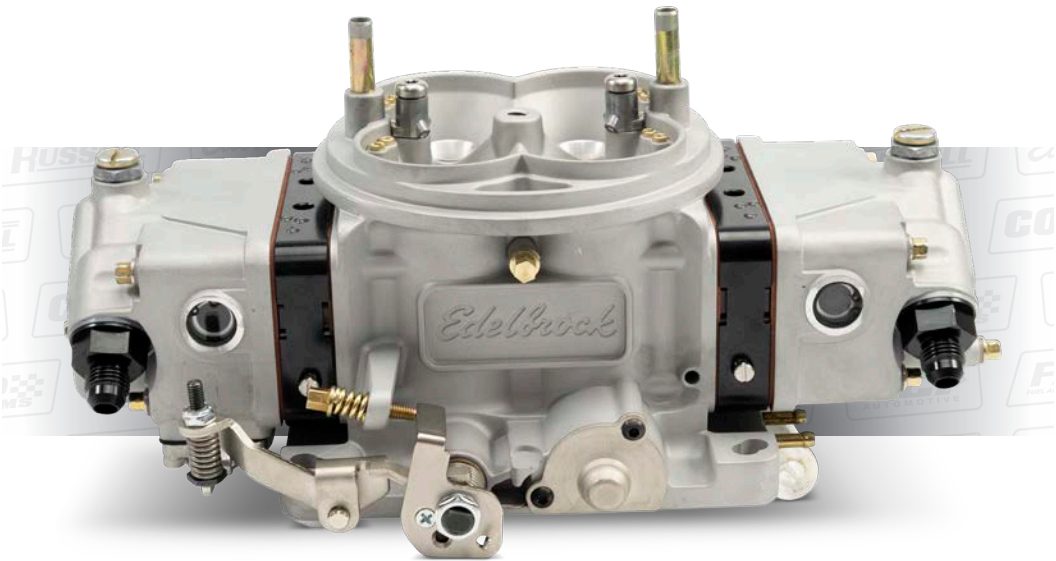




VRS-4150

SERIES CARBURETOR



INSTALLATION INSTRUCTIONS

PLEASE study these instructions carefully before beginning this installation. Most installations can be accomplished with common tools and procedures. However, you should be familiar with and comfortable working on your vehicle. If you do not feel comfortable performing this installation, it is recommended to have the installation completed by a qualified mechanic. If you have any questions, please call our **Technical Hotline at: 1-800-416-8628**, 7:00 am - 7:00 pm, Central Standard Time, Monday through Friday.

DESCRIPTION: Edelbrock VRS-4150 Carburetors have been calibrated, factory flow-tested, and preset. Please read all instructions prior to installation. **Edelbrock VRS-4150 Carburetors are non-emissions carburetors, check your local emissions laws before installing.**

KIT CONTENTS: VRS-4150

- | | |
|---|--|
| <input type="checkbox"/> 1 Installation Instruction Sheet | <input type="checkbox"/> 1 Black Primary to Ultra Progressive |
| <input type="checkbox"/> 1 Warranty Card | Secondary Link Ultra Progressive |
| <input type="checkbox"/> 1 Square-Bore Base Gasket | <input type="checkbox"/> 1 Silver Primary to Secondary Link (1:1 |
| <input type="checkbox"/> 1 Air Cleaner Gasket | Opening Rate) |
| <input type="checkbox"/> 1 Air Cleaner Stud (5/16" -18 UNC) | |

TOOLS RECOMMENDED FOR INSTALLATION

- | | |
|---|---|
| <input type="checkbox"/> Sockets/Wrenches/AN Wrenches | <input type="checkbox"/> Screwdrivers & Torx Driver (TPS Cover) |
| <input type="checkbox"/> 1/4" Hex Nut Drive | |

