Power Plate Baseline Kit Contents Listing

Kit No.	Idle Circuit Fuel	Idle Circuit Air	Main Circuit Fuel	Main Circuit Air	Emul Tube	PVCR Bushng
8230	85	120	165	90	F7	140
8231	75	120	190	80	F8	----
8232	85	70	160	90	F7	150
8233	80	110	140	90	F7	130
8234	70	90	145	80	F8	----
8235	70	180	155	110	F20	120
8236	80	70	170	80	F8	----
8237	85	200	200	125	F20	160
8238	100	140	215	80	F8	160
8239	100	70	200	80	F8	----
8240	85	190	175	100	F20	100
8241	85	70	200	80	F8	----
8242	85	200	165	120	F20	100
8243	85	180	195	120	F7	100
8244	85	180	175	110	F20	100
8245	85	180	200	125	F7	140
8246	85	180	185	115	F7	140
8247	80	70	230	80	F8	----
8248	90	180	200	130	F7	170
8249	90	150	235	150	F8	150
8250	85	200	185	110	F8	180
8251	100	70	250	80	F8	----
8252	80	150	230	140	F7	160
8253	85	140	235	150	F8	150
8254	90	190	170	110	F7	130
8255	95	70	210	80	F8	----
8256	100	150	235	145	F8	----
8257	90	180	225	100	F20	160
8258	80	200	155	130	F20	150

INSTALLATION INSTRUCTIONS FOR EDELBROCK POWER PLATE

POWER PLATE

Baseline Kit—

Edelbrock

Must be used in conjunction with Edelbrock Power Plate.

Power Plate — Holley Conversion

Holley Carbs		Power Plate Applications			
		Primary Side		Secondary Side	
Holley List #	Holley Mdl #	Plate Kit #	Baseline Kit #	Plate Kit #	Baseline Kit #
0-1848-1	4160	8201	8233	8203	8234
0-1849	4160	8201	8235	8203	8236
0-1850	4160	8201	8235	8203	8236
0-1850-1	4160	8201	8235	8203	8236
0-1850-2	4160	8201	8235	8203	8236
0-2818-1	4150	8201	8235	8203	8238
0-3310	4150	8202	8237	8204	8238
0-3310-1	4150	8202	8237	8204	8238
0-3310-2	4160	8202	8237	8204	8239
0-4118	4150	8202	8240	8203	8238
0-4224	4160	8202	8245	8203	8238
0-4412	2300	8206	8257	....	....
0-4452-1	4160	8201	8235	8203	8231
0-4776	4150	8201	8240	8203	8241
0-4776-1	4150	8201	8242	8203	8238
0-4776-2	4150	8201	8242	8203	8238
0-4777	4150	8202	8243	8203	8238
0-4777-1	4150	8202	8244	8203	8238
0-4777-2	4150	8202	8244	8203	8238
0-4778	4150	8202	8254	8203	8255
0-4778-1	4150	8202	8254	8203	8256
0-4778-2	4150	8202	8254	8203	8256
0-4779	4150	8202	8245	8203	8238
0-4779-1	4150	8202	8246	8203	8247
0-4779-2	4150	8202	8246	8203	8247
0-4780	4150	8202	8248	8204	8249
0-4780-1	4150	8202	8250	8204	8249
0-4780-2	4150	8202	8250	8203	8251
0-4781	4150	8206	8252	8204	8253
0-4781-1	4150	8206	8252	8204	8253
0-4781-2	4150	8206	8252	8204	8253
0-4788	4150	8206	8252	8204	8252
0-4788-1	4150	8206	8252	8204	8253
0-6109	4150	8202	8245	8203	8238
0-6291	4160	8201	8235	8203	8236
0-6299-1	4160	8201	8233	8203	8234
0-6520	4160	8205	8235	8203	8231
0-6619	4160	8205	8230	8203	8231

The Edelbrock Power Plate is the result of many years of development and refinement. It is a precise fuel metering device that offers the utmost in tuning capabilities for your Holley carburetor.

The Power Plate is based on Weber's famous 3-phase circuitry employing separate idle, low speed and full power circuits. By adding this new low speed circuit to your Holley carburetor you will now have, for the first time, the ability to isolate and tune each function of the carburetor for optimum performance with better driveability and in many cases improved fuel economy.

To help you understand and use this increased versatility we have included sections covering *Theory of Operation* and *Tuning Procedure*. Note: For high altitude applications please see page 22.

TABLE OF CONTENTS

TOOLS NEEDED FOR INSTALLATION

1-Phillips Screwdriver	1-Gasket Scraper
1- Standard Screwdriver	1-Pair of Pliers
1-Small Hammer	1-3/8" Open End Wrench
1-1/8" Punch	1-Vacuum Gauge
1-1" Open End Wrench	Light Duty Oil (WD-40)
1-Tachometer	Clean Rags

INSTALLATION INSTRUCTIONS

Although these instructions cover both primary and secondary installations, it is **HIGHLY RECOMMENDED** purchasing and installing the primary side first. The major increases in performance and driveability will be achieved by installation of the Power Plate on the primary side. Should usage or conditions dictate, i.e. vehicles normally run at wide-open-throttle for prolonged periods, a Power Plate should be installed on the secondary side of your carburetor. NOTE: A secondary side plate should never be used without a primary side plate.

Although these instructions are written with on-vehicle installation in mind, it may be easier to remove the carburetor from the vehicle for plate installation. If the carburetor is removed, the base gasket may need to be replaced. To realize the optimum performance from your Power Plate, it is recommended that the carburetor be thoroughly cleaned and any worn parts replaced at this time.

Each Power Plate Kit adds 1/2" in length to each side of the carburetor. Components such as fuel line(s), air cleaner and manifold fittings should be investigated for proper clearance **BEFORE** installing this kit. A 1/2" air cleaner spacer (Edelbrock #8092) may be required as well as a longer stud.

