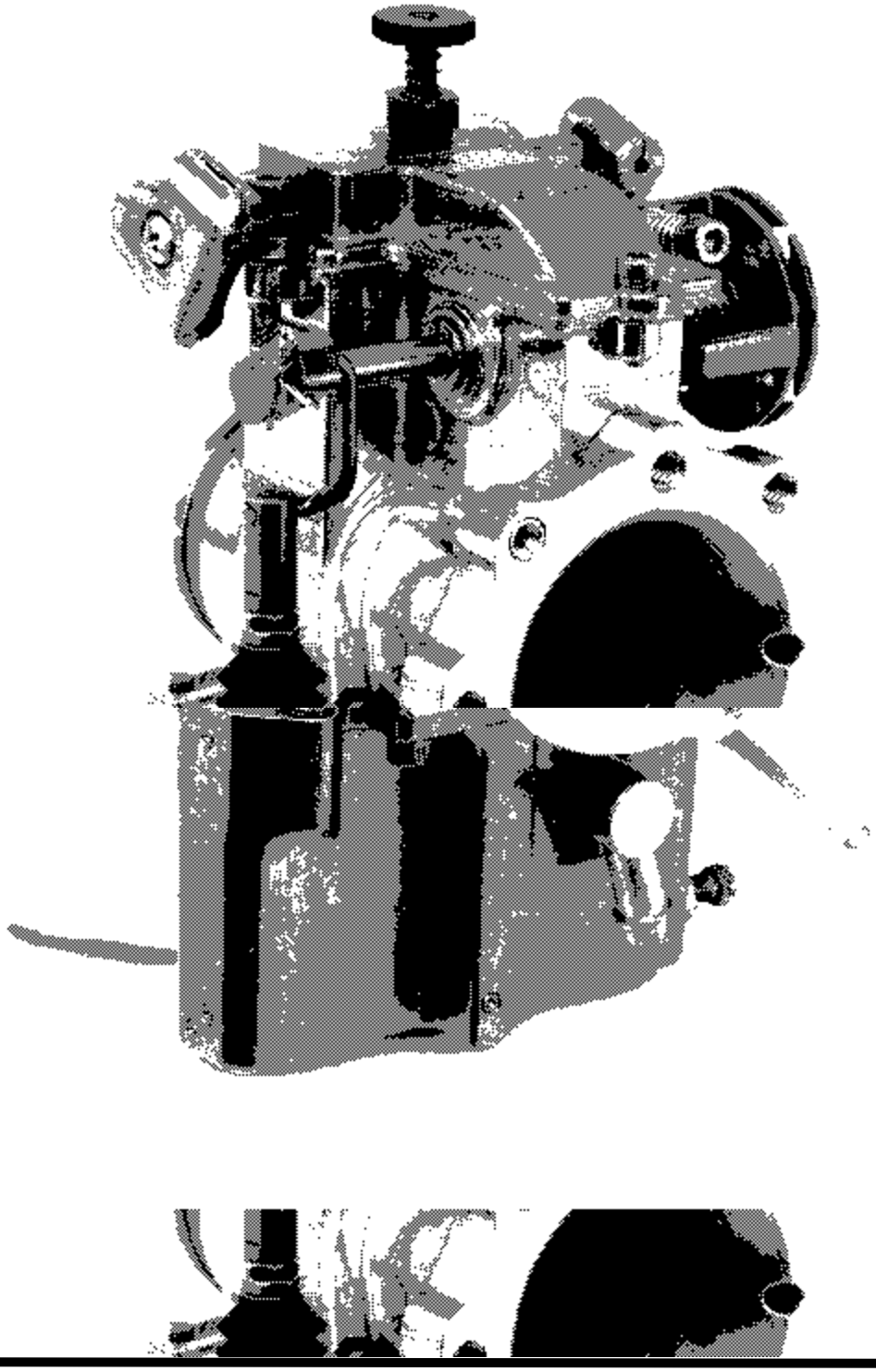
TUNING INSTRUCTIONS

For Harley-Davidson Carburetors



Brochure No. 63-0195

Rev. 8/03

INSTALLATION PROCEDURE

Please study these instructions carefully before installing your new Edelbrock carburetor. This tuning manual is for Harley-Davidson only! If you have any questions or problems, please call our Technical Hotline at: 1-877-888-7504 ext. 2, 8:00 am to 5:00 pm, Monday - Friday, Pacific Standard Time or e-mail us at edelbrock.edelbrock.com.

The Edelbrock Performer Series Carburetor has five (5) adjustments:

1. IDLE SPEED: Mechanical, raises and lowers slide to preferred idle RPM.
2. IDLE MIXTURE (900-1200rpm): Controlled by air bleed.
3. MID RANGE (1300-3500rpm): Controlled by needle setting/size.
4. FULL RANGE (3600-6000rpm): Controlled by main jet.
5. ACCELERATOR PUMP (Off Idle Throttle Response): Controlled by bypass screw on float bowl.

THROTTLE CABLE REQUIREMENTS

NOTE: Edelbrock Performer Series carburetors require the use of a two-cable (push-pull) throttle assembly and cables. Quick Kits and Complete Kits include throttle cable adaptors for use with OE CV throttle cables. For early EVO Big Twin (84-89) and EVO Sportster (86-87) ,OE cables can be used without any adaptors. Shovel Head and Iron Sportster will require use of Edelbrock throttle cables. Models not equipped with a dual cable throttle assembly will require one. Edelbrock offers an economical dual cable throttle assembly part #8273. Edelbrock cables can be used in place of OE cables on all EVO and Twin Cam applications.

	35”	40"	45"	50"
*84-95 Black	8268	8276	8271	8607
*84-95 Stainless	8269	8277	8272	8608
96-up Black	8680	8682	8684	8686
96-up Stainless	8681	8683	8685	8687

Dual cable throttle assembly 8273.

*These cables may also use Edelbrock dual cable throttle assembly part no. 8273.

CARBURETOR REMOVAL

Edelbrock recommends consulting an authorized service manual for make, model and year of motorcycle before disassembly of stock parts.

1. Turn fuel valve off before getting started.
2. Disconnect battery to eliminate the possibility of sparks or accidentally engaging the starter.
3. Remove air cleaner assembly.
4. Disconnect choke cable from its bracket.
5. Disconnect fuel line and vacuum lines from carburetor.
6. Gently remove carburetor from manifold.

NOTE: For removal of CV style carbs, Edelbrock recommends the carb be gently wiggled from side to side (not up and down) while pulling to get carb out of manifold.

MANIFOLD REQUIREMENTS

Edelbrock Quick Kits and Complete kits are designed to work with the stock manifold that was OE on your engine. Some aftermarket manifolds will also work with Edelbrock carburetors. S&S "E" Series and Screamin' Eagle flange mount manifolds will work with Edelbrock flange style carburetors. It is also recommended the manifold being used closely matches the venturi of the carburetor.

BIKE PREPARATION

1. Once stock carburetor and air cleaner have been removed, inspect manifold grommet (CV manifolds only) for tears, nicks or cuts. Replace grommet, if damaged. Stuff a clean dry rag into manifold until carb is installed to keep any debris out of engine.
2. Remove old fuel line and vacuum line (if equipped) and install supplied fuel line and vacuum line.

