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, K1401 & K1411 by REDLINE

VW Type-1, 1952- on 1300cc-up, air cooled engines

Using 2 Weber 34-ICT's

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 (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 34 ICT's
2 Intake manifolds
1 Throttle Linkage and levers
2 Air Filter's
1 Hardware kit

Note:
Fuel Injected conversions must use a low pressure fuel pump 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 this conversion kit will accommodate engines up-to 1835cc, modified cylinder heads, camshafts and exhaust may require a jetting change. For two 34-ICT carburetors use the **REDLINE** jet kit 701-ICT if re-jetting your engine is necessary.

RECOMMENDED ADDITIONAL PARTS

1. It is recommended to use a new fuel filter and use Loctite thread locking on all studs and nuts.
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 7mm from the gasket to the top radius of the brass 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 FOR CARBURETED ENGINES

1. Disconnect battery and remove the gasoline cap.
2. Remove factory vacuum lines, air filters and attached components from the carburetor.
3. Remove the distributor cap and ignition wires. Identify the wires to cylinders for correct reassembly.
4. Disconnect and remove the coil from the fan shroud. Identify coil wires for reassembly.
5. Disconnect the throttle cable.
6. Remove the fan belt, pulley nut and pulley.
7. Remove the fuel line from the pump to the carburetor. Plug the outlet to prevent fuel leakage.
8. Disconnect the stock heat riser tubes.
9. Remove the rear engine sheet metal. (Sheet metal closest to the deck lid.)
10. A. Remove the clamps securing the intake manifold boots. Unbolt and remove the end castings from the cylinder heads. Insert clean rag or towel far enough into the ports to prevent dirt and debris from entering the engine.
    B. If the engine is a single port (rare) engine remove the 6mm nuts that secure the intake manifold to the cylinder heads.
11. Loosen the side bolts on the fan shroud. Remove the manifold center section securing bolt. Retain for later use.
12. Disconnect the fuel pressure regulator and plug it off with the cap provided in the kit.
13. Disconnect all electrical components for the stock fuel injection system. Either tape the wires, or use tie wraps to position them in a safe area. Tape all connectors to prevent any shorts.
14. Remove the mounting nuts and any other hardware retaining the intake and fuel injection system. Remove the manifolds and injection housing as one assembly. Insert a clean rag in the intake ports and clean the mounting surface with a gasket scraper and solvent.
15. **STOCK FUEL INJECTION DISTRIBUTOR ASSEMBLY *MUST* BE REPLACED.** Disconnect and remove the stock distributor. Install the replacement distributor per the manufacture's recommendations. **PROCEED TO WEBER CARBURETOR INSTALLATION SECTION.**
16. Remove the stock fuel lines from the original carburetors.
17. Disconnect the electric choke/idle cutoff solenoid wire. Insulate the wire connectors to prevent any shorts. These wires will not be reused.
18. Unbolt the stock intake manifolds and remove carburetors and intakes as one assembly.
19. Insert a clean rag in the intake ports and thoroughly clean the mounting surface with a gasket scraper. **PROCEED TO THE WEBER CARBURETOR INSTALLATION SECTION.** (next)

WEBER CARBURETOR INSTALLATION, BENCH ASSEMBLY

20. Use Loctite thread locking compound to install the carburetor mounting studs into the flanges of the new intake manifolds. (**NOTE:** The “double-nut” method of stud installation can be used. Lock two nuts approx. ½ the way down the stud. Using a suitable wrench on the top nut, tighten the stud into the manifold flange.)
21. Install the throttle lever spacers and lock nuts on each carburetor.
22. Install the “greased” flange gaskets and carburetors on the manifolds. Secure them in place using the lockwashers and nuts from the kit. The maximum torque should not exceed **10 ft/lbs.**
23. Slide the center pull-lever and the left and right extension arms onto the cross-bar 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. (Shown below FIGURE B)

