

WEBER CARBURETORS

40 / 44 / 48 IDF-XE

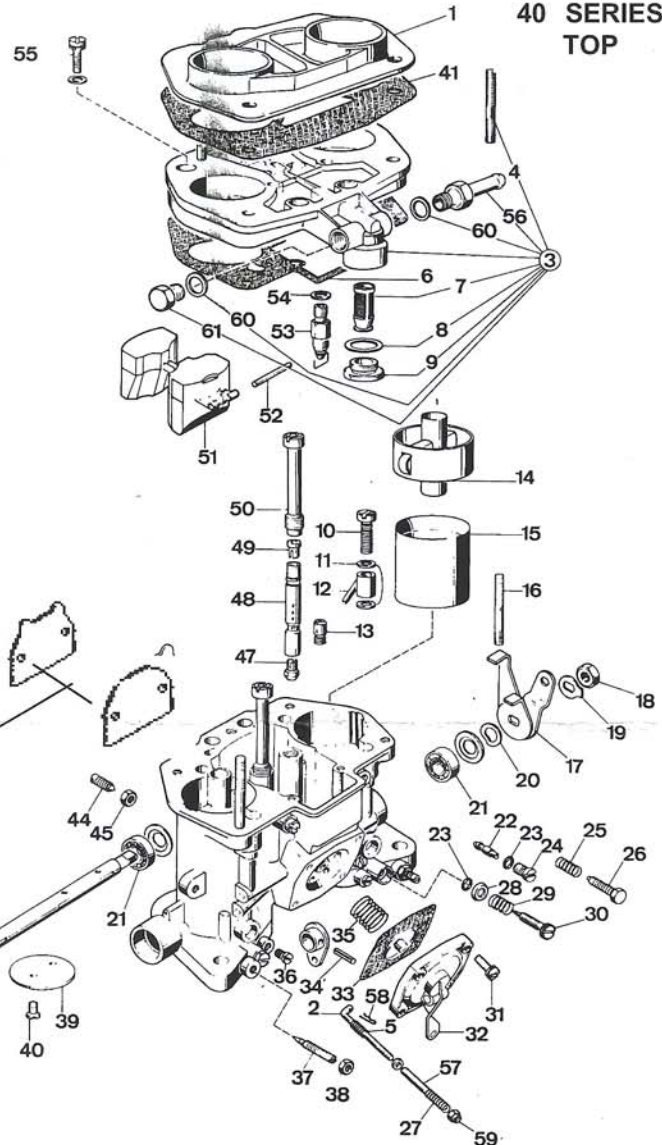
Part Number # 92.3240.05CB

PRO SERIES
 18950-138 40 IDF 70
 18890-030 44 IDF 71
 19030-021 48 IDF 6

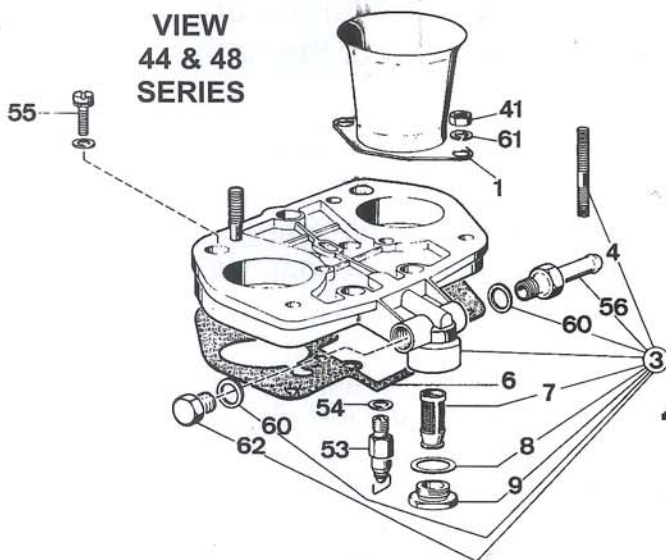
Late style IDF XE shown
 Early style can be identified by its cam and roller style accelerator pump action.

CB Performance rebuild kits contain both styles of pump diaphragms.

