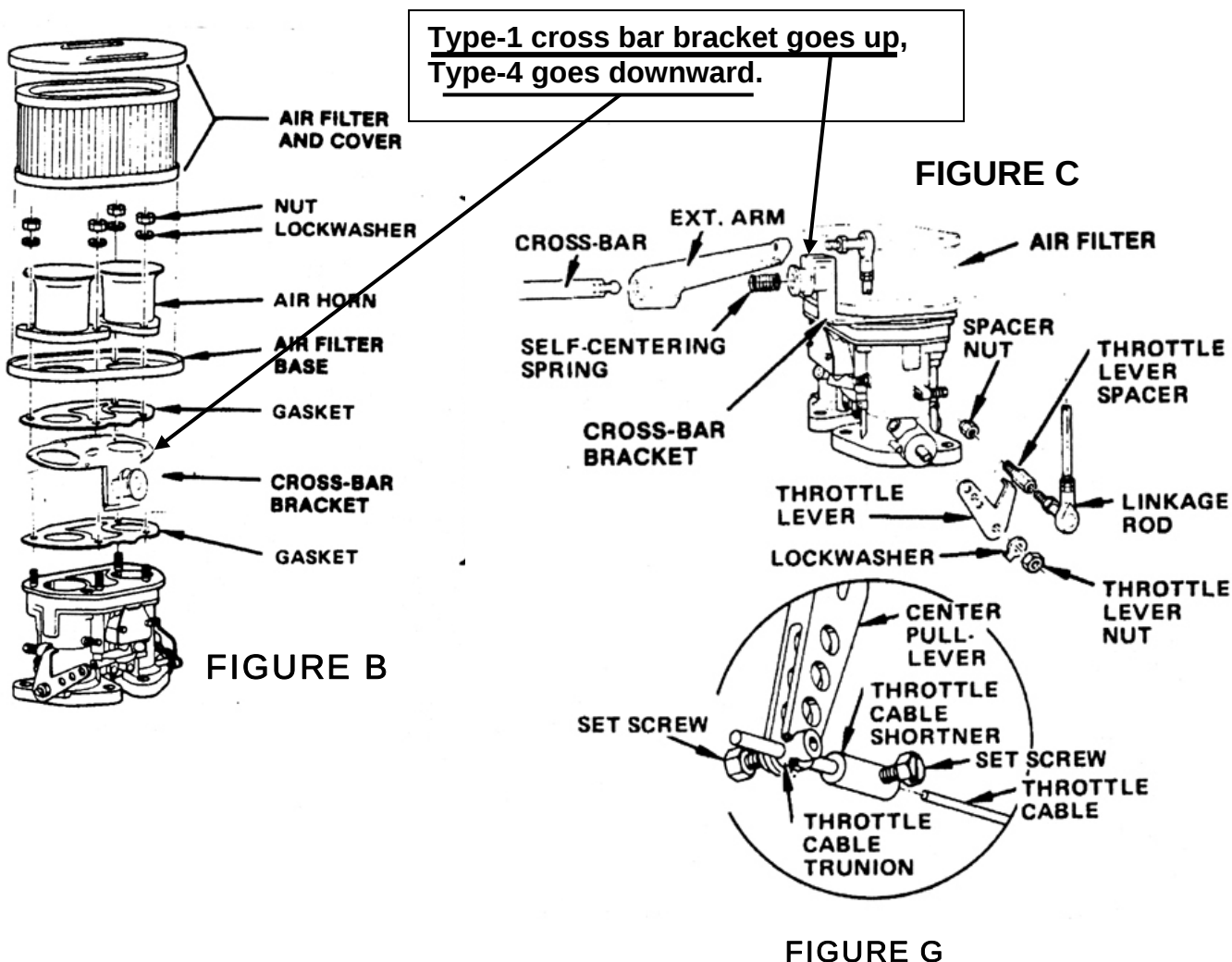
FIGURE G

FINAL INSTALLATION

WEBER
CARBURETORS

Distributed by
REDLINE

20. Remove the rags from the intake ports and install the manifold gaskets supplied in the kit. Install the left-side (Drivers Side) manifold and carburetor assembly first. Installation will be easier using a 3/8" ratchet with a 10-12" extension and a swivel. Secure the manifold in place using the nuts from the kit. Install the right side (Passenger Side) manifold and carburetor assembly in the same manner.
21. Re-install the distributor cap and ignition wires.
22. Install the carburetor air horn assembly as shown in **FIGURE B** on the left-side carburetor, using lock washers and nuts provided. **DO NOT INSTALL THE RIGHT SIDE COMPONENTS AT THIS TIME. DUE TO THE LENGTH REQUIRED FOR THE CROSS-BAR TO SEAT PROPERLY IN THE BRACKET, THE RIGHT AND LEFT SIDE ASSEMBLY OF PARTS CANNOT BE DONE SIMULTANEOUSLY.**



FINAL INSTALLATION

23. Install the cross-bar self-centering spring inside the left bracket bushing. Figure C, page 4
24. On the cross bar, insert the left hand ball-end into the left bracket bushing and spring. Temporarily brace the cross-bar up to perform the next step.
25. Install the air horn assembly on the right-side carburetor. **DO NOT BOLT DOWN THE COMPONENTS, YET.** Install the self-centering spring in the bushing. Unbrace the cross-bar and insert the ball-end into the right bracket bushing. **NOTE: Some repositioning of the bracket may be necessary to get the cross-bar to seat into the bushing.** Once the cross-bar has seated in the bushing, secure the air horn assembly down using the lock-washers and nuts provided.