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3. If replacing throttle cables do so now. Pay close attention to cable routing when removing old cables as you will need to route the new cables in the same location.
   NOTE: If re-using existing cables, bottom adjusters by loosening locknuts and thread adjusting screw so there are no threads showing. Inspect inner cable for kinks or fraying. If cable is in bad condition, it can stick causing loss of control of the motorcycle resulting in injury to you or others. It is recommended damaged or worn cables be replaced.

CARBURETOR INSTALLATION

Edelbrock carburetors come out of the box ready to be installed onto the engine.

1. Remove right side cable bracket end and install throttle cables into cable wheel with the "pull" cable locating in the 8:00 position of the cable wheel and the "push" cable locating in the 11:00 position of the cable wheel. *See Fig. 1*.

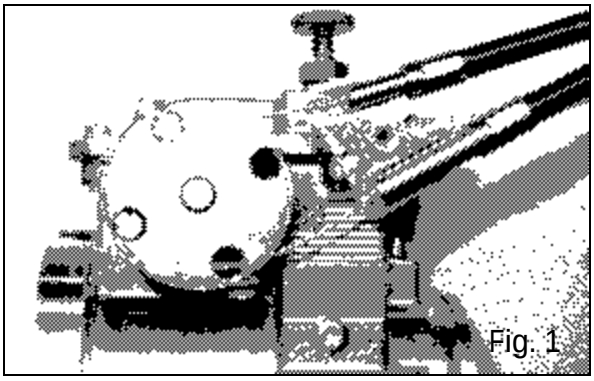
Fig. 1

   NOTE: If using CV throttle cables, the use of the supplied throttle cable adaptors will be required. Install the adaptor with the longer small end onto the "pull" cable. Install the remaining adaptor onto the "push" cable. NOTE: Removal of the small spring on the push cable can be removed if additional free play is needed.
2. Secure cables to cable bracket by replacing cable bracket end and tightening phillips screw.
3. Install fuel line and secure with supplied hose clamp.
4. Install vacuum line onto vacuum port on back of carburetor if engine is equipped with VOES. *See Fig. 2.*

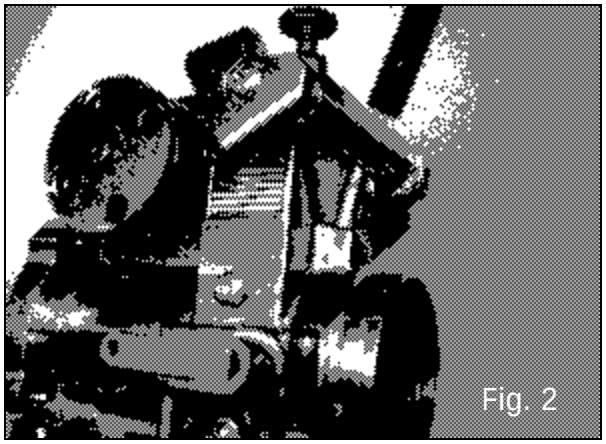
Fig. 2

5. Route enrichener cable over manifold and secure into cable bracket on left side of engine.
6. Mount carburetor to manifold using supplied flange gasket. NOTE: Before installing carb into CV manifold, lubricate the grommet with a light film of grease or liquid soap.
7. Once carb is secured to manifold, adjust throttle cables by extending adjuster on pull cable until full throttle is achieved at carburetor (slide completely disappears out of venturi). Take up slack in throttle grip by extending adjuster on push cable until there is approx. 1/8" of free play at grip. NOTE: If cables are adjusted too tight, it could cause cables to bind or stick.
8. After cables have been adjusted, rotate handle bars from full right to left several times to ensure cables do not bind or get caught on any obstructions.

AIR CLEANER INSTALLATION

Edelbrock Performer Series carburetors are designed to work with either an Edelbrock air cleaner (supplied in Complete Kits) or any other air cleaner designed to work with the CV carburetor.

Edelbrock Performer Series carburetor complete kits include an air cleaner that requires the use of any EVO Sportster, EVO Big Twin or Twin-Cam air cleaner cover that fits the factory air cleaner.

If re-using an existing CV style air cleaner, re-assemble onto Edelbrock carburetor in reverse order of dis-assembly from CV carburetor.

If installing Edelbrock air cleaner, see section pertaining to your motor.

1993-LATER EVO BIG TWIN, 1991-LATER EVO SPORTSTER,TWIN-CAM ENGINES:

1. Attach chrome hanger brackets to heads using hollow breather bolts and black fiber washers with one washer on each side of hanger bracket. Do not tighten bolts yet.
2. Thread plastic "T" fitting into backing plate until snug with the "T" sitting vertical. *See Fig. 3.*

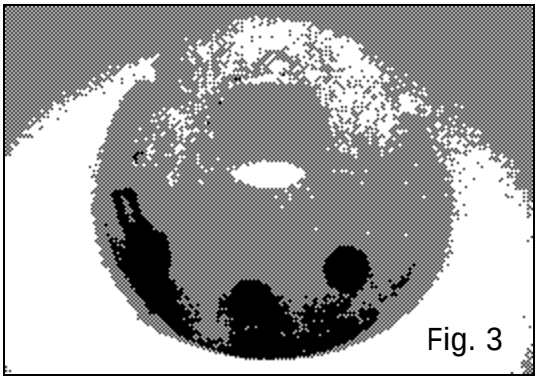
Fig. 3

3. Attach backing plate and gasket to carburetor using three (3) ¼-20X1/2" button head screws. NOTE: It is recommended that Loctite 242 (blue) or equivalent be used on all three screws before installing.
4. Line up ¼" holes on each side of backing plate with the slotted ¼" holes in each hanger bracket attached to heads in step 1.
5. Determine spacing between hanger brackets and backing plate and which spacer or combination of spacers will best fill in the gap.

NOTE: Make sure the carb is securely attached to the manifold before checking the spacing. If more spacers are used than required, it can pull the carb out of a CV manifold causing an air leak.

6. Attach the hanger brackets to the backing plate using either the ¼-20X1" or the ¼-20X11/2" button head screws by going through the backing plate and spacers then through the hanger brackets. Place 1/4X1/2" washer then ¼" Nylock on end of screw to secure backing plate and spacers to hanger brackets.
7. Align carb as vertical as possible and tighten the Nylock nuts on each hanger bracket.
8. Tighten breather bolts in heads. Do not over tighten as bolts are hollow and can break much easier than a standard bolt.
9. Connect 3/8" breather hose supplied in hardware kit onto the barb of the front hanger bracket. Cut the hose so it will fit onto the "T" fitting without any kinks. Connect the remaining piece of hose to the barb of the rear hanger bracket and trim the opposite to fit onto the "T" fitting. *See Fig. 4.*


Fig. 4

10. Install filter and sub cover onto backing plate and secure with ¼-20X1" screws supplied with air cleaner assembly.
11. Attach stock (OEM) EVO Sportster, EVO Big Twin or Twin-Cam air cleaner cover with stock screws. NOTE: It is recommended Loctite 242 (blue) or equivalent be used on cover screws.