Thoroughly read these installation instructions prior to performing the actual installation of your Power Plate kits. Each step of these instructions has been identified as a Primary (P) or Secondary (S) side step by showing the appropriate box by the step

number. In the cases where an installation step may apply to both sides of the carburetor both boxes will appear. Any special information will appear in bold type at the beginning of the step. Follow each instruction that applies to your installation before proceeding to the next step. Check off the box as you finish each step.

P S

☐ ☐ 1. Remove the vehicle's gas cap and disconnect the battery.

☐ ☐ 2. Remove the air filter assembly and any attached hoses. Identify each hose for correct reassembly.

☐ ☐ 3. Carefully disconnect the fuel line(s) from the carburetor. Plug the outlet(s) to prevent any leakage.

☐ ☐ 4. Identify and tag any vacuum hoses or electrical wires that may need to be disconnected to install your Power Plate. Disconnect items and position them out of the way.

☐ ☐ 5. **CAUTION: Do not perform this operation near any open flame.** Remove one of the bottom fuel bowl screws (FIG. A) and drain the fuel into a suitable container. When the fuel is completely drained remove the remaining 3 screws.

☐ ☐ 6. Remove the fuel bowl, metering body or plate (the secondary plate is held in place with 6 #10 clutch head screws) and transfer tube (if equipped). Clean the carburetor main body and fuel bowl of excess gasket material, including fuel bowl screw gaskets.

STEPS 7-12 ONLY APPLY TO PRIMARY SIDE POWER PLATE INSTALLATION ON OLDER HOLLEY 4160 MODELS WITH A BRASS BALANCE TUBE (FIG. C). IF YOUR CARBURETOR DOES NOT HAVE A BRASS BALANCE TUBE YOU SHOULD PROCEED TO STEP #13.

TYPICAL HOLLEY 4V CARBURETOR STOCK

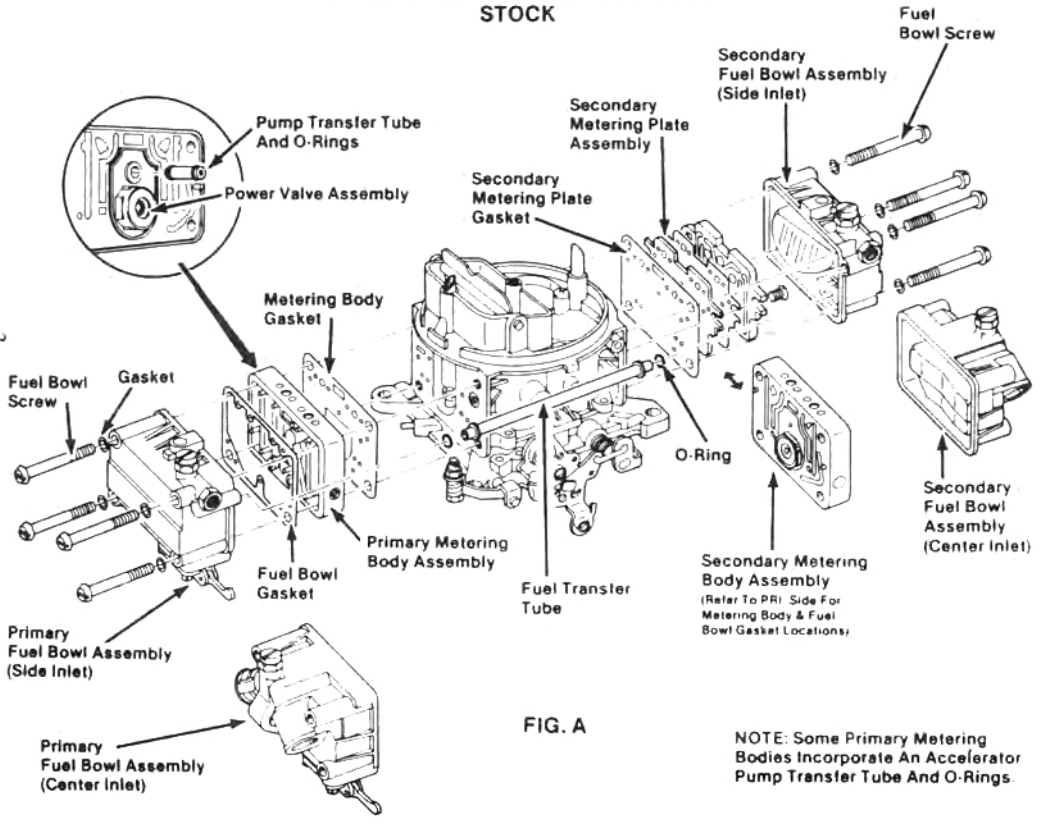

FIG. A

NOTE: Some Primary Metering Bodies Incorporate An Accelerator Pump Transfer Tube And O-Rings.