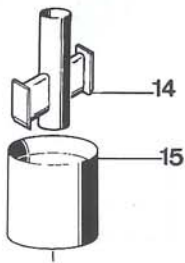
**VIEW
40 SERIES
TOP**



**VIEW
44 & 48
SERIES**



**44 & 48
VENTURIES**

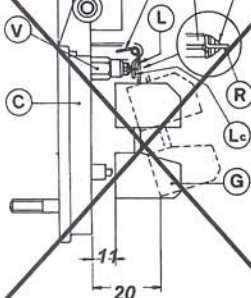


Float setting notes

1. Weber fuel pressure is 3 psi. **maximum**, use a fuel pressure regulator
2. Float height or level is 14mm from the gasket, do not depress the ball and spring in the needle valve.
3. Float drop, 2mm max. **needle travel**, after the height or level has been set.

KEY CALIBRATED PARTS

- 50) 52580-006 Extended Jet holder
- 53) 79511-xxx Needle & Seat (steel)
- 79519-xxx Viton performance Needle & Seat
- 19) 73401-xxx Main Jet
- 94) 77401-xxx Air corrector Jet
- 34) 74405-xxx Idle Jet
- 13) 79701-xxx Pump by-pass (use 000 for performance)
- 96) 76210-xxx Accelerator pump Jet
- 33) 47407-207 Accelerator pump diaphragm XE style
- 47407-027 Accelerator pump diaphragm early style



Progression Hole's Throttle Plate Adjustment Diagram



SPECIAL NOTE:

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

Synchronized Carburetors: IDF, IDA, DCOE, etc.

Shown in Figure "A", the idle speed screw **IS NOT** turned in more than the $\frac{1}{2}$ turn MAXIMUM. The throttle plate (F) is below the progression holes (2), the carburetor would be at "curb" idle.

Shown in Figure "B", the idle speed screw **IS** more than a $\frac{1}{2}$ turn in MAXIMUM. The throttle plate **IS** exposing the enrichening progression holes. The extra fuel at curb idle, from the exposed enrichening holes, is 95% of the tuning problems we experience. The Idle Speed Screw **CAN NOT** be turned in more than $\frac{1}{2}$ turn MAXIMUM, or, you will experience rich idle condition, a stumble off idle and at around 1800 RPM.