1984-1992 EVO BIG TWIN, 1986-1990 SPORTSTER

1. Attach chrome hanger brackets to heads using the two 5/16-18X11/2" chrome button head bolts and chrome reducer sleeves. Do not tighten bolts yet.
2. Thread plastic elbow into backing plate until snug with the barb facing down.
3. Attach backing plate and gasket to carburetor using three (3) ¼-20X1/2" button head screws. NOTE: It is recommended that Loctite 242 (blue) or equivalent be used on all three screws before installing.
4. Line up ¼" holes on each side of backing plate with the slotted ¼" holes in each hanger bracket attached to heads in step 1.
5. Determine spacing between hanger brackets and backing plate and which spacer or combination of spacers will best fill in the gap. NOTE: Make sure the carb is securely attached to the manifold before checking the spacing. If more spacers are used than required, it can pull on the carb and manifold resulting in an air leak or broken manifold.

6. Attach the hanger brackets to the backing plate using either the ¼-20X1" or the ¼-20X11/2" button head screws by going through the backing plate and spacers then through the hanger brackets. Place 1/4X1/2" washer then ¼" Nylock on end of screw to secure backing plate and spacers to hanger brackets.
7. Align carb as vertical as possible and tighten the Nylock nuts on each hanger bracket.
8. Tighten hanger bracket bolts in heads.
9. Connect 3/8" breather hose supplied in hardware kit onto the barb of the elbow with the other end connecting to the crank case breather.
10. Install filter and sub cover onto backing plate and secure with ¼-20X1" screws supplied with air cleaner assembly.
11. Attach stock (OEM) EVO Sportster or EVO Big Twin air cleaner cover with stock screws. NOTE: It is recommended Loctite 242 (blue) or equivalent be used on cover screws.

1966-1984 SHOVEL HEAD

1. Loosen top center case bolt and remove nut from right side.
2. Remove bottom flange bolt holding carb to manifold.
3. Install flat steel air cleaner support strap on the case bolt and replace manifold bolt through the top hole of the strap.
4. Replace nut on case bolt and torque to proper specs. Tighten manifold to carb bolts at this time.
5. If connecting case breather to air cleaner, thread elbow into backing plate until snug with elbow pointed down.
6. Attach backing plate and gasket to carburetor using three (3) ¼-20X1/2" button head screws. NOTE: It is recommended that Loctite 242 (blue) or equivalent be used on all three screws before installing.
7. Install filter and sub cover onto backing plate and secure with ¼-20 x 1" screws supplied with air cleaner assembly.
8. Attach stock (OEM) EVO Sportster or EVO Big Twin air cleaner cover with stock screws. NOTE: It is recommended Loctite 242 (blue) or equivalent be used on cover screws.

1957-1985 IRON SPORTSTER

1. Remove outside rear bolt from the front cylinder lifter block.
2. Install threaded stud into vacant hole where bolt was removed from lifter block with the ½-20 threads up.
3. Remove rubber plug from bottom center of backing plate.
4. If connecting case breather to air cleaner, thread elbow into backing plate until snug with elbow pointed down.
5. Attach backing plate and gasket to carburetor using three (3) ¼-20 x 1/2" button head screws. NOTE: It is recommended that Loctite 242 (blue) or equivalent be used on all three screws before installing.
6. Install steel air cleaner support bracket with bends over threaded stud with the long end up and secure with washer and ¼-20 Nylock nut. Do not completely tighten yet.
7. Line up hole in backing plate that plug was removed from in step 3 with the slotted hole in support strap and secure with ¼-20X3/4 button head screw, washers and Nylock nut.
8. Tighten Nylock nut holding strap to lifter block stud.
9. Install filter and sub cover onto backing plate and secure with ¼-20X1" screws supplied with air cleaner assembly.
10. Attach stock (OEM) EVO Sportster or EVO Big Twin air cleaner cover with stock screws. NOTE: It is recommended Loctite 242 (blue) or equivalent be used on cover screws.

BACKING PLATE MODIFICATION FOR CV STYLE AIR CLEANER TO BE USED WITH EDELBROCK/EPS CARBURETORS

All new Edelbrock/EPS carburetors accept either Edelbrock or any CV style air cleaner.

Since the Edelbrock/EPS carburetor uses an air bleed jet, a slight modification will need to be made to the CV backing plate.

1. Using the supplied A/C gasket as a template, line the gasket up with the screw holes on the air cleaner flange side of the carburetor. *(See Fig. 5).*

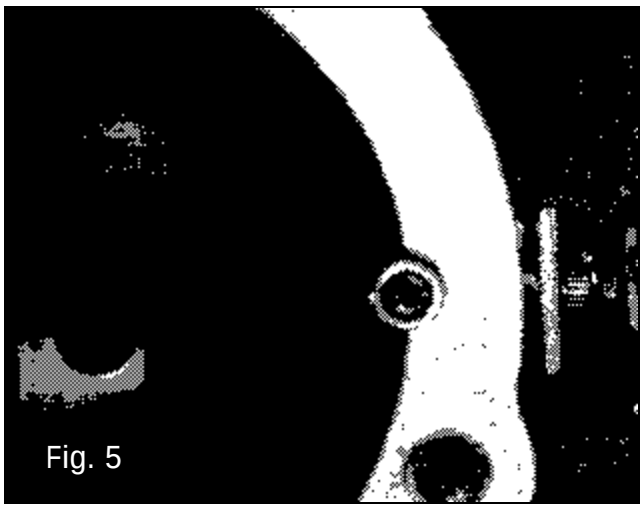
Fig. 5

2. Make a mark on the backing plate for the location to be filled. *(See Figure 6).*


Fig. 6

3. Using a round file, file the backing plate until no part of the backing plate is covering the air bleed. *(See Fig. 7).*

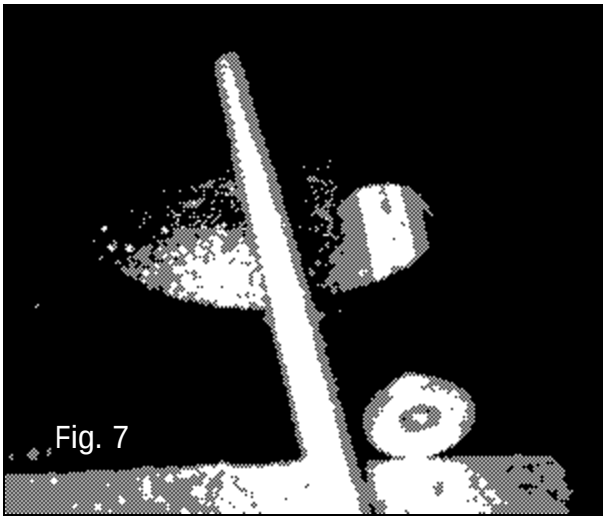
Fig. 7

NOTE: Make sure to only remove enough material fromthe backing plate so the air bleed screw has no obstructions. *(See Figure 8).*

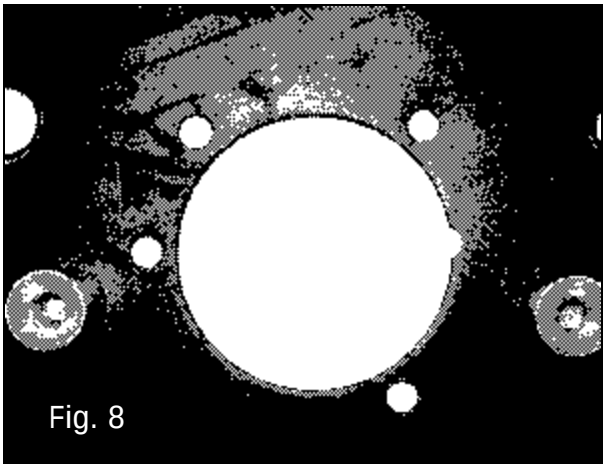
Fig. 8

NOTE: OEM CV backing plates will not work with the Edelbrock Carburetor.