26. Adjust the cross-bar ball ends to achieve a 1/32" (end-play), clearance between the bushing flange and ball flange. See below picture Figure D. Once the ball-ends are adjusted correctly, lock the jam nuts in place.

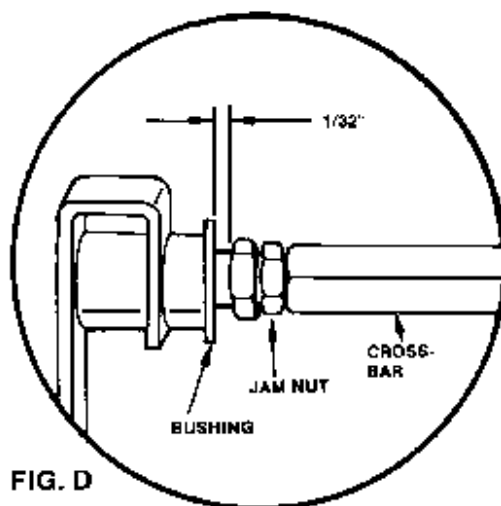


FIG. D

27. Install the linkage rods to each of the extension arms as shown in **FIG C** page 4. **CHECK THROTTLE OPERATION FOR FREE MOVEMENT. IF THERE IS ANY INDICATION OF STICKING OR BINDING, CORRECT AS NECESSARY BEFORE PROCEEDING.**
28. Remove and replace the hose from the fuel pump outlet with the new fuel hose provided in the kit. **BEFORE STARTING THE ENGINE TO SYNCHRONIZE THE CARBURETORS, BE SURE CARBURETOR LINKAGE MOVES FREELY AND IGNITION PLUG WIRES HAVE BEEN REPLACED IN THE CORRECT FIRING ORDER.**
29. Replace gas cap and then reconnect the battery, Start engine checking for fuel leaks and vacuum leaks, correct before proceeding.
30. Synchronize and set idle speed and mixture **ACCORDING** to the tuning instructions on page 7. **NOTE: This is done after the engine is hot and throttle lever down rods are disconnected.**
31. After carburetor synchronizing and tuning is complete, turn the engine off and proceed with throttle cable installation.

FINAL INSTALLATION

32. Install the throttle cable trunion and shortner as shown in FIGURE G. Align the center pull lever on the cross-bar with the throttle cable and tube. Secure it in place by tightening the set screw.