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

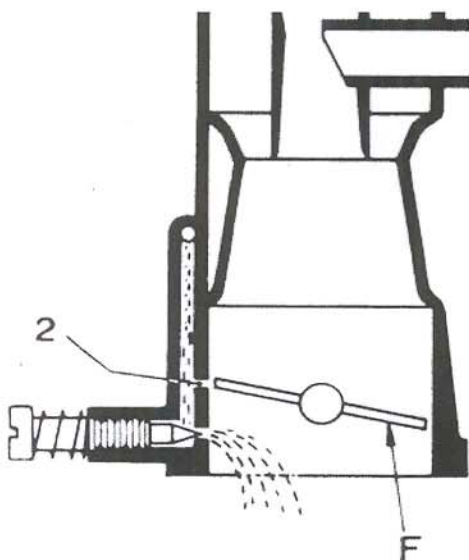


Figure A
Correct Throttle Position

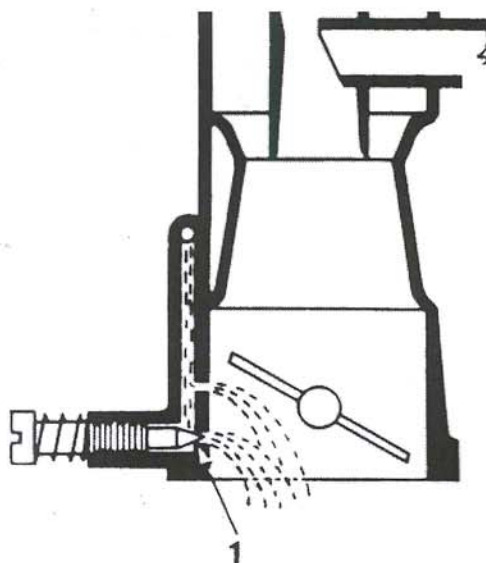


Figure B
Enrichening Holes Exposed

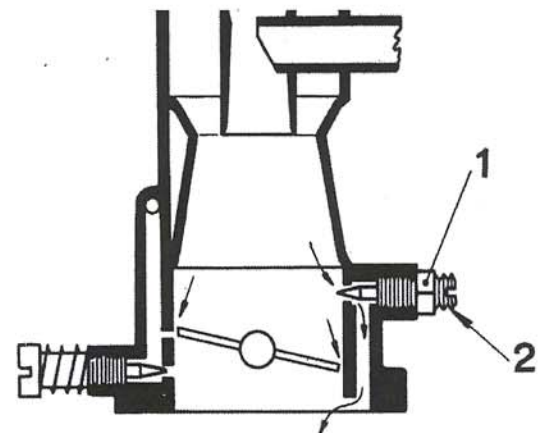


Figure C
Air By-pass Valve

WEBER IDF Carbs Low Speed Circuit Tuning



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

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

Standard IDF Settings:

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

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

Float Height; 14mm measured from the gasket to top of float, do not depress the ball in the needle valve with this measurement.

"Lean Best Idle" Procedures

After confirming the linkage allows the throttle lever to seat against the Idle Speed Screw. Back off the Idle Speed Screw, then turn the screw in until it contacts the throttle lever and turn it in ½ turn. Turn in the Mixture Screw in until it "LIGHTLY" seats, then back it out 1 1/2 full turns. Loosen the 8mm wrench size nuts on the "air bleed" screws, turn in the air screws until it seats then retighten the nut.

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

"Simple Rules for Calibration"

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

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

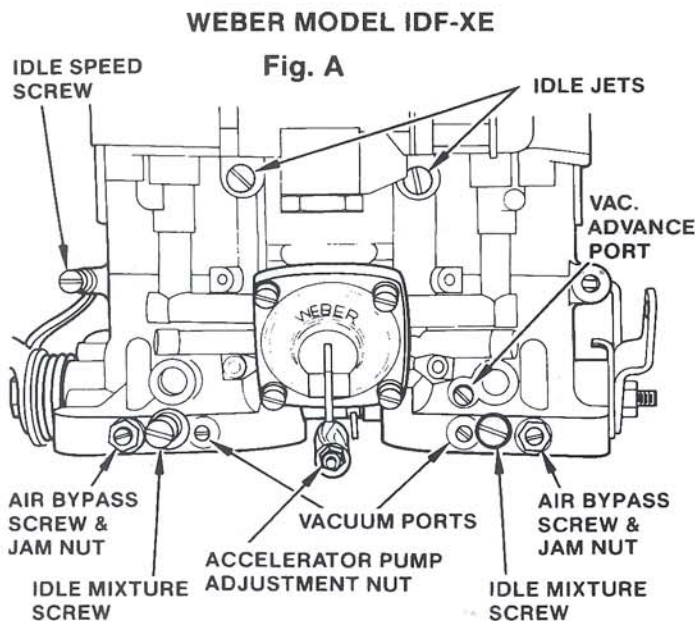
This is all based on the important fact that your speed screws are not open more than ½ turn in maximum, if they are then that is also another indication that you have a lean idle circuit. You are adding fuel at "idle" by opening the throttle plates too far and thus exposing these transitional, enriching, progression holes. You must be on the idle circuit (**less than ½ turn in on the speed screw**)



Pump By-pass Valve:

The pump by-pass valve is designed to allow fuel into the pump circuit and when depressed, by-pass a percentage (hole on the side of the valve) of the fuel delivered to the accelerator pump nozzle/jets. The zero pump by-pass valves (#79701.000) in our jet kits will deliver all of the available fuel to the engine and not "by-pass" fuel back to the fuel bowl. This will increase the duration and volume of the pump shot with the original pump jets. To decrease the duration and increase the fuel volume of fuel we include in our jet kit the larger 55 pump nozzle/jets. This is for maximum fuel delivery from the accelerator pump circuit. The accelerator pump by-pass valve is located in the bottom of the fuel bowl, one is required per carburetor.