CARBURETOR OPERATION

The Edelbrock Performer Series carb is equipped with an enrichener system for cold starts. The enrichener should be used for "starting" only when motor is cold. On some occasions, a cold motor may fire without the use of the enrichener. The enrichener will not be needed in most cases as the accelerator pump can be used to prime the engine by simply twisting the throttle two times before attempting to start engine.

1. Pull enrichener cable out.
2. Engage starter until motor fires. NOTE: It may be necessary to crack the throttle open approx 1/8 of an inch to help the motor turn over faster and aid in starting.
3. After engine fires, it may require the throttle be held at a high idle (1000-1200 RPM) for several seconds to warm engine. NOTE: If enrichener was used to start engine, idle will become rough when engine no longer requires the use of the enrichener circuit.

   If a cold motor does not want to start, see *Troubleshooting* section at end of this manual.

HOT STARTS

Now that the engine has been run and is warm, the enrichener will not be necessary.

NOTE: DO NOT OPEN THE THROTTLE ON A PUMPER SERIES CARBURETOR IF THE ENGINE IS WARM AND NOT RUNNING! DOING THIS WILL FLOOD THE ENGINE, MAKING IT DIFFICULT TO RESTART.

If you think the engine is flooded, you can clear out the cylinders by SLOWLY opening the throttle to wide open and engage starter for 3-4 seconds. Once this is done, the engine should fire normally.

If hot start problems persist, please refer to the *Troubleshooting* guide at the end of this manual.

ADJUSTING CARBURETOR

Idle Speed Adjustment

The idle adjustment screw mechanically adjusts the idle by keeping the slide slightly open at idle. This will be affected by adjustments made to the air jet or needle adjuster upon tuning the low to mid-range.

The idle speed screw is installed on the carburetor and pre-set at the factory.

1. Start engine and warm for 3-5 minutes.
2. Once engine is warm, set idle to manufacturer's recommended specifications.

NOTE: Idle speed may change when adjustments are made to the air jet or needle adjuster. This will require the repeat of steps (1) and (2).

All Edelbrock Performer Series carburetors come preset from the factory for use on stock based motorcycles with an aftermarket exhaust. Depending on the modifications that have been made to your engine, a slight adjustment to the air/fuel mixture may be necessary.

Before attempting to tune your Edelbrock Performer Series carburetor, new spark plugs are recommended. This will make it a lot easier to tune.

Idle Mixture Adjustment

The idle mixture is controlled by the size of the air bleed located in the mouth of the carburetor. All Edelbrock Performer Series carburetors are manufactured using a .035 (red) air bleed. Each carburetor is shipped with two additional air bleeds for fine-tuning, a .030 (gold) and a .040 (blue). A larger number air bleed will lean the idle mixture while a smaller # air bleed will richen the idle mixture. *See Fig. 9* for air bleed location.

Fig. 9

Before making a change to the idle mixture make sure engine is warm and enrichener is in the "OFF" position. Determine if the engine needs more or less fuel by the way the idles:

Lean Condition

a. Engine won't idle without enrichener on.
b. Popping or spitting through carburetor.
c. Erratic idle (varies in rpm).

Install smaller air bleed to richen mixture.

Rich Condition

a. Black smoke, strong exhaust odor.
b. Rough idling.

Install larger air bleed to lean mixture.

To change idle air/fuel mixture, use a small flat blade screwdriver to remove air bleed from carburetor. Install desired air bleed with a drop of Loctite 242 or equivalent. DO NOT OVERTIGHTEN AIR BLEEDS INTO BODY AS THEY ARE ALUMINUM AND MAY STRIP EASILY!

Air Bleed Color	Size	Part No.
Purple	.020	8170
Black	.025	8171
Gold	.030	8172
Red	.035	8173
Blue	.040	8174
Green	.045	8175
Orange	.050	8176

INITIAL RIDE

NOTE: The engine's street performance is usually the best way to tune the carburetor. Due to different grades of gasoline, gasoline additives, altitudes and riding styles plug readings may differ from engine to engine.
After bike has warmed up and idle speed has been set, it is now time for an initial test ride. While riding the motorcycle pay close attention to the off idle to 1/3 throttle position. In this range, watch and listen for the following:

Lean Condition

a. Flat spot off idle
b. Lag in acceleration
c. Popping or backfiring through exhaust or intake on deceleration.

These problems can be remedied by richening the needle position. Turning the metering adjustment tool to the right does this. It is recommended that adjustments be made two clicks at a time. NOTE: Before making adjustments for this condition, check for intake and exhaust leaks. These leaks have similar symptoms
.

Rich Condition

a. Lazy acceleration
b. Poor mileage
c. Surge at low speeds
d. Poor fuel economy

These problems can be remedied by leaning the needle position. Turning the metering adjustment tool to the left does this. It is recommended adjustments be made two clicks at a time.

NOTE: Before making adjustments for this condition make sure enrichener is completely off (9:00 o'clock position).

OFF-IDLE TO MID-RANGE AIR/FUEL MIXTURE ADJUSTMENT

Off idle to mid-range mixture adjustments are made by raising or lowering the needle height in the slide. The needle adjuster is located in the slide on top of the needle and adjusts the needle height. By turning the center slot on the needle adjuster to the right (clock wise) will richen the mixture, or turning it to the left (counter clock wise) will lean the mixture. These adjustments are referred to as "clicks". Each click equals ¼ of a turn. The usable range is approximately 32 clicks with zero (0) clicks being full rich and thirty two (32) being full lean. The number of clicks is always referred from full rich.

Example: 14 clicks would be 14 clicks from full rich, zero (0) clicks. Edelbrock recommends making 1 or 2 click increments when adjusting needle height.

1. With engine off, open throttle to wide open. Remember to open throttle slowly to avoid flooding.

2. Push red knob down (with throttle still open) and turn until it engages with the needle adjuster and some resistance is felt. *See Fig. 10*. Once resistance is felt, it is now time to make your adjustment.

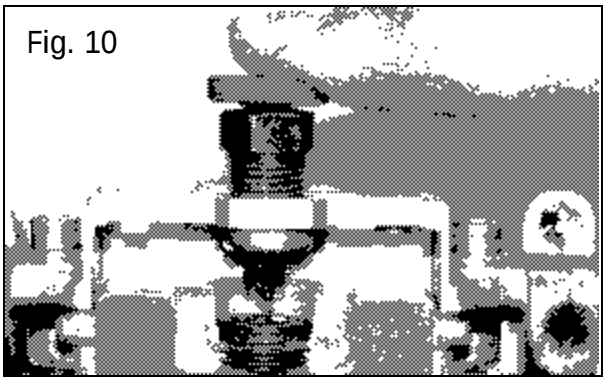
Fig. 10

Make your adjustments according to the following:

TO MAKE RICHER (MORE FUEL) 0-1/3 THROTTLE.