PARTS RECOMMENDED FOR INSTALLATION

- | | |
|---|---|
| <input type="checkbox"/> PN 8008 Carburetor Stud Kit Zinc
Finish 1 1/2" Overall Length | <input type="checkbox"/> PN 36018 Throttle Position Sensor
(if desired) |
| <input type="checkbox"/> PN 1207 Pro-Flo Chrome 14" Round Air
Cleaner with Paper Element | <input type="checkbox"/> PN 8041 Throttle Cable Bracket |
| <input type="checkbox"/> PN 8100 Adjustable Fuel Log for
Dual Inlet Carburetors | <input type="checkbox"/> PN 8005 Universal Throttle Return
Spring Kit (or equivalent) |
| <input type="checkbox"/> PN 641192 Russell -8 AN Dual Inlet Fuel
Line with 10-1/2" spacing for
7/8" -20 inlet threads.
(or equivalent) | <input type="checkbox"/> New Fuel Filters |
| | <input type="checkbox"/> Fuel System Regulated to 7 psi
maximum and 5 psi minimum. Use of
low pressure high flow components
recommended. |

CHECK THE FOLLOWING BEFORE BEGINNING INSTALLATION

- Replace or add an in-line fuel filter. Dirt (i.e. corrosion residue or other debris) found in carburetor will void your warranty.
- Check and replace the air filter if necessary.
- Check PCV valve and replace if clogged.
- Check all hoses for leaks or cracks and replace if necessary.
- Check fuel system for proper operation. Replace or upgrade if necessary.
- Check the intake manifold and cylinder head gaskets for leaks and replace if necessary.
- Check the ignition system: clean and gap or replace spark plugs, plug wires, and adjust ignition timing to proper specifications.

IMPORTANT WARNINGS REGARDING YOUR EDELBROCK VRS-4150 CARBURETORS

**For a Successful Installation, Read This Page
Before Beginning the Installation.**

WARNING: Proper installation is the responsibility of the installer. Improper installation will void your warranty and may result in poor performance and engine or vehicle damage.

When working around gasoline, always work in a well ventilated area and keep all open flames, sparks, and other sources of ignition away from the work area. Failure to do so can result in a FIRE or EXPLOSION.

- **Edelbrock VRS-4150 Race and Performance carburetors ARE NOT for computer-controlled applications.** This includes some 1981 & later GM vehicles with Rochester Q-Jet carburetor (*will have a 2-wire plug that connects to the front of the carb*) and some 1981 & later Ford vehicles with automatic overdrive (AOD) transmissions.
- **The use of a new fuel filter between the fuel pump and carburetor is required.** Failure to do so will void the manufacture's warranty of the carburetor. It's good practice to keep the filter away from heat and not allow it to come in contact with any part of the engine.
- **Do not use more than 7 psi fuel pressure.** Excessive fuel pressure may cause flooding. If the vehicle has an adjustable fuel-pressure regulator, it is highly recommended to set it to 6.0 psi. With most fuel pumps, the minimum fuel pressure is encountered at high rpm and wide-open-throttle. Fuel pressure should not drop below 2.0 psi. If it does, a fuel pump with more capacity may be required. Edelbrock mechanical or electric fuel pumps are highly recommended for all Edelbrock VRS-4150 carburetors.

WARNING: EDELBROCK CARBURETORS ARE NOT CALIBRATED FOR OR COMPATIBLE WITH ALCOHOL OR E85 PUMP FUEL. USE OF ALCOHOL OR E85 IN YOUR EDELBROCK CARBURETOR WILL DAMAGE YOUR CARBURETOR AND VOID ALL MANUFACTURE'S WARRANTIES. THESE FUELS CAN ALSO DAMAGE OTHER FUEL SYSTEM COMPONENTS, UNLESS SPECIFICALLY DESIGNED FOR USE WITH ALCOHOL OR E85 FUELS.

- **Blended Fuels** - Typically, two types of blended fuels are available: E10 and E15. E10 is a blend of fuel which contains no more than 10% ethanol, while E15 contains no more than 15% ethanol. As long as there is no more than 10% ethanol mixed with the gasoline, your carburetor will function properly. As the percentage of ethanol climbs above 10%, a richer calibration may be required. Also, because ethanol is more volatile than gasoline, hard hot starting and poor hot weather driveability may result.

Other blended fuels may contain either methanol or alcohol blended with gasoline. Methanol blended fuel should not be used in your Edelbrock VRS-4150 carburetor as it will cause corrosion of the fuel system components. It can also cause rapid failure of seals, gaskets, diaphragms pump plungers and floats.