TYPICAL HOLLEY 4V CARBURETOR WITH POWER PLATES

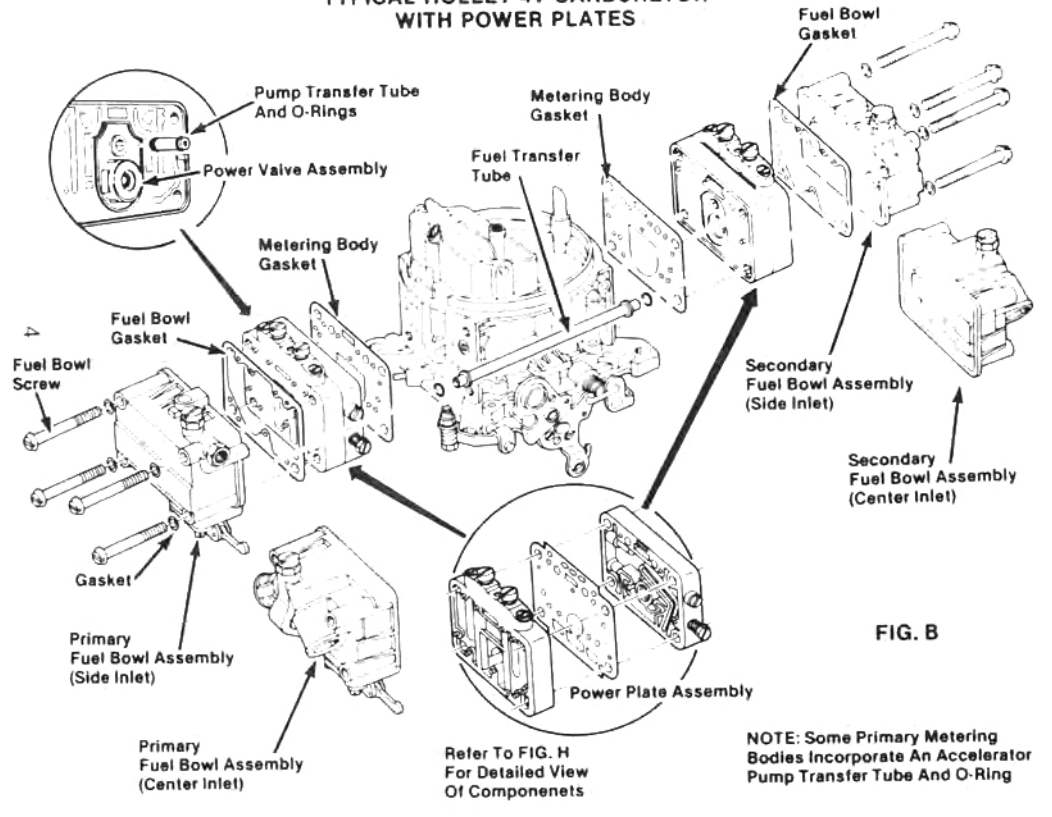

FIG. B

NOTE: Some Primary Metering Bodies Incorporate An Accelerator Pump Transfer Tube And O-Ring

P

☐ 7. Remove one of the bottom fuel bowl screws from the secondary side and drain the fuel into a suitable container. When the fuel is completely drained, remove the remaining 3 screws.

☐ 8. Remove the secondary fuel bowl from the carburetor.

☐ 9. Remove the 6 clutch-head screws retaining the secondary plate to the main body of the carburetor. Remove the secondary plate assembly and gasket.

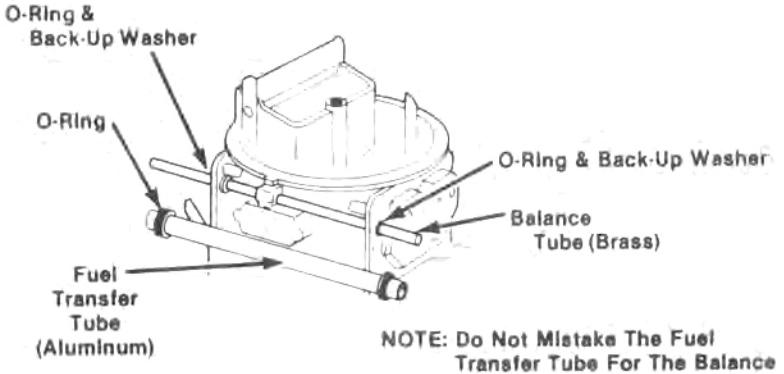

FIGURE C

☐ 10. Slide out the balance tube, o-rings and back-up washers from the carburetor body. **(FIG. C)**

☐ 11. Using a small punch and hammer, install the lead balls supplied in the Calibration Kit in the openings of the main body where the balance tube was located.

☐ 12. Replace the secondary fuel bowl and metering plate assembly using the new gasket supplied in the Power Plate Kit.

STEPS 13-14 APPLY TO ALL PRIMARY INSTALLATIONS AND ONLY SECONDARY INSTALLATIONS ON CARBURETORS WITH ACCELERATOR PUMPS. ALL OTHER SECONDARY INSTALLATIONS PROCEED WITH STEP #17.

P S

☐ ☐ 13. Lay the fuel bowl assembly on a flat surface. Properly support the ears of the accelerator pump housing to prevent damage and use a small punch and hammer to knock out the accelerator pump arm roll pin. **(FIG. D)**

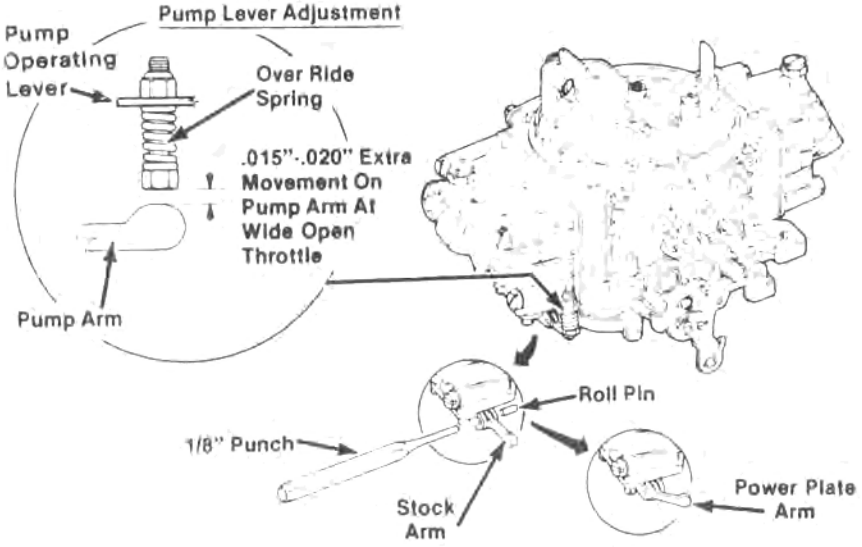

FIGURE D

☐ ☐ 14. Install the new accelerator pump arm supplied in the Calibration Kit using the original roll pin. **(FIG. D)**

STEP 15 APPLIES TO ALL PRIMARY INSTALLATIONS AND SECONDARY INSTALLATIONS ON CARBURETORS WITH ADJUSTABLE SECONDARY IDLE CIRCUITS. ALL OTHER SECONDARY INSTALLATIONS PROCEED TO STEP #17.