1. Pushing down, turn the red adjuster knob to the RIGHT (clockwise) one (1) or two (2) clicks depending on the severity of the lean condition.

TO MAKE LEANER (LESS FUEL) 0-1/3 THROTTLE.

1. Pushing down, turn the red adjuster knob to the LEFT (counter-clockwise) one (1) or two (2) clicks depending on the severity of the rich condition.
2. Release knob and throttle. Restart engine and reset idle speed if necessary. Evaluate performance and repeat if necessary.

   NOTE: If proper adjustment cannot be obtained through the standard range of adjustment see "Needle size adjustments" later in this manual.

NEEDLE SIZE ADJUSTMENTS

MIXTURE ADJUSTMENT (1/3 -2/3 THROTTLE)

The needle size in the carburetor controls the 1/3-2/3 throttle mixture. Edelbrock Performer Series carburetors are set up with jetting specs we have found to work on wide variety of engine combinations. Some engine combinations may require different air bleeds, main jets and needle settings depending on the altitude and modifications done to your engine. 38 and 40 mm carbs are shipped with a 13-0 needle while 42mm carbs have a 14-0 needle in them from the factory. We have found the factory-installed needles to work with many different engine modifications. Usually tuning will consist of jet changes and/or needle height adjustments.

If you feel a needle change is in order, please follow the following instructions for changing the needle.

See back of manual for available needle sizes and part numbers.

Ride motorcycle and pay close attention to the engine's performance from 1/3 to 2/3 throttle. In this range, watch for the following.

Lean Condition

a. Will not rev out in higher rpm's.
b. Poor acceleration when throttle is rolled on at higher rpm's.
c. Detonation (pinging).

Rich Condition

a. Black smoke from exhaust at high rpm's.
b. Lazy acceleration.
c. Power falls off then accelerates when throttle is rolled closed slightly.
d. Poor fuel economy

NOTE: The main jet also has some effect in this range. We recommend changing the main jet to see if proper jetting can be achieved. See Main Adjustments section.

ADJUSTMENTS-SLIDE REMOVAL

1. Remove air cleaner assembly and carburetor.
2. Turn idle speed screw out until it no longer touches the carburetor cap.
3. Remove three 9/64-cap screws using Allen wrench (provided).
4. Lift cap off of carburetor body and pull back towards air boot /air filter. *See Fig. 11.*

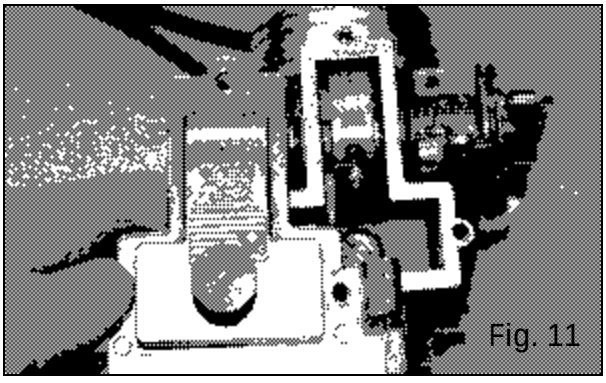
Fig. 11

5. After cap has been removed, remove the torx head T-10 screw *(See Fig. 12)* attaching the slide actuator strip to the inside wheel.


Fig. 12

6. Remove slide assembly from carb body
7. Turn center slot of the needle adjuster to the right and count the number of clicks until it stops. This will allow you to reposition the new needle in the same location for idle-mid range adjustment. It is recommended this number be written down for later use.
8. Line up slots (inner and outer) on the needle adjuster. *See Fig. 13.*

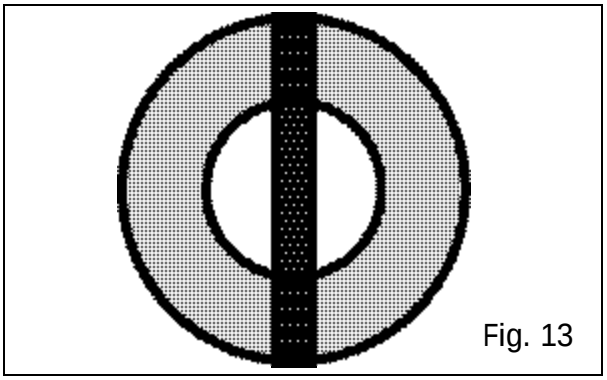
Fig. 13

9. Using a wide, flat blade screwdriver remove the needle adjuster assembly, needle and needle spring from the slide.

   Make needle change according to the following:

   a. To make RICHER (more fuel) 1/3-2/3 throttle position - Read the number printed on the needle that was just removed from the carburetor. To make richer, you will need to install the NEXT HIGHER # needle.

   b. To make LEANER (less fuel) 1/3-2/3 throttle position - Read the number printed on the needle that was just removed form the carburetor. To make leaner, you will need to install the NEXT LOWER # needle.

10. Place needle spring on needle with the small end towards the needle head (up). Insert needle and spring into the slide, aligning the nub on the needle head into the groove in the slide. Insert needle adjuster actuator pin into slide with threaded hole up and also aligning roll pin into the groove in the slide. *See Fig. 14* for correct sequence.

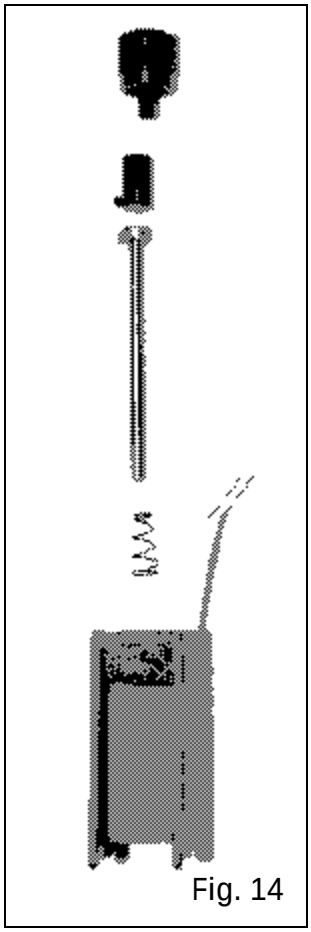
Fig. 14

11. Put a drop of BLUE Loctite 242 or equivalent on the upper threads (above cross-drilled holes) of the needle adjuster and install into slide. Tighten needle adjuster assembly in slide with a wide, flat blade screwdriver.

NOTE: Make sure Loctite does not get into the crossdrilled holes of needle adjuster. If this happens clean needle adjuster with WD-40 or a penetrating oil. DO NOT USE ANY HARSH CHEMICALS TO CLEAN NEEDLE ADJUSTER ASSEMBLY!

W A R N I N G ! ! !

Gasoline is very flammable. DO NOT work on any carburetor while smoking or around an open flame. It is also strongly recommended that any procedure pertaining to gasoline be performed in a well-ventilated area, as the vapors can be harmful.

12. Using a 3/16 flat blade screwdriver, turn center slot of needle adjuster *(See Fig. 15)* to the right (clockwise) until it stops. Now turn to the left (counter-clockwise) counting clicks (one click equals ¼ turn) until the number acquired from step 6 is obtained.