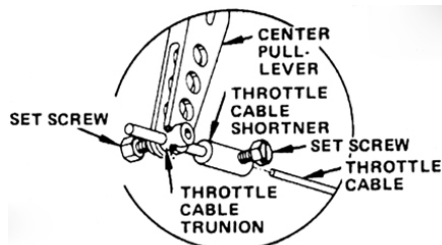


FIGURE G

33. Position the stock throttle cable next to the shortner and measure the excess cable to be removed. **NOTE: Before cutting the throttle cable, be sure you have allowed enough cable to fit through the shortner and have the lock screw hold it securely in place.**
34. Once you have correctly measured the amount of cable to be removed, cut the cable. Install the new cable in place by tightening down the set screw.
35. Complete the installation of the air filter assemblies.
36. **CHECK FOR ADEQUATE HOOD CLEARANCE BEFORE CLOSING THE HOOD.**

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 "our" 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.

WEBER IDF Carburetors

TUNING Low Speed Circuit



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

The Individual Runner carbs, IDF, have individual Idle jets and mixture screws for each barrel. They also have an additional air bleed screws and lock nuts. This is not used for idle adjustment or idle quality. **The settings for these screws should be closed.**

Standard IDF Settings:

Speed screw: ½ turn in after contact with lever **ABSOLUTE MAXIMUM.**

Mixture Screw: 1 ¼ - 1 ¾ turns out from lightly seated.

Float Height: 14mm gasket to top of float, (do not depress ball & spring in the needle valve).

Float Drop: 2.0mm of "NEEDLE" travel.

"Lean Best Idle" Procedures

After confirming the linkage allows the throttle lever to seat against the Idle Speed Screw. Back off the Idle Speed Screw, then turn the screw in until it contacts the throttle lever and **turn it in ½ turn MAXIMUM.** Turn in the Mixture Screw in until it "**LIGHTLY**" seats, then back it out 1 1/2 full turns. Loosen the 8mm wrench size nuts on the "air bleed" screws, turn in the air screws until it seats then retighten the nut. All air by-pass valves are closed and not commonly used for carburetor adjustments.

- Start the engine, it will run slow and like a tractor. As long as it will stay running, the idle speed is not important at this point.
- First, turn in the mixture screw until the engine runs worse, then back out the screw ¼ turn at a time. The engine should start to smooth out. Continue to back the screw out ¼ turn at a time until the screw does nothing or runs worse. Then turn it back in to the point where it ran best. You want to tune the engine by sound. Adjust each mixture screw to the best, fastest and smoothest running point. Do this procedure with each mixture screw.
- Now you may adjust the Idle Speed Screw. It should be sensitive and only require ¼ turn in or out to achieve the idle speed you like.
- These carbs are most commonly used in pairs, this makes the synchronization important, be sure to bring the high flowing carb down to the low flow carb. Then bring them both up to "proper" Idle speed. **The Idle Speed Screws are not opened more than ½ turn in MAXIMUM.**
- After synchronizing multiple carbs, reconfirm steps b. c. & d.

"Simple Rules for Calibration"

If your mixture screw is out more than 2 turns then your idle jet is too lean, go up one half size on the Idle jet.

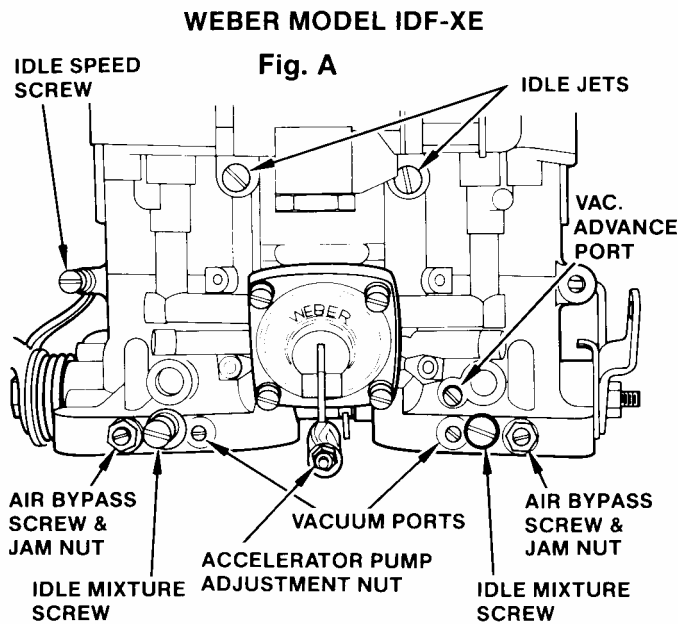
If your mixture screw found lean best idle at less than 1 1/4 turns from lightly seated, then your Idle jet is too rich, go down one half size on the idle jet.