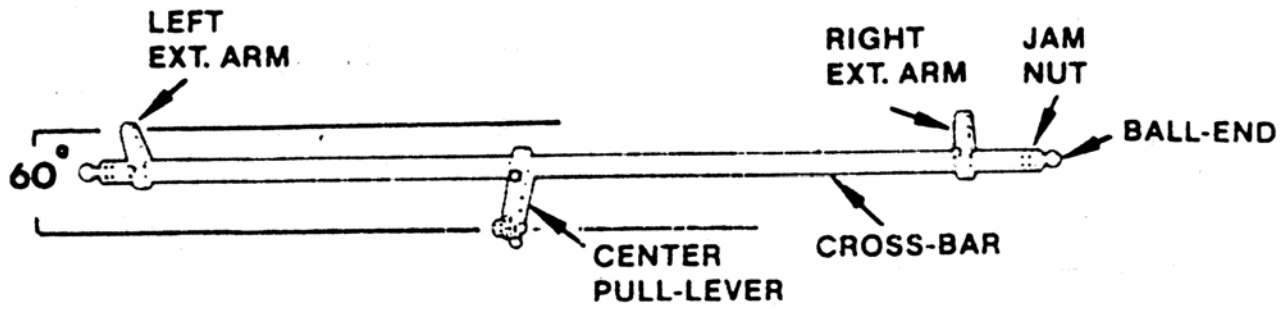


FIG. B

FINAL INSTALLATION

24. If your spark plugs are used, now is the easiest time to install new ones.
25. Remove the rags from the intake ports and install the manifold gaskets from the kit. Install the left-side (Drivers side) manifold and carburetor first. Installation will be easier using a 3/8” drive ratchet with a 10-12” extension and swivel. Secure the manifold in place using the nuts from the kit. Install right side (Passengers side) manifold and carburetor in the same manner.
26. Replace the distributor cap and ignition wires.
27. Install the cross bar bracket on the right side (Passenger side) carburetor, using the lock washer and bolts provided. FIGURE C. **DO NOT INSTALL THE LEFT SIDE BRACKET AT THIS TIME. DUE TO THE LENGTH REQUIRED FOR THE CROSSBAR TO SEAT PROPERLY IN THE BRACKET, THE RIGHT AND LEFT SIDE ASSEMBLY OF PARTS CANNOT BE DONE SIMULTANEOUSLY.**