Fig. 15

Some adjustment may be needed to this setting after engine has been test ridden again. Generally, If you go to a richer needle (higher #) you will be a couple of clicks leaner on your setting. Just opposite for a leaner needle (lower #) richer setting.

13. Install slide into carburetor body and make sure slide moves freely and will completely close with it's own weight. Use a drop of BLUE Loctite 242 or equivalent (medium strength) on the 4-40 torx screw and attach the slide actuator strip to the inner wheel. When tightening screw, place a small flat blade screwdriver between the slide strip and carburetor body. *See Fig. 16*. This will prevent the slide strip from twisting.

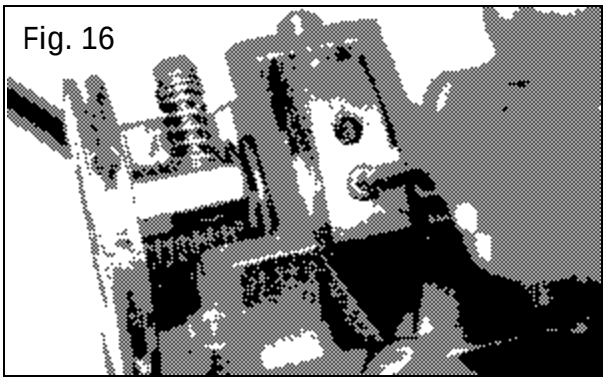
Fig. 16

14. Replace cap and cap gasket onto top of carburetor body and secure with the three Allen cap screws. NOTE: Before tightening screws, open carburetor to wide open and hold while tightening screws. This will ensure cap is centered on carburetor body.
15. Reinstall carburetor and air cleaner onto engine. Don't forget to turn fuel on before starting engine.

MAIN JET ADJUSTMENTS

The main jet controls fuel flow from about 2/3 throttle to wide open. If you have a problem in this area of throttle opening a main jet change is in order. The main jet is located in the bottom of the pick up tube and can be accessed by removing the plug in the bottom of the float bowl.

1. Turn fuel petcock to off position.
2. Remove aluminum plug from bottom of float bowl using 11/16 socket or wrench. Use a small cup to drain fuel from bowl into while removing plug. WARNING!! Gasoline and gasoline fumes are extremely flammable. It is strongly recommended when working with gasoline, it be done in a well-ventilated area away from any open flames or ignition source.
3. Using a stubby flat-blade screwdriver remove main jet from pick up tube. *See Fig. 17.*

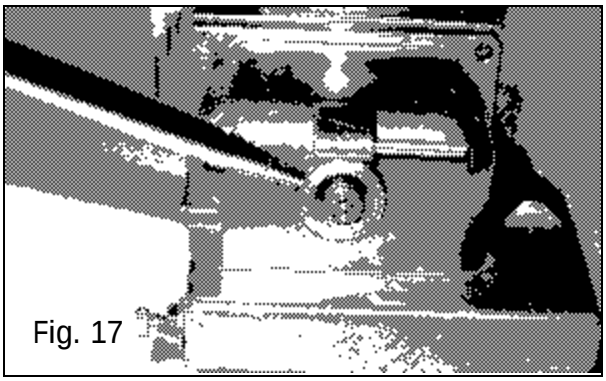
Fig. 17

NOTE: All Edelbrock Performer Series carburetors are assembled with a .076 main jet. A .074 and .078 main jet are included in hardware kit for fine tuning your engine. Additional jets are available in .002" increments.

4. Install desired jet into pick up tube. Do not over tighten jet as brass is soft and can easily strip.
5. Replace bowl plug with o-ring. Do not over tighten plug when re-installing as it is hollow and can easily crack or break.

MAIN JET SIZES AND PART NUMBERS

Jet Size	Part #	Jet Size	Part #
.062	#8140	.074	#8146
.064	#8141	.076	#8147
.066	#8142	.078	#8148
.068	#8143	.080	#8149
.070	#8144	.082	#8150
.072	#8145	.084	#8151

ACCELERATOR PUMP ADJUSTMENTS

Edelbrock Performer Series carburetors are equipped with an accelerator pump; the following will help you adjust your accelerator pump to its proper settings.

The accelerator pump on this carburetor was designed to only "squirt" fuel during rapid (fast) throttle opening when the engine requires extra fuel to keep from going lean. The pump will not squirt fuel during slow throttle opening as the main fuel system can supply the required fuel for the engine to perform properly.

Accelerator pumps are primarily used on four-stroke applications where instant low-rpm throttle response is desired and/or required. The Edelbrock Performer Series accelerator pump is easily adjustable to fine-tune the throttle response and ride ability of the engine to different combinations and riding styles.

The pump adjustment screw is pre set at the factory to 1.5 turns out.

To make adjustments to the pump, it is recommended you determine if the engine requires more or less "pump shot". To determine which way to adjust the pump, use the following to help guide you.

EXAMPLES:

a.. The engine wants to stall or stumble during quick throttle openings = not enough pump shot. Turn adjustment screw in (clockwise) until hesitation goes away.

b. The engine is sluggish during a "roll on" of the throttle then cleans out and accelerates normally = too much pump shot. Turn adjustment screw out (counter clockwise) until engine accelerates smooth.

Do not try to adjust pump by free revving the motor in neutral. This adjustment should be done then tested with a load on the motor i.e. riding the bike and going through the first three gears.

To make adjustments to the accelerator pump, you will need the following tools: 5/16 or 8mm open end wrench and a flat-blade screwdriver.

To make adjustment to pump use the following procedure. *See Fig. 18.*

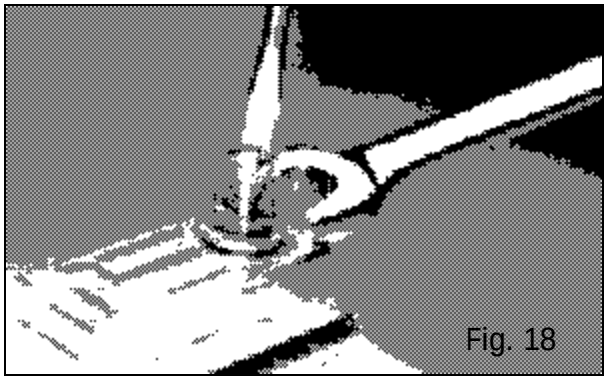
Fig. 18

1. While holding the screw from turning, loosen the jam nut approx. 1 turn.
2. Turn the screw in the direction required for proper adjustment. Remember: right for more fuel, left for less fuel. Edelbrock recommends that 1/8 of a turn adjustments be made until proper pump shot is achieved.
3. Once pump has been set to optimized setting, hold screw from turning and tighten jam nut.

GENERAL INFORMATION

FLOAT ADJUSTMENT

1. Turn fuel petcock OFF, disconnect throttle cables and fuel line from carburetor and remove from engine.
2. Remove four (4) float bowl screws using the 9/64 Allen wrench provided.

W A R N I N G ! ! !

Gasoline is very flammable. DO NOT work on any carburetor while smoking or around an open flame. It is also strongly recommended that any procedure pertaining to gasoline be performed in a well-ventilated area, as the vapors can be harmful.