This is all based on the "important fact" that your Idle Speed Screws are "not open more than ½ turn in", if they are then that is also an indication that you have a lean Idle circuit. You are cheating by opening the throttle plates and exposing additional progression holes in the transition.

Pump By-pass Valve:

The pump by-pass valve is designed to allow fuel into the pump circuit and when depressed, by-pass a percentage (hole on the side of the valve) of the fuel delivered to the accelerator pump nozzle/jets. A "zero" pump by-pass valve (included with these carburetors in this kit) will deliver all of the available fuel to the engine and not "by-pass" fuel back to the fuel bowl. This will increase the duration and volume of the pump shot with the original pump jets. To decrease the duration and increase the fuel volume use the larger 55 pump nozzle/jets. This is for maximum fuel delivery from the accelerator pump circuit. The accelerator pump by-pass valve is located in the bottom of the fuel bowl, one is required per carburetor.

IDF Adjustment controls



More Tuning & Adjustment

1. **Most Critical!** Be sure for initial carburetor set up all air by-pass screws should be in closed position. These are not commonly used in standard carburetor adjustment.
2. Set the **idle speed screw at a MAXIMUM** of $\frac{1}{4}$ to $\frac{1}{2}$ **turn in** after contact with throttle lever. When doing multiple carburetors all linkage should be disconnected. All carbs should be bench adjusted to same setting.
3. Set the idle mixture screw to 1 $\frac{1}{2}$ turns out from lightly seated. **When checking the seated position to make only light contact with seat, aggressive seating will damage needle and seat of carburetor,**

Adjustment if possible should be to find smoothest idle with each mixture screw on all carburetors. Some prefer to do one barrel of each carburetor then come back and do the second barrel

4. **Start engine** as long as engine starts and runs **do not turn up idle speed.**
5. After preliminary lean best setting of idle. Check carburetors for synchronization. Commonly done by checking lead or front barrel of each carburetor.
6. You will always want to bring high flow carburetor down to match the low flow carburetor. If this cannot be done you will need to recheck bench assembly for binding throttle in high flow carb. Once you have matched both carburetors you will need to set the idle to the desired idle speed setting. This will be done by adjusting both carbs up or down the same amount and re checking for synchronization.
7. Make one last check of lean best (smoothest running position) idle on all mixture screws one last time.
8. Lean Best idle should end up with the mixture screws at or near 1 $\frac{1}{2}$ turn off the seated position. Check rule of thumb for idle jet selection on the other side of this page.

Progression Hole's Throttle Plate Adjustment Diagram



SPECIAL NOTE:

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

Synchronized Carburetors: IDF, IDA, DCOE, etc.

Shown in Figure "A", the idle speed screw **IS NOT** turned in more than the **½ turn MAXIMUM**. The throttle plate (F) is below the progression holes (2), the carburetor would be at "curb" idle. (38-DGES has ported vacuum)

Shown in Figure "B", the idle speed screw **IS** more than a **½ turn in MAXIMUM**. The throttle plate **IS** exposing the enriching progression holes. The extra fuel at curb idle, from the exposed enriching 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.

Shown in Figure "C", This air by pass valve is shown in the open position inducing a vacuum leak. These valves are not normally used for tuning or for idle control. The correct setting is closed. Loosen jam nut (1), turn screw (2) clockwise until seated, then retighten jam nut (1).