P ☐ S ☐ 15. Install the idle mixture screws and springs in the Power Plate metering body. (**FIG. H**) Turn the idle mixture screws in (clockwise) until they just come in contact with theseat. Back each screw out (counter-clockwise) 1 turn from the contact point. **DO NOT TURN THE SCREWS PAST THIS POINT.**

☐ ☐ 16. Install either the vacuum advance fitting or plug in the location shown on (**FIG. H**). Remove the pump transfer tube, (**FIG.A**) if applicable, from the stock metering body and install it in the Power Plate body. New o-rings are provided in the Calibration Kit.

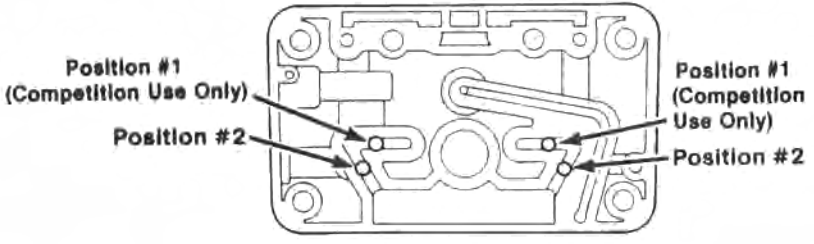

FIGURE E

☐ ☐ 17. Install the two white nylon idle passage plugs into the position #2 location of the metering body (**FIG. E**). When properly installed, the top of the nylon plug will be flush with the face of the casting. (For further details of the difference between the two plug locations refer to Theory of Operation.)

STEPS 18-19 APPLY TO ALL PRIMARY INSTALLATIONS AND SECONDARY INSTALLATIONS ON CARBURETORS WITH A SECONDARY POWER VALVE. ALL OTHER SECONDARY INSTALLATIONS PROCEED TO STEP #20.

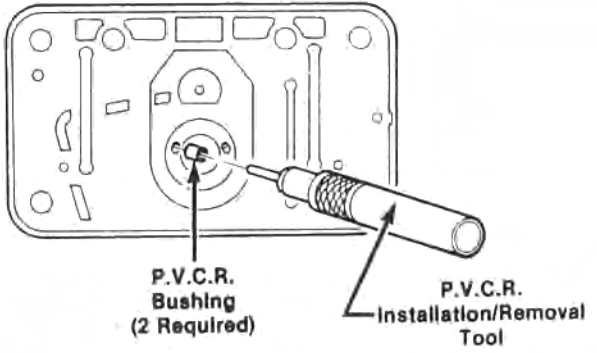

FIGURE F

P ☐ S ☐ 18. Install the P.V.C.R. bushings using the short end of the installation-and-removal tool provided in the Calibration Kit. (**FIG. F**) The long end can be used to remove the bushings by inserting it in the back side of the passage and pushing out the bushing.

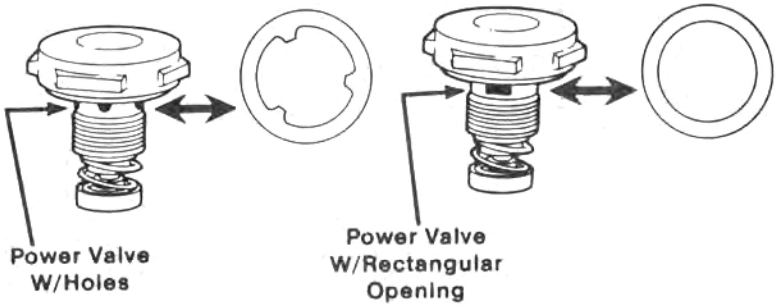

FIGURE G

P S

☐ ☐ 19. Using a 1" open end wrench, remove the stock power valve and install it in the Power Plate metering body using one of the two new gaskets provided. **BE SURE TO USE THE CORRECT POWER VALVE GASKET OR INTERNAL LEAKAGE COULD RESULT. (FIG. G)** Note:Use caution when removing and installing power valves. Do not let the wrench strike any of the locating pins on the edge of the plate.

☐ ☐ 20. Assemble and install the idle air corrector jets, o-rings and idle fuel jets in the Power Plate jet body, as shown in **FIG. H.**

☐ ☐ 21. Assemble and install the emulsion tube holders, o-rings, main air corrector jets, emulsion tubes and main fuel jets in the Power Plate jet body, as shown in **FIG. H. NOTE:** The idle fuel jets and emul sion tube holders, air correctors, and main fuel jets are all produced slightly oversized to allow for custom fit by the customer. Use a pair of pliers and LIGHTLY crimp these components so they snap firmly together. **DO NOT OVER CRIMP THESE PARTS AND DO NOT CRIMP AREAS THAT CONTAIN THREADS.**

☐ ☐ 22. Install the intermediate body gasket and assemble the Power Plate metering and jet body halves together. Install the new fuel bowl and metering body gaskets on the Power Plate assembly.