Ethanol Blended fuels are much less damaging than methanol, **VRS-4150 floats are compatible with ethanol but not methanol.**

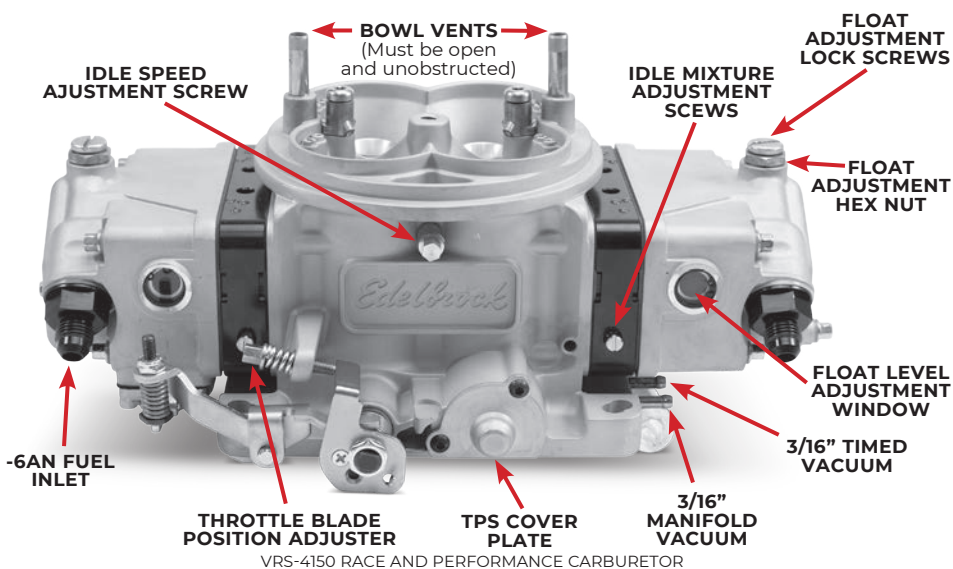
- **Excessive under hood temperature:** Ensure fuel line is not located too close to heat sources such as the exhaust or block, causing expanding fuel to be forced past the needle and seat. Fuel can also boil inside the carburetor due to missing gaskets, spacers, or heat shields. For additional information on Insulator Spacers, please visit our website at www.edelbrock.com.

If you have any questions or concerns with the installation or performance, do not return to the carburetor to the retailer...call the Edelbrock Carb Tech Hotline at 800-416-8628 from 7am - 7pm CST Monday-Friday.

Please also visit the Edelbrock website to view the complete Owner's Manual, carburetor calibration reference carts and other technical information not found in these instructions.

INSTALLATION PROCEDURE

Figure 1 - Fittings and Vacuum Port Locations



BEFORE REMOVING OLD CARBURETOR

1. Determine if the distributor vacuum port is timed (no vacuum at idle) or full (vacuum present at idle).

With the engine at operating temperature and idling, pull the vacuum advance hose off of the carburetor and “feel” for vacuum by putting your finger on the vacuum port (**See Fig. 2**). If you feel vacuum it uses full time vacuum. If you need to crack open the throttle to feel vacuum your distributor uses timed vacuum.



2. If your distributor has timed vacuum advance, you will hook the vacuum hose from the distributor to the inner 3/16” diameter vacuum port on the new carburetor. If it has full vacuum advance, it will be hooked up to the outer 3/16” diameter port.

EDELBROCK CARBURETOR INSPECTION

1. Check for possible damage to the carburetor.
2. Make sure all throttle linkages operate freely.
3. Ensure that all fuel inlet, vacuum ports and throttle bores are free from packing material.

CARBURETOR REMOVAL

1. Prior to removal, make sure that the engine is cool.
2. Disconnect the negative battery cable from the battery.
3. Remove air cleaner. Be sure to carefully disconnect any hoses from the air cleaner and note their location for reinstallation. You may want to mark them with masking tape for easy reference.

4. Disconnect throttle linkage, kickdown linkage (certain automatic transmission applications only), cruise control (if equipped) and any return springs if present.

NOTE: Check carefully for the precise location of all these linkages and return springs. You may want to mark them with masking tape for easy reference.