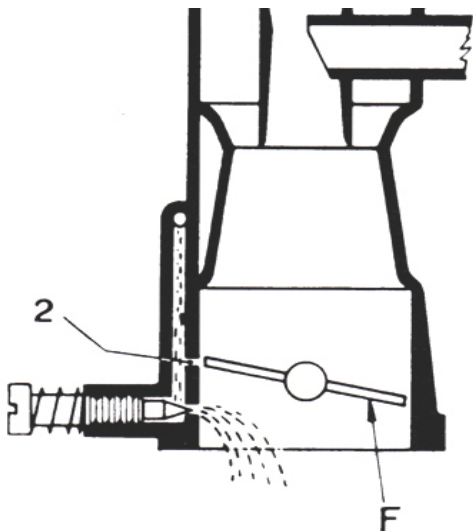


Figure A
Correct Throttle Position

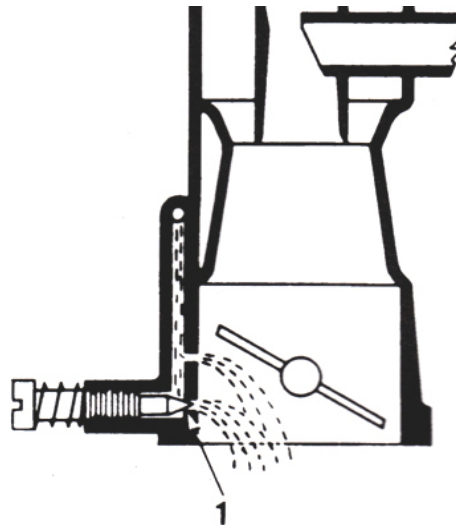


Figure B
Enriching Holes Exposed

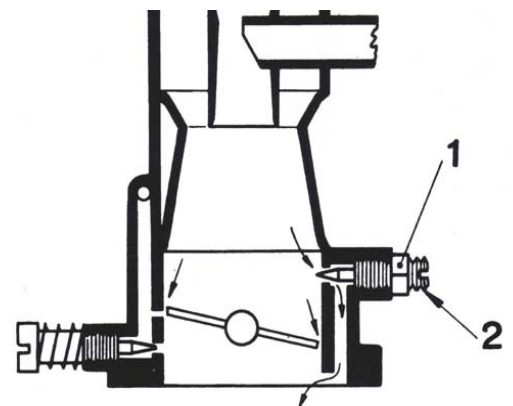


Figure C
Air By-pass Valve

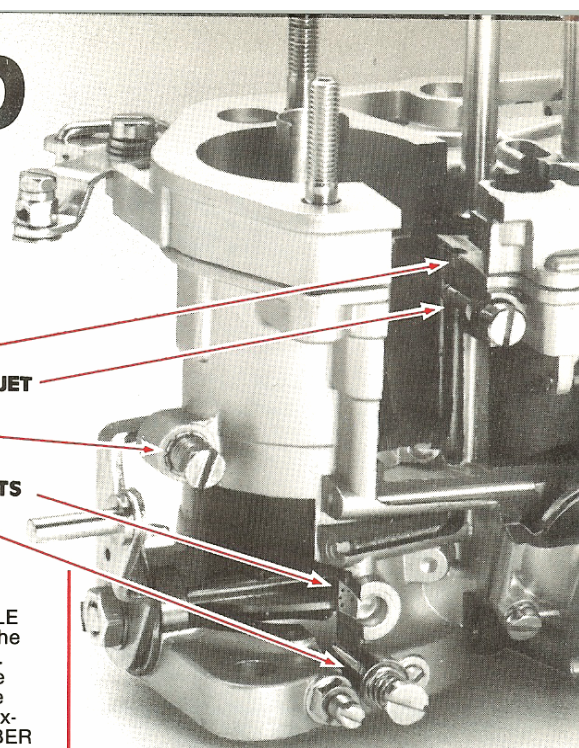
REDLINE WEBER



**TECH
SERIES**

LOW SPEED CIRCUIT

"Where Performance Begins"



IDLE SPEED AIR JET

IDLE SPEED FUEL JET

IDLE SPEED ADJUSTER SCREW

TRANSITION PORTS

IDLE VOLUME SCREW

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

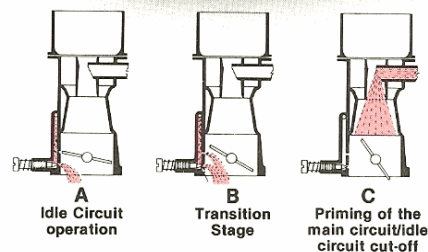


Idle Speed Fuel Jet

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 vernier-like management of complete mixture and engine speed.

TRANSITION: SLOTS AND BIG HOLES—GREAT PERFOR- MANCE 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 manufacturing 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

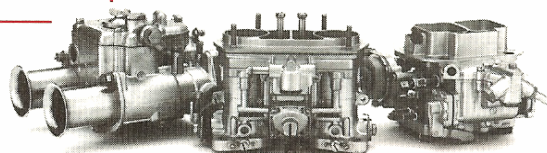
COPIES DON'T WORK AS WELL AS THE ORIGINALS!