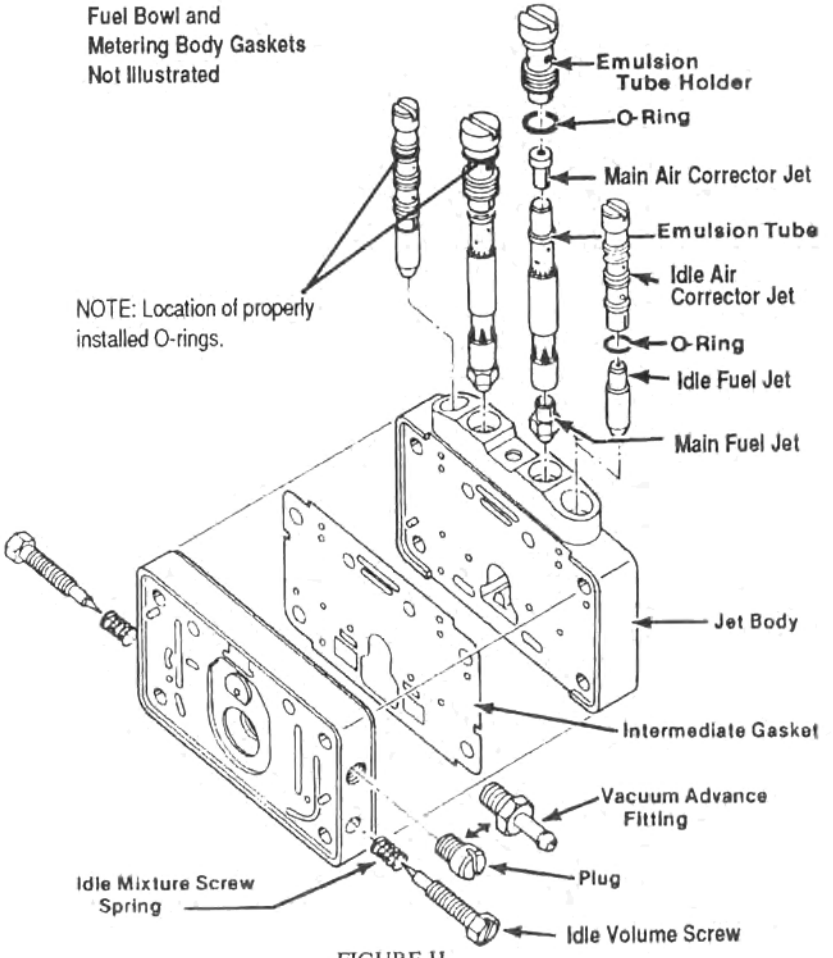

FIGURE H

P S

☐ ☐ 23. Install the Power Plate assembly, fuel transfer tube and o-rings (if applicable) and the fuel bowl assembly on the carburetor. **NOTE:** Carburetors with fuel transfer tubes must use the longer transfer tube provided in the Calibration Kit. When installing a Power Plate on both sides of the carburetor the tube from the secondary side kit must be used. O-rings will seal easier if coated with WD-40 or light weight oil.

☐ ☐ 24. Install the new fuel bowl screws and gaskets supplied in the kit. Tighten the screws in a criss-cross pattern in small increments to 25-30 inch pounds of torque.

☐ ☐ 25. Check the fuel transfer tube (if applicable) to be sure the o-rings have seated properly. When o-rings are correctly seated the fuel transfer tube will rotate without binding. **CAUTION: O-RINGS MUST BE CORRECTLY INSTALLED OR FUEL LEAKAGE WILL RESULT.**

☐ ☐ 26. Remove the fuel line plug(s) and reconnect the fuel line(s) to the carburetor.

☐ ☐ 27. Reinstall any components removed in step #4.

☐ ☐ 28. **CHECK THROTTLE OPERATION FOR FREE MOVE MENT. IF THERE IS ANY INDICATION OF STICKING OR BINDING, CORRECT AS NECESSARY BEFORE PROCEEDING.**

☐ ☐ 29. Reinstall the gas cap and reinstall the battery.

THEORY OF OPERATION

With the Power Plate installed on your carburetor you now have access toWeber's 3 phase circuitry. This circuitry provides precise control of the 3 major phases of carburetor operation; 1) idle circuit; 2) low speed (intermediate or mid-range) circuit; and 3) high speed (main) circuit,allowing you to optimize each for your specific application/ usage. BEFORE STARTING YOUR ENGINE please read and throughly understand this section so you can take full advantage of these capabilities.

This information is presented in two parts. The first explains the theory of operation of the Power Plate. The second part describes the tuning of the Power Plate. By thoroughly understanding the theory of operation, you will be able to tune the Power Plate to the needs of your engine. You will also be able to explain to others why your engine runs so well.

Terminology

The following chart should assist you in relating the terminology between Weber and Holley. Also see Figure H.

WEBER	HOLLEY
Idle Air Corrector Jet (IACJ)	Air Bleed (Idle)
Main Air Corrector Jet (MACJ)	Air Bleed (Main)
High Speed Circuit	Main Circuit
Main Fuel Jet (MFJ)	Main Jet
Idle Volume Screw	Idle Mixture Screw
Idle Fuel Jet (IFJ)	(no equivalent)

CIRCUIT DESCRIPTIONS

*Note: Not to scale

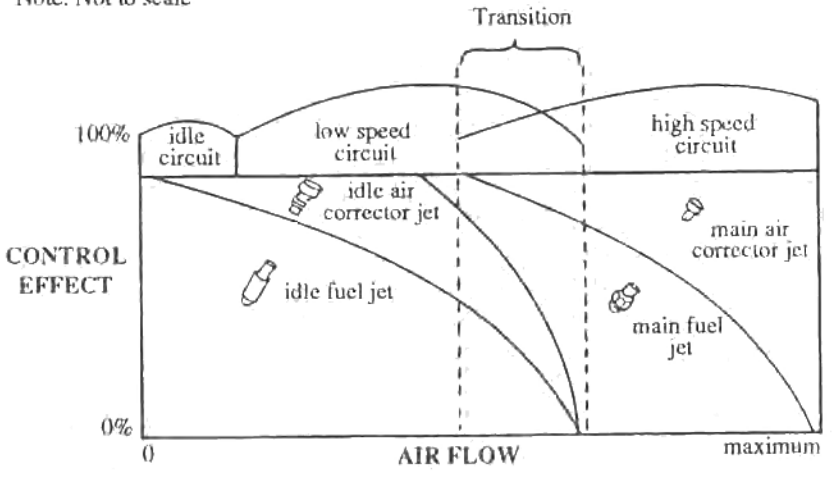

FIGURE I

Circuit Descriptions

The Weber three phase circuitry is illustrated in Figure I. The bottom axis portrays air flow rate from min. to max. Note that the Idle Circuit operates at low air flow rates which is consistent with 3000 - 4000 RPM. This is the upper end of the transition phase. (approximately 2500 RPM) and extends through 4500 to maximum RPM. The illustration also indicates which adjustment devices are effective at the various air flow rates. The vertical axis shows the degree (from 0% to 100%) to which each device participates in controlling the air and fuel. The Idle Fuel Jet is the dominant adjustment for idle circuit performance. The Idle Air Corrector Jet does have some effect at idle RPM and becomes more dominant as the air flow increases to the rates where the low speed circuit operates. In the transition phase these two, plus the MFJ, and MACJ all participate. Finally, in the High Speed Circuit (at high air flow) the Main Fuel Jet is initially dominant and then is supplanted by the Main Air Corrector Jet.