FINAL INSTALLATION

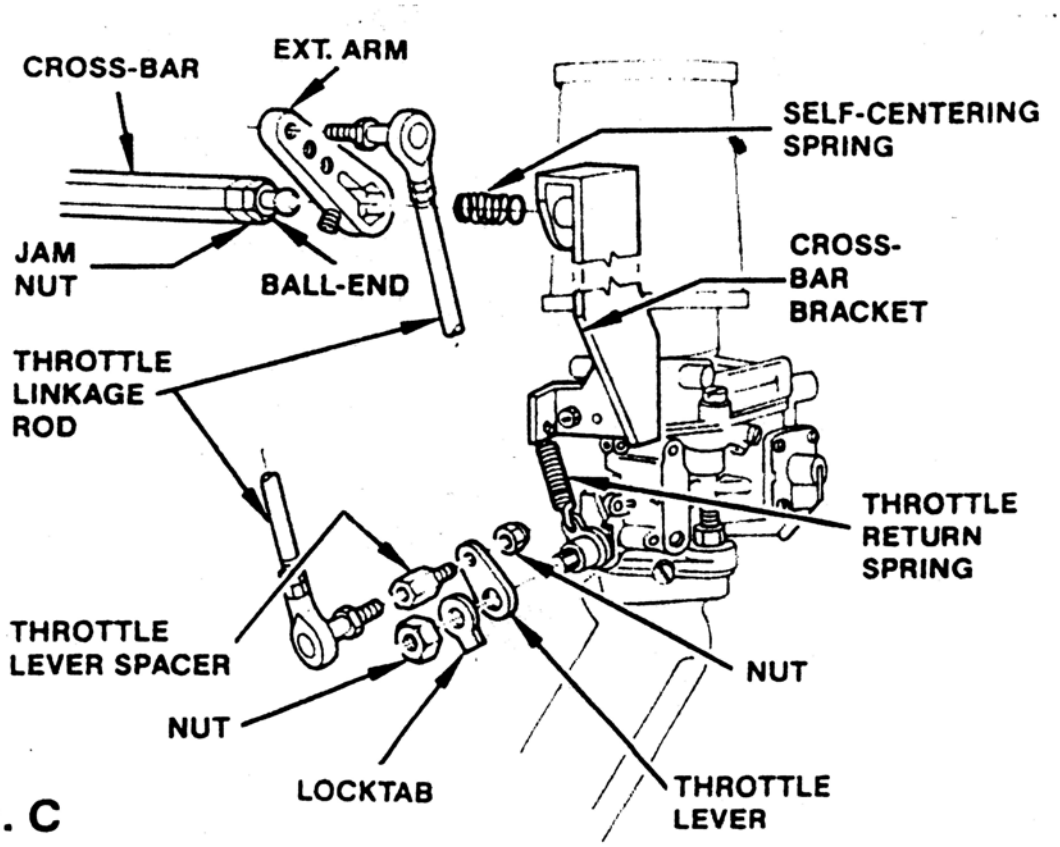


FIG. C

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.**

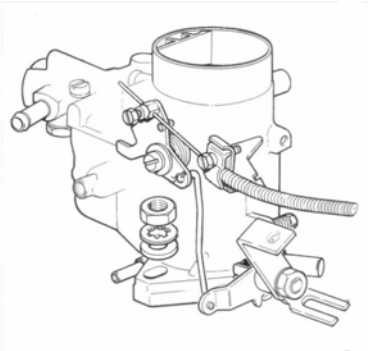
ALL technical support and warranty issues will be handled through the manufacture. REDLINE @ 1-800-733-2277 ext 7457.

WEBER 34-ICT / ICH

CARBURETOR SET UP AND LEAN BEST IDLE ADJUSTMENT

34 ICT

Base line Settings
Speed Screw: 1 3/4 turns in
Mixture Screw: 2 turns out



It is most important to verify all linkage and levers are installed without binding and the linkage opens to full throttle position 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.

CALIBRATIONS MAY VARY DUE TO REGIONAL FUELS AND STATE OF ENGINE TUNE AND PERFORMANCE. POOR RUNNING QUALITY DOES NOT MEAN YOU HAVE A CARBURETION PROBLEM. THE ADVANTAGE OF THE WEBER CARBURETOR IS ITS EASE OF ADJUSTMENT AND TUNING.

"LEAN BEST IDLE" Procedures

After confirming the linkage allows the throttle to seat against the Idle Speed Screw. Back off the Idle Speed Screw until it doesn't touch the throttle lever. Turn the Speed Screw in until it contacts the throttle lever and turn it in 1 3/4 turns. Repeat this with the other carburetor. Turn the Mixture Screw in until it "LIGHTLY" seats, then back out the screw 2 full turns.

a. 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.
b. First, turn in each 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 each screw 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 these procedures with each mixture screw.
c. Now you may adjust the Idle Speed Screw. It should be sensitive and only "require" ½ turn out to lower the idle speed. The Speed Screw should never be in more than 1 3/4 turns in.
d. These carbs are 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 never opened more than 1 3/4 turn in maximum.**
e. After synchronizing multiple carbs, reconfirm steps b. c. & d.

Simple Rules for low speed calibration

If your mixture screw is out more than 2 1/2 turns then the Idle jet is too lean (too small). When the mixture screw is out less than 11/2 then the Idle jet is too rich (too large). **These assumptions are based on the fact that the idle speed screw setting is not opened more than 1 3/4 turns.** If the speed screw has to be opened 1 3/4 or more turns then this is also an indication of a lean condition or a vacuum leak and 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.

Pump By-pass Valve:

The pump by-pass valve is designed to by-pass a percentage of the fuel delivered to the accelerator pump nozzle/jets. We include the zero by-pass valve in our jet kit, which can deliver all of the available fuel to the engine and NOT allow any fuel to by-pass back into the fuel bowl. This will increase the duration and volume of the pump shot with the original pump nozzle/jets. The accelerator pump by-pass valve is located in the bottom of the fuel bowl. One is required per carburetor.

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.

Carburetors: 34-ICT & 34-ICH
Shown in Figure "A", the idle speed screw **isn't** turned in more than **1 ¾ 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 ¾ 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 ¾ turns MAXIMUM** or, you will experience a rich idle condition, a stumble off idle, "flooded" hard starting, "dieseling" or run on.