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3. Drain fuel from bowl into a fuel safe container. CAUTION!!! Edelbrock Performer Series carburetors contain a small brass check needle that can fall out when bowl is turned upside down. It is recommended that the bowl be emptied through a strainer or rag to catch the check needle. Reinstall check needle (point down) into hole on top of float bowl flange. *See arrow in Fig. 19*.

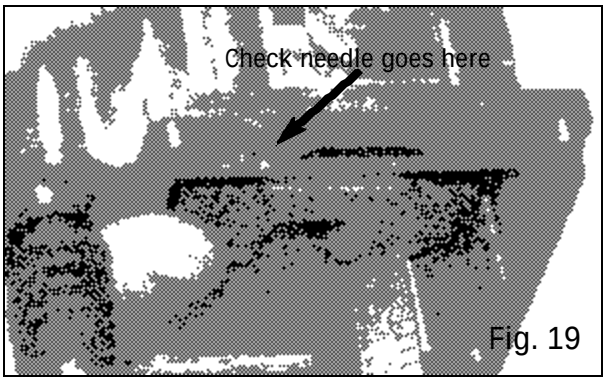


Fig. 19

4. Tilt float bowl upside-down so float closes needle completely. Using a machinists scale, measure from the end of the float to the top of the bowl. *See Fig. 19*. The float height should be set to .500" (1/2").

   Float adjustments are made by carefully bending the small tab on the back of the float. *See Fig. 20.*

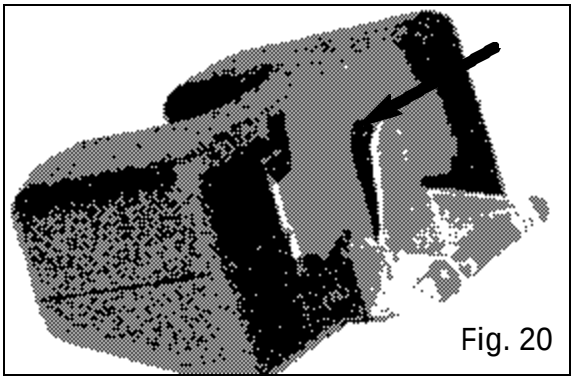


Fig. 20

By bending the tab outward (away from float) you will lower the float level. Bending the tab inward will raise the float level.

NOTE: Changing the float level will affect the carburetor jetting. If the float level has been readjusted, it may be necessary to retune the carburetor.

SPARK PLUG READINGS

If possible, ride for a good distance to get a proper reading on the spark plug(s). NEVER let engine idle for a long period of time before checking spark plugs.

Carb Needles

The larger the number on the needle, the richer the mixture. Needles with "-1" are richer off-idle.

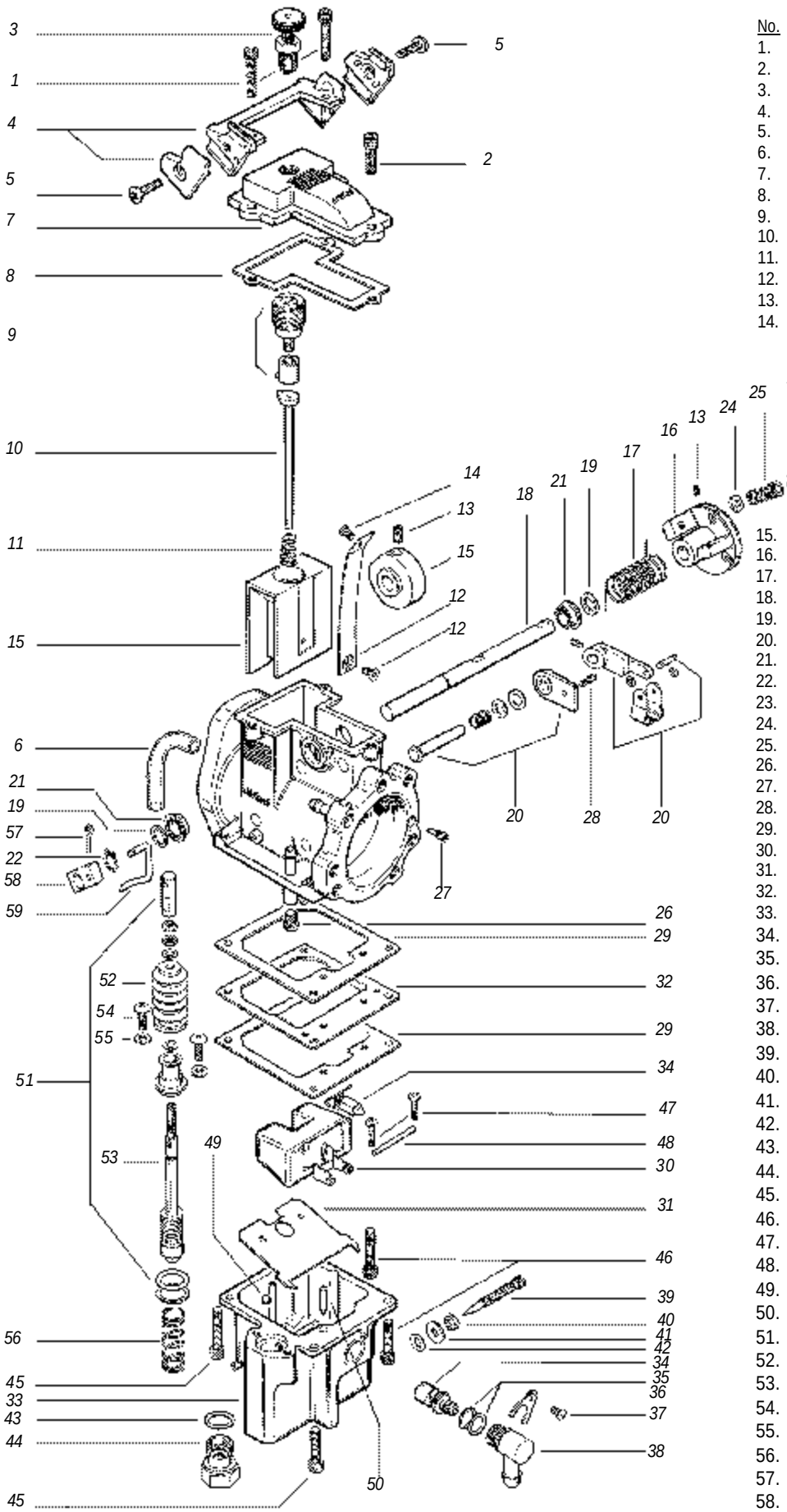
Size	*Part No.*	*Size*	*Part No.*	*Size*	*Part No.*
3	8355	9	8364	13-1	8373
4	8356	9-1	8365	14	8374
5	8357	10	8366	14-1	8375
6	8358	10-1	8367	15	8376
6-1	8359	11	8368	15-1	8377
7	8360	11-1	8369	16	8378
7-1	8361	12	8370	16-1	8379
8	8362	12-1	8371	17	8380
8-1	8363	13	8372		

Main Jets

Size	*Part No.*	*Size*	*Part No.*	*Size*	*Part No.*
62	8140	70	8144	78	8148
64	8141	72	8145	80	8149
66	8142	74	8146	82	8150
68	8143	76	8147	84	8151