From Figure I, it can be seen that the tuning procedure should proceed from left-to-

right. The idle circuit is tuned first; then the Low Speed Circuit up into the Transition Phase. Finally, the High Speed Circuit including the Transition Phase and the Power Enrichment Circuit are tuned last. Notice that the Transition Phase involves the IFJ, IACJ, MFJ and MACJ. How well all are balanced determines the overall performance, responsiveness and efficiency of the engine. It is important, therefore, that the Theory Operation and the Tuning Procedure be thoroughly read.

Idle Circuit

This circuit controls the volume of an air/fuel emulsion supplied through the idle discharge port.

- Idle Speed Screw - (not shown in Fig. B) This screw is used to set the idle position of the throttle plates.

- IdleVolume Screw - This controls the volume of the pre-mixed air and fuel. It does not control the mixture of air-to-fuel.

- Idle Fuel Jet - This controls the amount of fuel supplied to the idle circuit. Changing the idle fuel jet will richen (if larger) or lean (if smaller) the mixture throughout the idle range.

- Idle Air Corrector Jet - This jet controls the amount of air supplied to the idle circuit. A larger size will admit more air resulting in a leaner mixture while a smaller size will admit less air resulting in a richer mixture.

Low Speed Circuit

This circuit is most often in use during normal driving. Depending onengine and carburetor sizes, vehicle weight and engine load, this circuit is in operation from off idle to 4000 RPM.

- Idle Fuel Jet - The amount of fuel delivered in the low speed circuit is controlled by this jet. Changing the idle fuel jet will richen (if larger) or lean (if smaller) the mixture throughout the low speed circuit.

- Idle Air Corrector Jet - This jet controls the volume of air suppliedto the low speed circuit. A larger size will admit more air resulting in a leaner mixture while a smaller size will admit less air resulting in a richer mixture. The effects of changing this jet will be more noticable in the upper end of low speed circuit operation.

• Idle Passage Plugs - The position of these nylon plugs determines the source of fuel for transition from the low speed to high speed circuit. The #2 (lower) position duplicates the original Holley circuitry. In this position fuel is drawn from the emulsion tube well abov the main fuel jet. During transition from the low speed to high speed circuit the available fuel is shared by both circuits. As the high speed circuit takes over, the fuel available to the low speed circuit decreases until there is none left and the transition is complete. Because of this limited "overlap" the transition is more precise and generally offers better fuel economy.

With the plugs in the #1 (upper) position the low speed circuit receives its fuel directly from the fuel bowl reservoir. This results in a slower transition and, generally, less fuel economy. Certain very radical racing engines may benefit from this greater overlap period. In all cases it is recommended the #2 (lower) position be tried before the #1 (higher) position.

High Speed Circuit

This circuit, with assistance from the power enrichment circuit, supplies the engine's air/fuel needs from the point of transition off the low speed circuit up to its maximum RPM

• Emulsion Tube - Its purpose is to mix (emulsify) fuel from the main fuel jet with air from the main air corrector jet to promote optimum vaporization during high speed circuit operation Emulsion tubes are available with different combinations of inside and outside diameters and different quantities and locations of mixing holes. By changing the emulsion tube the fuel curve atless than wide open throttle can be subtly altered.

The standard emulsion tubes in the calibration kits are suited for general performance work. Should you have an exotic or unique application please write our technical department at 2700 California Street, Torrance, CA 90503.

• Main Fuel Jet - The main fuel jet controls the volume of fuel to be mixed with air in the emulsion tube well. For a given air flow rate, changing the size of this jet will richen (if larger) or lean (if smaller) the mixture throughout the high speed circuit.

• Main Air Corrector Jet - The main air corrector jet controls the volume of air to be mixed with fuel in the emulsion tube well. Changing to a larger size will admit

more air. This produces a leaner mixture while changing to a smaller size will admit less air resulting in a richer mixture. The effect of main air corrector jet changes will be more noticable at the upper end of this circuit's operation.

Another important function of this jet is to help control the start of high speed circuit operation. A smaller main air corrector jet will "start" the high speed circuit at a lower RPM while a larger size will delay its entry.

Power Enrichment Valve

The Holley power valve still controls the timing of this fuel enrichment but you now have the ability to change the amount of fuel contributed during its operation. This is done with interchangeable Power Valve Channel Restrictor (P.V.C.R.) bushings. As with the other fuel jets, the larger the size the richer the mixture. Remember, however, that larger is not necessarily better. More fuel does not mean more power. The power Enrichment Bushing must be selected to best match the engine.

TUNING PROCEDURE

This part of the instructions covers the *Power Plate* Tuning procedure. It consists of three steps. The idle circuit adjustments are made first. Then the Low Speed circuit adjustments are made. Third, the High Speed circuit adjustments are completed. Remember, from the "Theory of Operation, "that the adjustments interact. Therefore, if large adjustments are made in the Low Speed, then the Idle adjustments must be rechecked. Likewise, if large adjustments are required in the High Speed circuit then both Idle and Low Speed must be rechecked. The procedure tells you when rechecks must be done. Please do the rechecks as requested and the final results will come more quickly and yield a better running engine.

The components included in the *Power Plate Kit* should match the engine demands and only minor adjustments should be required in each step. However, if major adjustments are required at any point in the procedure then previous adjustments must be rechecked.

Before tuning your *Power Plate* equipped carburetor please check the following:

• Is your engine sound and in a good state of tune? Problems caused by unrelated components are often blamed on carburetors.

•Are the float level and fuel pressure set to standard specifications for the carburetor body being used?

GENERAL NOTE: Only change one type of component at a time. This will allow you to measure the effect of each change. Multiple component changes will only confuse you.