5. Disconnect all wires, tubes, and hoses from carburetor and note their locations.

6. Carefully remove the fuel line from the carburetor. **TAKE EXTREME CARE NOT TO SPILL ANY EXCESS FUEL.** Place a rag underneath the fuel line to absorb any spillage that may occur. Certain models require two wrenches to remove the fuel line; one to hold the fitting on the carburetor and the second to turn the fitting on the fuel line. Use a tubing wrench to avoid rounding the tube fitting nut.

7. Remove mounting nuts or bolts and washers. Be sure to put them where they won't fall into the intake manifold upon carburetor removal.

8. Remove carburetor, being careful not to spill any dirt into the intake manifold. Immediately place a clean rag into the intake manifold to keep foreign objects out.

9. Remove old mounting gasket and thoroughly clean mounting surface. Compare old carb gasket to the gasket included with your Edelbrock carburetor. VRS-4150 carburetors are only compatible with 4150 style square bore or 4500 style intake manifolds. 4500 manifolds require a 4500 style carb gasket.

CARBURETOR PREPARATION

1. Compare the throttle arm of your new carburetor with the old one to be sure that all required linkages will hook up. Install the proper throttle and transmission linkage for your particular application. Throttle stud is removable and must be installed in the proper location.

2. Check and prepare carburetor for proper vacuum fitting installation (power brakes, PCV, distributor, transmission, etc.).

CARBURETOR INSTALLATION

1. Remove rag from intake manifold and install new studs, manifold gasket and carb gasket. When installed, there should be about 1/4" of stud exposed above the nut. If the stud is too long, it will be difficult to adjust the idle mixture screws.

2. Hand tighten with a short wrench, alternating between diagonally opposed nuts.

IMPORTANT NOTE: *Check for interference between the accel pump well, lever and the intake manifold.*

3. Connect all throttle and transmission linkages and throttle return springs. You may have to cut, bend or modify your current throttle cable brackets to fit the new carburetor, or use Edelbrock Throttle Cable Bracket PN 8041.

IMPORTANT NOTE: *With engine OFF, make sure that there is no interference when opening and closing the throttle. Be sure there is no binding or hanging up between idle and wide open throttle, as this could cause the throttle to stick open, resulting in loss of engine speed control.*

4. Connect all vacuum hoses to their proper location on the carburetor (**See Fig. 1 on page 3**). Replace hoses that appear brittle or cracked to prevent vacuum leaks.

5. Connect fuel lines to carburetor. Avoid contact with any sharp edges or areas of extreme heat.

6. Install new air cleaner gasket and air cleaner stud (supplied). The VRS-4150 carburetors are threaded for 5/16" -18 studs. (3" included). Install air cleaner, making sure it does not contact the carburetor linkage or fuel line, and has proper hood clearance. We recommend Edelbrock Pro-Flo chrome air cleaner #1207 with paper element or #1206 with cotton gauze element. Both are low profile 14" diameter with 3" tall element.

7.CAUTION: The VRS series carburetors are 1/2" taller than standard carburetors. Check hood clearance carefully especially the carb stud, trim as necessary.

NOTE: Running without an air cleaner is strongly discouraged for a street-driven vehicle. Dirt and varnish will accumulate in critical bleeds and upset the fuel metering. Dirt and debris may easily get into the fuel bowl through the bowl vents or larger bleeds and cause a multitude of problems.

8. Recheck all linkage for smooth throttle operation.

9. Reconnect the negative battery cable from the battery.

IMPORTANT WARNING BEFORE STARTING THE ENGINE

Make sure to read the following before starting the engine.

- **Be sure all vacuum lines are properly connected.**
- **Check for signs of flooding before operating vehicle.** If flooding occurs, see "If You Have a Problem" section on Page #9.
- **Do not pump the accelerator more than two or three times with the engine off.** This will cause fuel to collect on the throttle shaft and may cause flooding.

10. Start engine and check for fuel or vacuum leaks. With engine at normal operating temperature, set idle speed using either 1/4" hex adjuster located on the side of the main body above the Edelbrock logo. Clockwise to lower speed, counter-clockwise to raise it.