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.

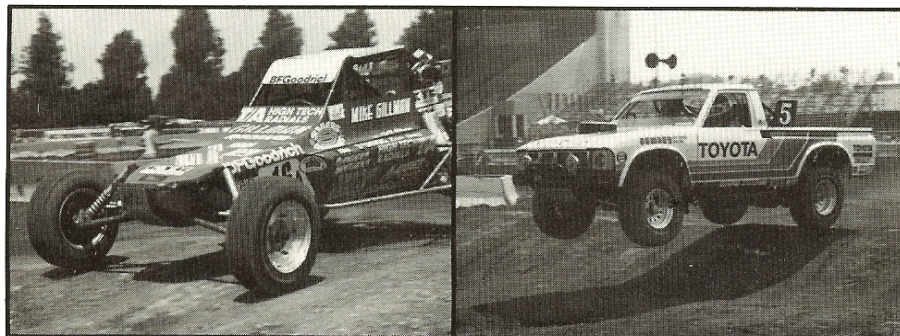
Legal in California for racing vehicles which may never be used upon the highway.

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 is 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 DEPOSITS – 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 too 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 too cold

BLISTERED, BURNED ELECTRODES

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

INSULATORS CHIPPED

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 too hot

GASOLINE FOULING

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

WEBER IDF CARBURETOR

REDLINE PRO BUG HEX LINKAGE

VW, TYPE-I #99004.912



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America's premier distributor of Genuine WEBER Carburetors for over 26 years