Prior to Starting Engine

1. Remove air cleaner
2. Plug off open vacuum lines
3. Connect tachometer/vacuum gauge to engine
4. Idle speed screw should be set at one full turn in (clockwise) from point of initial contact with the throttle lever.
5. Idle volume screws should be set at one full turn out (counter-clockwise)from point of bottoming out (fully closed).

Note: Do not overtighten during bottoming out or you may screws and/or Power Plate.

6. Secondary throttle plates should be closed.
7. Check for fuel leaks.

Start Engine and Let Idle

- Immediately check for fuel leaks.
- If idle speed is too low to keep the engine running, turn the idle speed screw in an additional 1/2 turn. If the engine will still not idle, check for vacuum leaks.
- Make sure engine reaches normal operating temperature before proceeding.

1. Idle Circuit Adjustment

A. Starting with idle volume screws 1 full turn out from point of fully closed, adjust idle volume screws to obtain fastest and smoothest idle. To do this, slowly turn each idle volume screw in (clockwise) until the engine speed drops noticeably. From this point, turn each screw out (counter-clockwise) to obtain maximum RPM.

Note: Certain Holley carburetors, designated Reverse-Idle, originally used a different idle volume screw adjustment procedure. With Power Plate the correct adjustment procedures for all Holley carburetors are those listed here.

B. Once adjusted, stop engine and note the position of each idle volume screw. Do

this by recording the number of turns in (clockwise) required to fully close each idle volume screw. All screws should require the same approximate number of turns.
Note: Do not overtighten. It is only necessary to seat each screw lightly.

C. Compare the number of turns in Step B, above, to the following chart and perform the required action.

TURNS OUT FROM FULLY CLOSED	CONDITION INDICATED	ACTION REQUIRED
0 (fully closed but vehicle continues to run)	Vacuum leak or idle speed screw turned in too far.	Ensure all vacuum ports/ hoses are plugged off. Verify proper idle speed screw adjustment. Correct and retest from A.
1/2 or less turns out	Slightly rich	Reduce idle fuel jets one size & retest from A.
1/2 - 1 turn out	Correct setting	Reset idle volume screws to 1 turn out and proceed to D.
1-1 1/2 turns out	Slightly lean	Increase idle fuel jets one size and retest from A.
1 1/2 or more turns	Lean	Increase idle fuel jet 2 sizes and retest from A. If condition does not improve re-check float and fuel pressure settings

When the correct idle fuel jets are installed, final idle volume screw adjustment will be between 1/2 to 1 turns out from fully closed. Idle speed will be sensitive to idle volume screw adjustments within this range.
Note: Should idle volume screw adjustment be relatively insensitive,check that the secondary throttle plates are not open too far.

D. Adjust idle speed screw to achieve desired idle speed. Final adjustment should be within 1/2 to 1-1/2 turns in from initial contact. If idle speed screw is turned in more

than 1-1/2 turns the throttle plates will uncover too much of the transition slot and the low speed circuit will begin to operate prematurely. This will cause an off-idle stumble. If you have an off-idle stumble, reset idle speed screw at one full turn in from initial contact and repeat the above procedure from step A.

2. Low Speed Circuit Adjustment

Note: Transition RPM values of 2500-2800 are approximate points of reference for circuit transition for medium weight vehicles with engines in the 300 to 350 C.I.D. range. These values should be 3000-3300 RPM for lighter vehicles/larger engines and 2000-2300 RPM for heavier/smaller engines.

With the vehicle securely blocked to prevent movement and the transmission in neutral, slowly increase engine speed to transition RPM (do this slowly to minimize the effect of the accelerator pump circuit). Use the chart below to determine the action required.

ENGINE BEHAVIOR	CONDITION INDICATED	ACTION REQUIRED
Engine stutters or stumbles. Spits back through carburetor	The upper end of the low speed circuit is lean	Decrease the idle air corrector jets by 2 sizes max and low speed circuit
Engine responds cleanly	Calibration is correct	None, proceed to high speed circuit adjustment
Engine speed floats, sound mushy or lazy. Black smoke from exhaust	The upper end of the low speed circuit is rich	Increase the idle air corrector jets by 2 sizes max and retest the low speed circuit

3. High Speed Circuit Adjustment

Tuning of the high speed circuit should be done with the engine under a steady-state loaded condition on a chassis dyno or on an open track. An exhaust gas analyzer or plug checks used at the RPM ranges listed below will verify main fuel and air corrector jet sizes.

This procedure is laid out in two stages. The first is used to set the overall mixture as determined by the main fuel and main air corrector jets. The second will establish the proper entry point for the high speed circuit.

Note: Although these are given as separate procedures they should be done together at the same time. This is necessary because a change of either the main fuel or main air corrector jet size will have some effect on both mixture and entry point.

A. Mixture

1. Replace air filter and reconnect all hoses.
2. Using 1st or 2nd gear and moderate acceleration (manifold vacuum above 12.5") run the engine at or near maximum RPM and observe the engine behavior. Refer to the chart below and perform the appropriate action.

ENGINE BEHAVIOR	CONDITION INDICATED	ACTION REQUIRED
Runs rough, rattles, stumbles or spits back through carburetor through carburator	Lean	Increase main fuel jets 2 sizes max, or decrease main air corrector jets 2 sizes max. Retest until condition corrected .
Engine pulls cleanly	Calibration is correct	None, proceed to step B
Runs rough, seems lazy. Black smoke	Rich	Decrease main fuel jets 2 sizes max, or from exhaust increase main aircorrector jets 2 sizesmaxRetest until condition corrected

B. Entry Point

Using 3rd or top gear and moderate acceleration (manifold vacuum above 12.5") start at 3000 RPM and gradually increase to approximately 4500 RPM. Refer tothe chart below and perform the appropriate action.