Air Bleeds

Size	*Color*	*Part No.*	*Size*	*Color*	*Part No.*
20	Purple	8170	40	Blue	8174
25	Black	8171	45	Green	8175
30	Gold	8172	50	Orange	8176
35	Red	8173			



No.	Description	Required	Edelbrock Part No.
1.	8.32 x 3/4 cap screws	2	8398
2.	8.32 x 1/2 cap screw	1	8410
3.	M.A.T.	1	8450
4.	Cable bracket comp.	1	8305
5.	8.32 x 3/8 Phillips pan head	2	8404
6.	Bowl vent tube	1	9091
7.	Cap 38.40.42 B/B Chr	1	8309
8.	Cap gasket	1	8304
9.	Needle adj. Assembly	1	8352
10.	Needle 10-0-17.0	1	See page 11
11.	Needle spring	1	8340
12.	Slide assembly	38.40.42	38-40=8354; 42=84
13.	8-32x3/8 Allen Hd Soc Screw	1	8399
14.	4.40 x 1/4 torx pan	1	8403
15.	Spool	1	8341
16.	Cable wheel	1	8342
17.	Slide return spring	1	8346
18.	Throttle shaft	1	9087
19.	Stainless Steel flat washer	2	9089
20.	Choke assembly complete	1	8338
21.	Shaft bearing	2	9089
22.	Shaft clip	1	8405
23.	8.32 x 7/8 idle screw	1	8400
24.	Idle washer	2	8408
25.	Idle spring	1	8351
26.	Main jet 64-84	1	See page 11
27.	Idle air bleed 2550	1	See page 11
28.	4.40 x 1/4 soc screw	1	8407
29.	Bowl gasket	2	8327
30.	Float	1	8328
31.	Slosh plate	1	8318
32.	Bowl baffle	1	8640
33.	Float bowl	1	9090
34.	Needle & seat	1	8326
35.	Fuel inlet O-ring	2	9093
36.	Fuel inlet keeper	1	9093
37.	8.32 x 1/4 c/s	1	9093
38.	Fuel inlet	1	9093
39.	Pump bypass screw	1	9094
40.	Pattern nut	1	9094
41.	Stainless Steel flat washer	1	9089
42.	Bypass screw O-ring	1	9094
43.	Bowl plug O-ring	1	9095
44.	Bowl plug	1	9095
45.	8.32 x 5/8 soc c/s	2	8401
46.	8.32 x 3/4 soc c/s	2	8398
47.	4.40 x 3/8 torx pan screw	2	8328
48.	Float hinge pin	1	8328
49.	Pump check ball	1	9096
50.	Pump check needle	1	9096
51.	Pump plunger assembly	1	9097
52.	Plunger boot	1	9097
53.	Pump plunger (only)	1	9098
54.	8.32 x 1/2 button head	2	9097
55.	Stainless Steel flat washer	2	9089
56.	Pump return spring	1	9096
57.	Cotter pin	1	9099
58.	Pump lever	1	9099
59.	Pump link	1	9099

EXAMINE AND EVALUATE FOR THE FOLLOWING CONDITIONS:

Condition	Bike Performance	Plug Reading
Good Performance	Smooth idle, good acceleration, good fuel economy	Porcelain area of spark plug should be white to a light tan color with no flaking. Threaded area will have a dark discoloration.
Rich in the low-mid range	Rough idle, poor fuel economy, black smoke at idle	Porcelain and threaded area will be black and sooty.
Lean low-mid range	Hard starting, poor throttle response, popping through exhaust during deceleration. Motor will only idle with enrichener on.	White porcelain, may be flaking. Threaded area will be clean.
Rich mid-wide open	Motor will fall off at higher RPMs. A slight reduction of throttle will make engine pick up and rev. If there is an extremely rich condition, motor will sputter at wide-open throttle. Poor fuel economy. NOTE: Careful, sometimes the rev limiter is mistaken for this condition.	Porcelain will be dark brown to black in color and possibly sooty. Threaded area will be black and sooty.
Lean mid-wide open	Poor acceleration above half throttle. May pop through air cleaner.	Porcelain will be snow-white in color with whisker-like protrusions.

TROUBLESHOOTING GUIDE

I. POOR IDLE

1. Inconsistent idle rpm, too rich or too lean. Check the following:

   a. Improper air bleed installed. See idle mixture adjustments.
   b. Air leak. Check manifold to head seals and carb to manifold grommet/gasket.
   c. Enrichener is not completely shut off.

II. POOR 1/8-1/3 THROTTLE PERFORMANCE

1. Engine will not run smooth at steady throttle between 1/8 and 1/3 throttle. Runs too rich or too lean. Check the following:

   a. Improper needle setting. See "Off-idle to mid range adjustments.
   b. Fuel tank caps not venting properly. Can cause pressure build up or vacuum in tank.
   c. Air leak. Check manifold to head seals and carb to manifold grommet/gasket.

III. POOR 1/3-full THROTTLE PERFORMANCE

1. Engine will not run smooth at steady throttle between 1/3 and 2/3 throttle. Runs too rich or too lean. Check the following:

   a. Incorrect needle size. See "Needle size adjustments"
   b. Incorrect main jet size. See "Main jet adjustments"
   c. Fuel tank cap no venting properly. Can cause pressure build up or vacuum in tank.
   d. Clogged main jet. May perform good at lower throttle openings where fuel is no in great demand.
   e. Clogged or dirty air filter may restrict airflow at higher throttle openings.
   f. Clogged petcock filter or in-line fuel filter.

If problems continue, please contact Edelbrock Toll-Free Tech Line at: 877-888-7504 ext. 2. 8:00am-12:30pm, 1:30 pm-5:00pm, Monday through Friday, Pacific Standard Time. Tech service is also available via internet at www.edelbrock.com. E-mails will be answered within 72 hours of being received.

WARRANTY POLICY

Edelbrock Carburetors and all parts included in carburetor kits are warranted to the original purchaser to be free of manufacturing defects in materials and workmanship for a period of one (1) year from the original date of purchase. Any part that fails to conform to these conditions will be repaired or replaced at the discretion of Edelbrock, upon receipt of the defective part within the one (1) year warranty period.

In the event a part has been rendered defective, Edelbrock must be notified prior to the return of the defective part. A Return Authorization Number MUST BE OBTAINED prior to the return of any defective parts. A part that is suspected to be defective must not be replaced without prior authorization from Edelbrock. Edelbrock will not be liable for any consequential or incidental damages resulting from the failure of any Edelbrock part, the breach of any warranties, the failure to deliver, delay in delivery, delivery in non-conforming condition, or for any other breach of duty between Edelbrock and a customer.

All warranties will be void under any of the following conditions:

1. Merchandise was improperly installed or used in an abnormal application.
2. Merchandise has been modified or altered in any way.

DISCLAIMER

It is the sole responsibility of the user to determine the suitability of the product for his/her use, and the user shall assume all legal, personal injury risk and liability and all other obligations, duties and risks associated therewith.

Edelbrock will not be liable for any modifications made to carburetors designed to meet emissions standards. Any modifications to these products will void certification and all warranties they may carry.

☎	Please contact Edelbrock with any questions at 1-877-888-7504 ext. 2, 8:00am-12:30pm and 1:30pm-5:00pm, Monday-Friday, Pacific Standard Time.

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