CAUTION: Be alert of carburetor flooding when fuel is first applied. Flooding can be caused by dirt, small particles from hose cutting, floats and inlet needles which have settled during shipping, or by other conditions as discussed below. Each Edelbrock carburetor is flow tested in the factory for both air and liquid flow so flooding is rare. However, for safety sake please observe this caution. When the fuel

pump is turned on or when the engine is first started, watch closely for signs of flooding. Fuel level should be up to the middle of the sight glass on the side of the bowl. If flooding is apparent, tap the body of the carburetor lightly with a rawhide mallet or the wooden handle of a small hammer. If flooding continues, pinch the fuel line hose to shut off flow, run the engine to clear the carburetor, and let the fuel line flow again. If flooding still continues, shut off the engine. Clean up any raw gasoline and refer to the "Trouble Shooting" section on page 9.

WARNING: Never pour fuel directly down the carburetor when attempting to start the engine! This may cause a backfire and possible engine compartment fire, resulting in engine or vehicle damage, personal injury, and/or death.

IDLE MIXTURE

The Edelbrock VRS-4150 carburetors have 4 conventional Idle Mixture Screws (IMS) that provide a leaner A/F when turned clockwise and richer A/F when turned counter clockwise. The following procedure should be used to set the idle mixture and speeds.

1. Fully warm engine
2. Air cleaner in place.
3. Set desired speed with the idle speed screw.
4. Adjust all four IMS 1/4" turn at a time to get maximum idle RPM.
5. If the idle speed changes more than 40 rpm, adjust the idle speed screw or the main body.
6. Go leaner just enough to get a 20 RPM drop in speed.
7. This is a Lean-Best Idle Set. Setting richer than this will not improve idle quality or performance, but could tend to foul plugs.

LONG DURATION CAMSHAFT

If the engine has a fairly radical camshaft it may require an excessive amount of throttle opening for idle and/or have low idle vacuum levels. Either condition can lead to poor levels of adjustability and erratic idles.

Another fix for the above condition

is to run as much spark advance as possible at idle. If the distributor is fitted with a vacuum advance unit, connect it directly to manifold vacuum. If you are not able to employ vacuum advance for some reason, then the mechanical curve should have a low limit, which will allow you to use plenty of initial spark advance.

FLOAT ADJUSTMENT

1. Float level adjustment is performed on a running engine. Fuel level should be in the middle of the sight glass. Generally the carburetor as shipped will not require adjustment.

2. If adjustment is required first slightly loosen the lock screw with a large flat blade screw driver. Do not excessively loosen the screw as fuel may leak out. The "nut" is actually a keyed collar, turning it clockwise drives the needle and seat further into the bowl, lowering the fuel level level. Turning it counter-clockwise raises the needle and therefore raising the fuel level.

3. Hold the adjusting nut with a hex wrench and tighten the lock screw. If the level is too high rev the engine to consume the excess fuel in the bowl.

IF YOU HAVE A PROBLEM

- **If your engine has a rough idle or hesitates off-idle**, readjust your idle mixture (see page 6). If you have a vacuum advance unit on your distributor make sure it is connected to the proper vacuum source see Figure2 and Step 2 of Page 4 - "Before Removing Old Carburetor"
- **If flooding occurs it may be caused by: 1)** dirt or debris stuck between the needle and seat; **2)** the floats are out of adjustment or **3)** too much fuel pressure. First, remove the needle and seat and look for foreign debris. Use a fuel filter to prevent this problem in the future. See page 8 for more information on the float level. Make sure fuel pressure does not exceed 7.0 psi. Flooding is not a symptom of a faulty carburetor.
- **If fuel drips from the throttle shaft**, this is caused by excessive pumping of accelerator pedal with engine off or heat soak.

If you have any questions or concerns with the installation or performance, do not return to the carburetor to the retailer...call the Edelbrock Carb Tech Hotline at 800-416-8628 from 7am - 7pm CST Monday-Friday. All returns must be accompanied by the original purchase receipt. The warranty period is 90 days for new VRS-4150 Carburetors

WARRANTY

EDELBROCK warrants its VRS-4150 Race and Performance Carburetors to be free from defects in material or workmanship. This warranty is valid provided that the product is properly installed, subjected to normal use and service and is not modified or changed in any way. This warranty is extended to only the original consumer purchaser, the warranty period is 90 days for Carburetors. Any implied warranty determined to be applicable is limited in duration to the duration of this warranty. Some states do not allow limitations on how long an implied warranty is so the above limitation may not apply to you.