ENGINE BEHAVIOR	CONDITION INDICATED	ACTION REQUIRED
Stumbles and then recovers (slight hesitation) worsens with additional acceleration.	High speed circuit entry point too early.	Increase main air corrector jets 2 sizes max to delay entry-point, or decrease main fuel jets 2 sizes max. Retest until condition corrected.
Engine pulls cleanly.	calibration is correct.	None.
Stumbles and then flattens out. Improves with acceleration.	High speed circuit entry point too late.	Decrease main air corrector jets 2 sizes max to lower entry RPM or Increase main fuel jets 2 sizes max Retest until condition corrected.

Power Enrichment Circuit

Carburetors with a power valve may require additional tuning of the power enrichment circuit.

The "timing" of this circuit is controlled by the power valve. With the correct value of power valve it will only operate during high load conditions such as full throttle acceleration.

The amount of fuel delivered by this circuit is controlled by interchangeable P.V.C.R. bushings. By installing a larger P.V.C.R. bushing the amount of fuel delivered during power enrichment circuit operation will increase creating a richer mixture.

In the opposite way a smaller P.V.C.R. bushing will create a leaner mixture.

An exhaust gas analyzer or plug checks can be used to determine P.V.C.R. bushing sizes.

Note: Do not attempt to cover-up a poorly tuned high speed circuit with the power enrichment circuit. The power enrichment circuit should only operate during high load conditions such as full throttle acceleration.

ADDITIONAL INFORMATION

Jet Sizing

This chart is intended to be a guide in relating jet size designations between Holley and Weber. It may be helpful in establishing a starting point for calibration work

Holley Jet No	Weber Jet No	Holley Jet No	Weber Jet No	Holley Jet No	Weber Jet No	Holley Jet No	Weber Jet No
55	130	68	165	75	195	82	225
57	135	69	170	76	200	83	230
59	140	70	175	77	205	84	235
61	145	72	180	78	210	85	240
64	150	73	185	79	215	87	245
65	155	74	190	81	220	89	250
66	160					92	255

High Altitude

As a rule, carburetors tend to run richer at higher altitudes than at sea level. For best performance and economy you may want to decrease the fuel jets by 1 size for every 2000 feet above sea level. For example, at 4000 feet you would decrease the idle and main fuel jets by 2 sizes (a #50 idle jet would be changed to a #40 and a #155 main jet would be changed to a #145).

Both Holley and Weber jet sizes are based on flow rates rather than diameter. Drilling any two jets in the field will almost always result in significantly different flow rates. For this reason we strongly recommend against drilling jets.

Reference Material

For further information regarding the theory and practice of using Holley carburetors we suggest studying one of the many excellent books currently available. Two in particular that are well worth reading are:

"Holley Carburetors" by Dave Emanuel published by S-A Design, Santa Fe Springs, CA.

"Holley Carburetors and Manifolds" by Mike Urich and Bill Fisher published by H P Books, Tucson, AZ.

POWER PLATE TUNING PARTS		
Part Description	Sales No.	Part Size (2 per package)
Main Jet	8340-8375	0.80 to 2.55 in increments of .05mm
Idle Jet	8380-8392	0.40 to 1.00 in increments of .05mm
Air Corrector Jet	8405-8435	0.80 to 2.30 in increments of.05mm
Idle Jet Holder Holder & Air Corrector	8445-8460	0.60 to 2.10 in incrementsof 0.10mm
Power Valve Channel Restrictions	8315-8330	0.50 to 2.00 in increments of 0.10mm

NOTE: To determine the proper Sales No. for a given part size, add 1 to the Sales No. for each incremental increase in part size.
EXAMPLE: Part No. 8341 is a 0.85mm Main Jet & Part No. 8342 is a 0.90mm Main Jet.

Power Valve Channel Restriction
Assortments (2 each size)
8310 (0.60, 0.80, 1.00, 1.20)
8311 (1.40, 1.60, 1.80, 2.00)

Emulsion Tube (Part Number Does Not Reflect Size)

8301 (F7)	8304 (F15)
8302 (F8)	8305 (F17
8303 (F11)	8306 (F20)

Power Plate — Holley Conversion

Holley Carbs		Power Plate Applications			
		Primary Side		Secondary Side	
Holley List #	Holley Mdl #	Plate Kit #	Baseline Kit #	Plate Kit #	Baseline Kit #
0-6619-1	4160	8205	8230	8203	8231
0-6895	4150	8201	8258	8203	8258
0-6909	4160	8205	8232	8203	8231
0-6919	4160	8205	8232	8203	8231
0-6946-1	4160	8205	8232	8203	8231
0-6947	4160	8205	8232	8203	8231
0-6979	4160	8205	8230	8203	8231
0-6979-1	4160	8205	8230	8203	8231
0-6989	4160	8205	8232	8203	8231
0-7009	4160	8205	8232	8203	8231
0-7053-1	4160	8205	8230	8203	8231
0-7154	4160	8205	8232	8203	8231
0-7410	4150	8201	8258	8203	8258
0-7411	4150	8201	8258	8203	8258
0-7413	4160	8205	8230	8203	8231
0-7448	2300	8206	8258	---	---
0-7850	4160	8205	8232	8203	8231
0-7985	4160	8205	8230	8203	8231
0-7986	4160	8205	8230	8203	8231
0-7987	4160	8205	8232	8203	8231
0-8004	4160	8205	8230	8203	8231
0-8005	4160	8205	8232	8203	8231
0-8006	4160	8205	8232	8203	8231
0-8007	4160	8205	8233	8203	8234
0-8156	4150	8202	8246	8202	8247
0-8162	4150	8206	8252	8206	8253
0-8804	4150	8206	8252	8206	8253
0-9002	4160	8205	8230	8203	8231
0-9040	4160	8205	8235	8203	8231
0-9210	4160	8205	8232	8203	8231
0-9219	4160	8205	8230	8203	8231
0-9254	4160	8205	8232	8203	8231
0-9379	4150	8202	8244	8202	8247
0-9380	4150	8206	8252	8206	8253
0-9381	4150	8206	8252	8206	8253
0-9626	4160	8205	8232	8203	8231
0-9776	4160	8201	8258	8203	8236
0-9834	4160	8205	8230	8203	8231