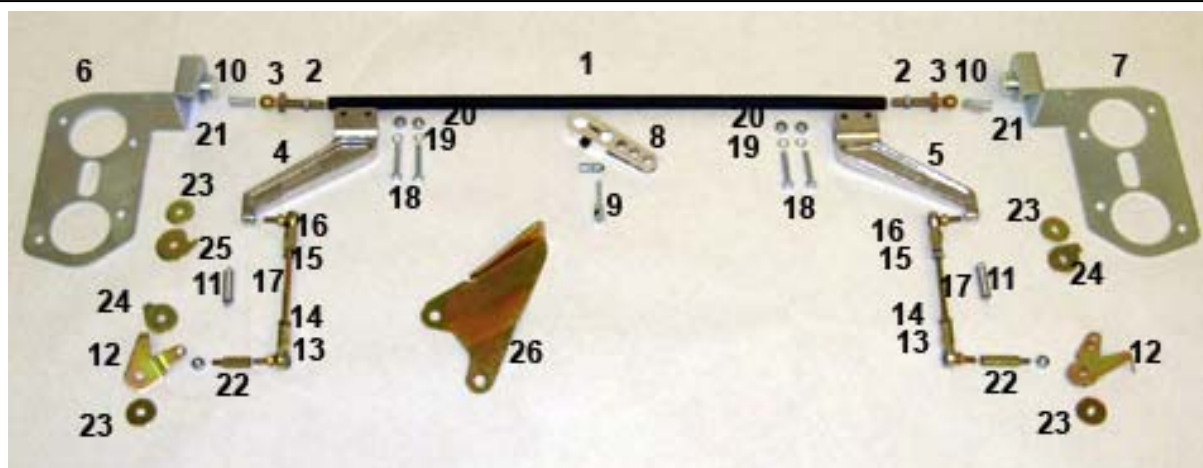


Illustration #	Part Number	Description
1	444.317-02	Hex Cross Bar Type I (19 3/4")
2	444.311-06	8mm Jam Nut for Ball Ends
3	99024.125	1/2" Ball End
4 & 5	444.317-07	Cross Bar Clamp-On Lever
6	444.317-05	Cross Bar Bracket Left Hand Type-I
7	444.317-04	Cross Bar Bracket Right Hand Type-I
8	444.311-08	Cable Bracket Clamp-On Lever
9	444.411-09	Accelerator Cable Extender Assembly
10	444.311-11	Ball End Pre-Load Spring
11	99024.440	Throttle Return Spring
12	444.317-08	Throttle Lever Right Hand
	444.317-09	Throttle Lever Left Hand
13	99024.128	Rod End Left Hand (Gold)
14	99024.304	10-32 Jam Nut Left Hand (Gold)
15	444.8456-11	10-32 Jam Nut
16	99024.129	Rod End Right Hand
17	99024.105	4 1/2" Hex Rod Type-I
18	444.317-06	10-32 x 1.25 Bolt
19	444.8456-08	3/16" Washer
20	444.8456-10	10-32 Nyloc Washer
21	444.311-09	Nylon Insert Bushing
22	444.311-10	Rod End Spacer Right Hand (Short)
	444.411-12	Rod End Spacer Left Hand (Long)
23	99024.258	"D" Washer
24	444.317-99	Throttle Stop
25	55555.038	Return Spring Washer
26	444.411-11	Coil Mounting Bracket, T-1

REDLINE SYNCHROMETER

Calibrated synchronizing instrument

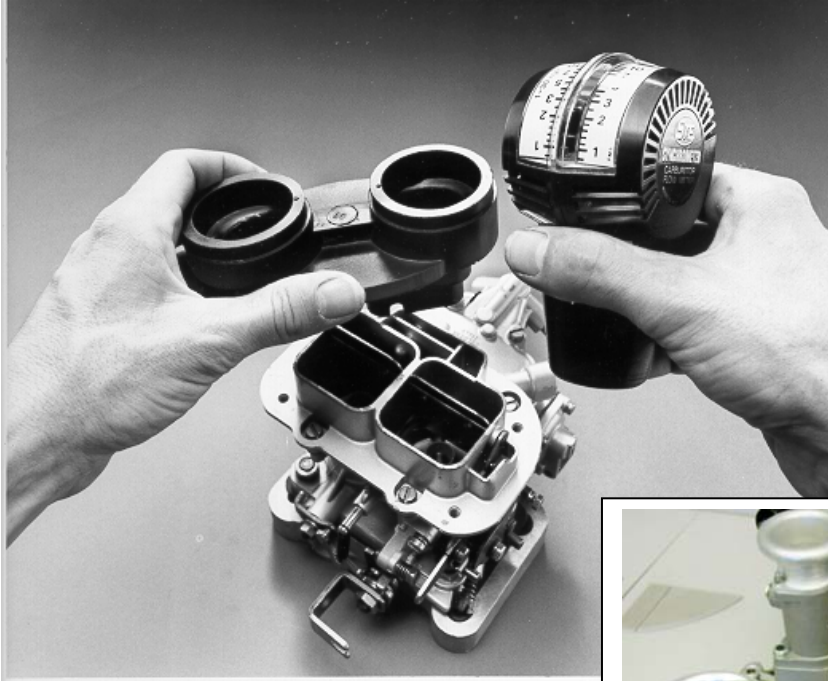
No restriction full flow carburetor balancing tool !

Available in two sizes'
For standard and high volume performance engines

Standard:
STE SK

High Volume:
STE BK
BK will require additional adapter for smaller inlets.

Additional adapters and adapter kits are available for performance and street tuning.



REDLINE stocks a complete range of special adapters for almost every carburetor application.

All special adapters are designed to fit tightly into the carburetor intakes. This allows for both hands free for tuning and simple adjustments with engine running.



SYNCHROMETER'S STE SK & STE BK



STANDARD: **STE SK**

The **STE SK** will fit intakes of 1 5/8" to 2 1/8". This SK will measure air flow from 1 to 30 kg/h. With this "lower" calibration scale it is easier to read the variations in air flow between carburetors at idle RPM's only. The SK also has extended calibration at 1 to 3 kg/h also making it useful to check secondary throttle adjustment at idle.

HIGH VOLUME: **STE BK**

The **STE BK** will fit intakes of approx. 2" to about 2 5/8". The BK features a rubber sleeve that can be rotated to open a by-pass allowing a higher air flow up to 50 kg/h; by-pass closed 1 to 35 kg/h.