In the event of a defect in material or workmanship, **EDELBROCK'S** sole responsibility is to repair or replace the defective product. This warranty covers the replacement or repair at **EDELBROCK'S** option of the product only and does not cover the cost of removal or installation of the product. Final warranty determination will be the decision of **EDELBROCK**.

EDELBROCK does not warrant products which have been modified or altered outside factory specifications; subjected to conditions such as misuse, neglect, accident, improper installation or adjustment, dirt or other contaminants, weather or corrosion, gum or varnish, use of improper or poor quality fuel or fuel additives, improper fuel pressure and faulty repair or use in other than those automotive applications recommended in a current **EDELBROCK** catalog. Further, there are no warranties which extend beyond those stated here.

EDELBROCK shall not be responsible for (a) actual or alleged labor, transportation or other incidental charges or (b) actual or alleged consequential or other damages incurred by use of **EDELBROCK** VRS-4150 Carburetors. **EDELBROCK GROUP** shall not be liable for any and all consequential damages occasioned by the breach of any written or implied warranty pertaining to this sale in excess of the purchase price of the product.

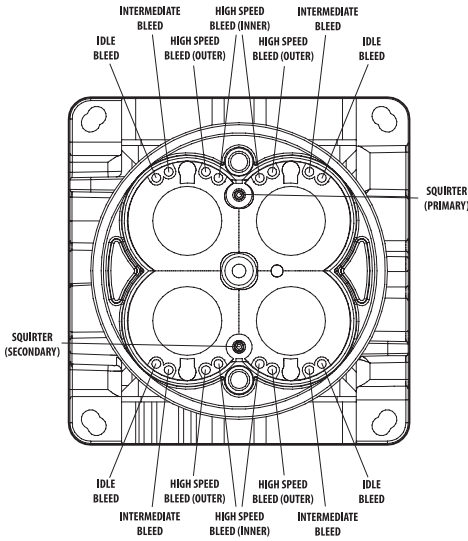
If you have any questions or concerns with the installation or performance, do not return to the carburetor to the retailer...
call the Edelbrock Carb Tech Hotline at 800-416-8628
from 7am - 7pm CST Monday-Friday.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

The general limited Warranty supersedes all prior warranty statements. Inquiries concerning this warranty should be directed to:

Edelbrock Group
8649 Hacks Cross Road
Olive Branch, MS 38654
Tech Line: (800) 416-8628

PRIMARY SIDE



SECONDARY SIDE

CALIBRATION:

ITEM:	PN 1306	PN 1307
Booster	Down-leg	Annular
Idle Air Bleeds (IAB)	.073	.073
Intermediate Bleed	.030	.030
High Speed Bleeds 2 (HSB2)	.037	.058
High Speed Bleeds 1 (HSB1)	.037	.030
Primary Squirter	.031	.033
Secondary Squirter	.031	.033
Jet (Primary)	#66	#68
Jet (Secondary)	#66	#68
Power Valve	4.5Hg	4.5Hg
Power Valve Channel Restrictor (PVCR)	.055	.059

COMPATIBILITY

ITEM	THREAD	NOTES:	EDELBROCK PN
Fuel Bowl Inlets	7/8-20	Comes with -6AN fittings installed	
Jets	1/4-32	Standard – Available in our HDQ line	PN'S 12455-12485
Air Bleeds	#10-32	Standard	
Emulsion Bleeds	#6-32	Standard	
Accel Pump Diaphragm		Standard	PN 12400
Power Valve		Standard	PN'S 12625, 12635, 12645, 12655, 12665
Needle and Seat		Standard, (adjustable .110)	
Bowl Screw Seal		Standard	PN 13112
Pump Cam		Custom due to 1/2" throttle shaft	PN 13110 30 cc PN 13111 50 cc
Metering Blocks		Custom Four Circuit	
Metering Block Gaskets		Custom for four circuit geometry	PN 13101
Bowl Screws	#12-24	Custom 2.80" length	
Float		Custom – 1/8 longer than std.	PN 13108



VRS-4150

SERIES CARBURETOR



**For further information contact the
Edelbrock Technical Department:
Between 7:00 am and 7:00 pm CST,
Monday through Friday
Tech Line: (800) 416-8628
edelbrock.com**