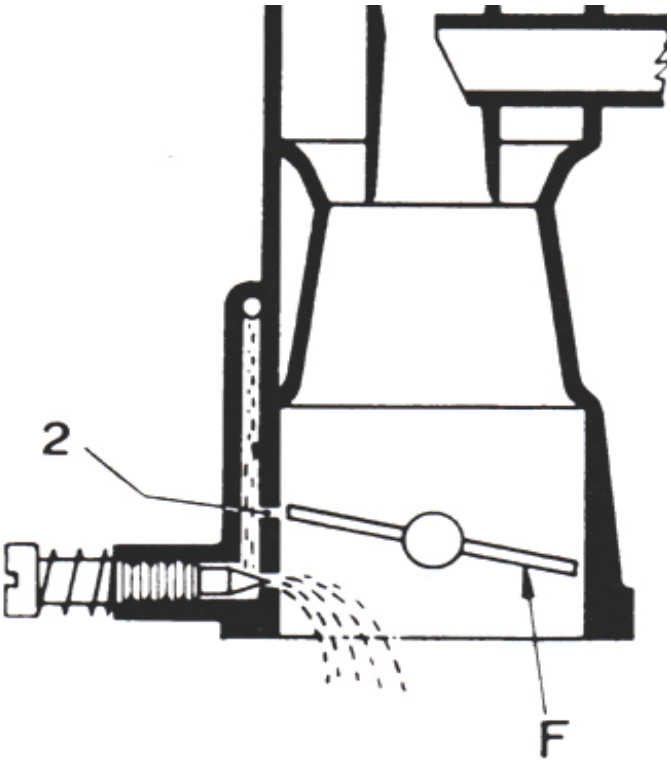


Figure A
Correct Throttle Position

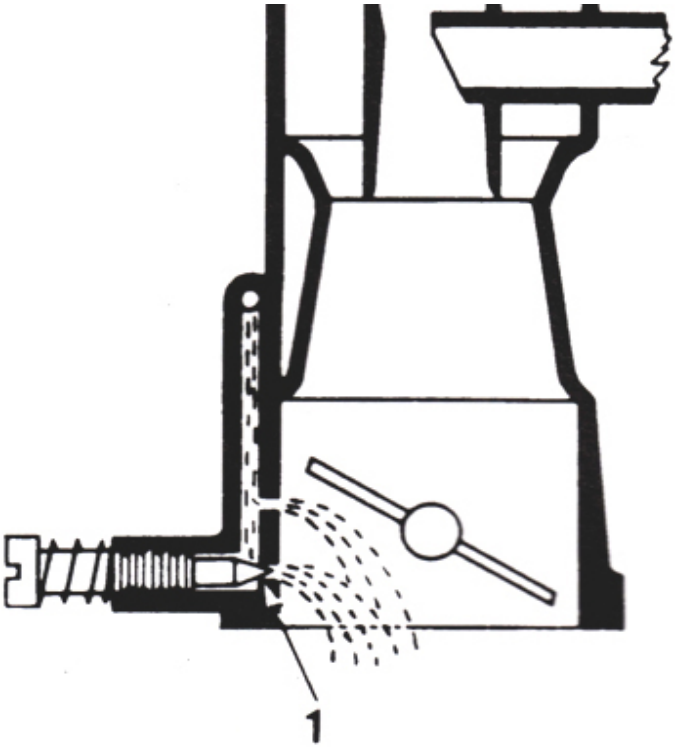


Figure B
Enrichening Holes **Exposed**

WEBER dual 34-ICT
PRO BUG HEX LINKAGE, by REDLINE
VW TYPE-I, III, IV,

LINKAGE KITS:

VW Type-I:
99007.411

VW Type-III:
99007.311

VW Type-IV:
99007.412

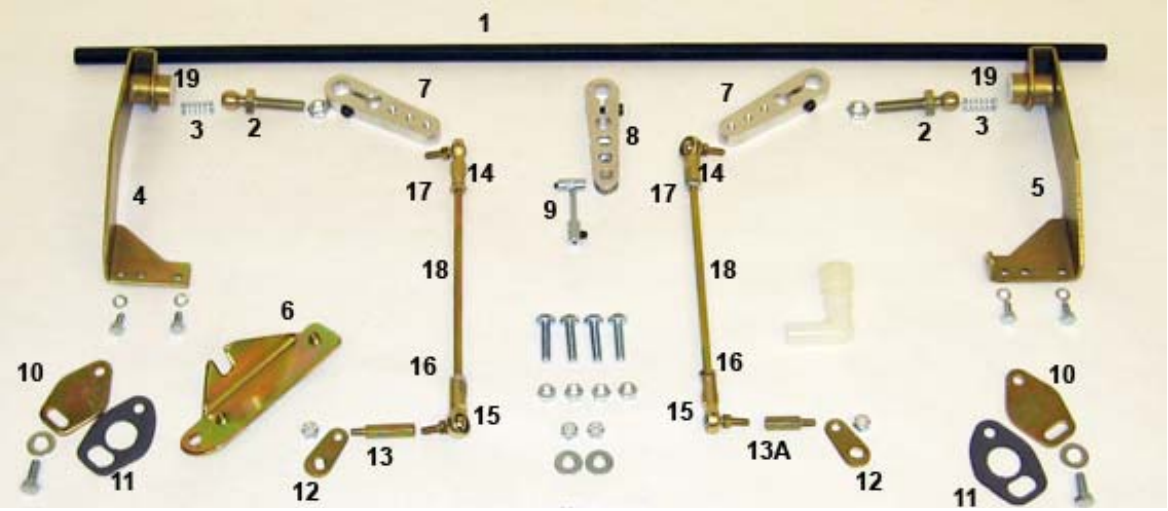


Illustration #	Part Number	Description
1	444.411.02	Hex Cross Bar Type-I (26.25”)
1	444.411.02	Hex Cross Bar Type-IV (26.25”)
1	444.311.02	Hex Cross Bar Type-III (27.75”)
2	99024.125	½” Ball End
3	444.311.11	Ball End, Spring Tensioner
4	444.411.03B	Cross Bar Bracket, Left Hand Type-I (long)
4	444.311.03B	Cross Bar Bracket Left Hand Type-III, IV (short)
5	444.411.04B	Cross Bar Bracket Right Hand Type-I (long)
5	444.311.04B	Cross Bar Bracket Right Hand Type-III, IV (short)
6	444.411.11	Coil Bracket
7	444.311.07B	Hex Rod Lever, Common
8	444.311.08	Hex Rod Lever, Acc. Cable
9	444.411.09	Acc. Cable Shortner
10	99024.414	Heat Tube, Block Off Plates Type-I
11	99024.415	Heat Tube, Block Off Gaskets Type-I
12	444.311.05	Throttle Levers
13	444.411.12	Rod End Spacer, Left Hand (long)
13A	444.311.10	Rod End Spacer, Right Hand (short)
14	99024.129	Rod End Right Hand (Silver)
15	99024.128	Rod End Left Hand (Gold)
16	444.8456.11	10-32 Jam Nut Right Hand (Silver)
17	99024.304	10-32 Jam Nut Left Hand (Gold)
18	99024.107	Hex Rod 6 ½” Type-I
18	99024.102	Hex Rod 1 ½” Type-III
18	99024.104	Hex Rod 3 ½” Type-IV
19	444.311.09	Nylon Bushing

REDLINE SYNCHROMETER

Calibrated synchronizing instrument

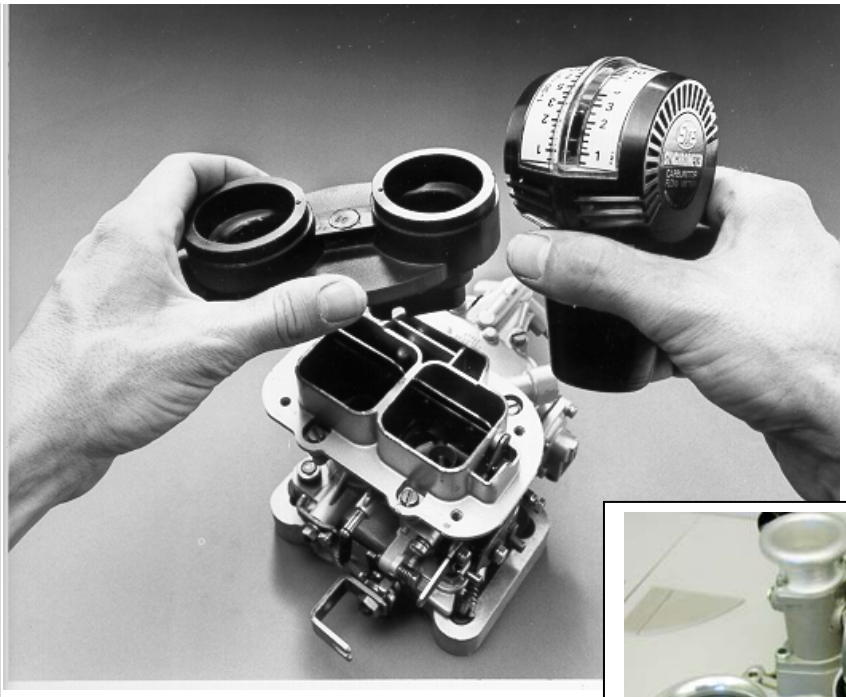
No restriction full flow carburetor balancing tool !

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 ½" 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

REDLINE FUEL MANAGEMENT

PRO-TUNER SET

GENERAL REFERENCE OPTIONS

DUAL IDF's

V8 48-IDA's

DUAL 34-ICT's Volkswagen