Using an additional adapter **STE 118** will allow the BK to fit intakes as small as 1 1/2" similar to the STE SK and allow for higher RPM air flow and synchronization. (Most universal combination)



PRO Tuner set



STE BK used with V8 injection
And Weber 48-IDA's

SYNCHROMETER ADAPTER'S



"HOLD ON" Family of adapters, The Synchrometer must be held to the carburetor intake.

Used in combination with STE SK or STE BK and with the elbow adapters.
For improved fit and contact area, consider REDLINE'S Street Tuner and PRO Tuner sets.



STE 118
Taper 1 7/16"
O.D. 1 1/2"
O.D. 2 1/4"
Use with STE BK



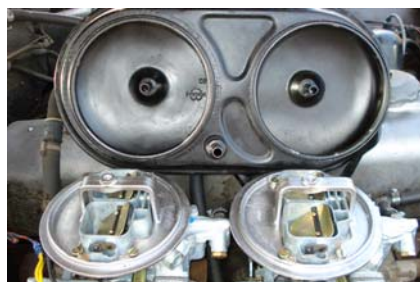
STE 18
O.D. 1 1/8"
O.D. 2 1/4"
Use with BK & SK
or STE 8, DCO



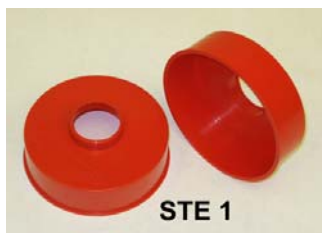
STE 10
O.D. 2 7/8"
I.D. 1 1/2"
Use with BK & SK

"HAT" Family of adapters, Synchronizing multiple 2 barrel and 4 barrel carburetors.

For use with Weber 32/36 & 38 DGES on BMW, Mercedes as well as Holley 2300 2bl & 4bl Dominators, ZENITH 35/40 INAT on BMW & Mercedes, most round top carburetors.



STE 31/01
Inside Diameter: 5"
Inside Height: 3"
Use with BK & SK



STE 1
Inside Diameter: 5 3/8"
Inside Height: 1 9/16"
Use with BK & SK
Zenith 35 40 INAT



STE 32
Inside Diameter: 7 1/8"
Inside Height: 2 3/4"
Use with BK & SK

“SNORKEL” Family of adapters Used with “HOLD ON” adapters

These “snorkels” are typically used as a right angle adapters used for Weber DCOE synchronization with little working room. These snorkels are included in REDLINE'S Pro Tuner kit.



STE 6

Large opening:
Use with STE BK and STE SK

Smaller opening:
Perfectly fits into 40-DCOE inlets,
1 9/16" Alpha, Solex, Weber

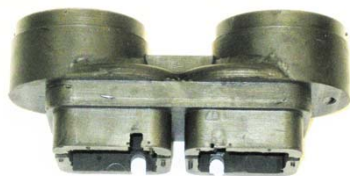


STE 8

Large opening:
Use with STE BK and STE SK

Smaller opening:
Use adapter STE 18 for multiple
inlets, 40 -55 DCOE 2 ¼" max.

Weber “DG & DF” Family of adapters, Jaguar, Nissan 240Z, Triumph TR6 & TR7



STE 40

32/36 DGEV
38 DGES



STE 49

32/36 DFEV

Miscellaneous "ANGLE & OFFSET" Family of adapters,



STE 25

Male to Inlet w/taper 1 7/8"
44-IDF, 45-DCOE
Use with STE BK and STE SK



STE 28

Male to Inlet 2"
48-IDF, 48-IDA, 48-DCOE
Use with STE BK and STE SK



STE 13

Top:
O.D. 2" I.D. 1 9/16"
Bottom:
O.D. 1 3/4" I.D. 1 7/16"
Use with STE BK and STE SK
Height 1 3/4"



STE 11

Top:
O.D. 2" I.D. 1 5/8"
Bottom:
Inlet O.D. 2 3/8" I.D. 1 3/4"
Use with STE BK and STE SK



STE 54

Top:
O.D. 2" I.D. 1 9/16"
Bottom:
O.D. 1 3/16" I.D. 1 7/8"
Use with STE BK and STE SK

SYNCHROMETER TUNER SET, OPTIONS



PRO-TUNER SET



GENERAL REFERENCE OPTIONS

DUAL IDF's



V8 48-IDA's



DUAL
34-ICT's
Volkswagen