IDF Adjustment controls



More Tuning & Adjustment

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

Adjustment if possible should be to find smoothest idle with each mixture screw on all carburetors. Some prefer to do one barrel of

each carburetor then come back and do the second barrel

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

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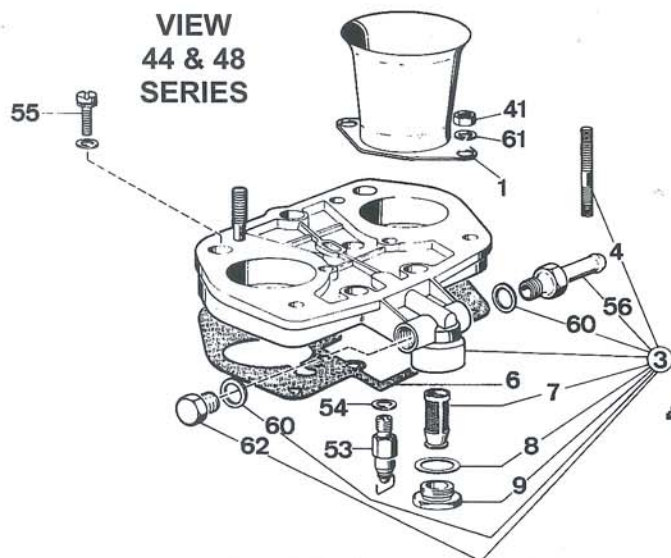
19030-021 48 IDF 6

Late style IDF XE shown

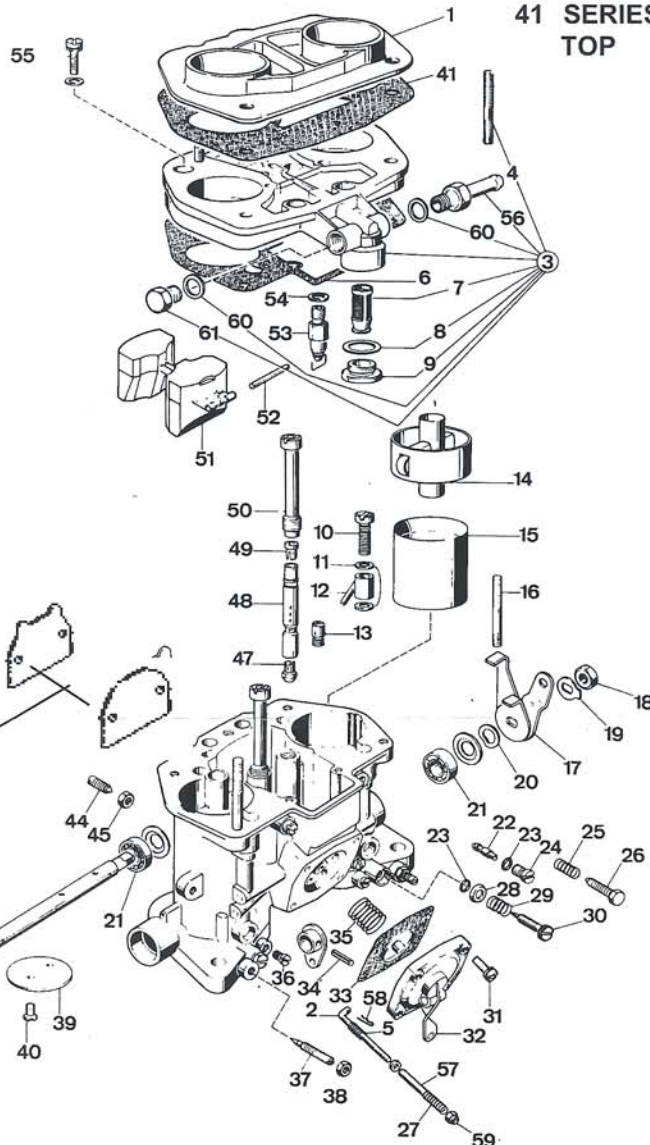
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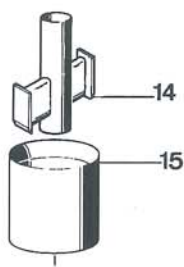
VIEW
44 & 48
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VIEW
41
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TOP



44 & 48
VENTURIES

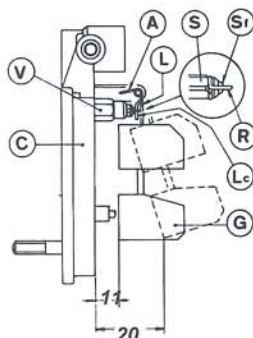


Float setting notes

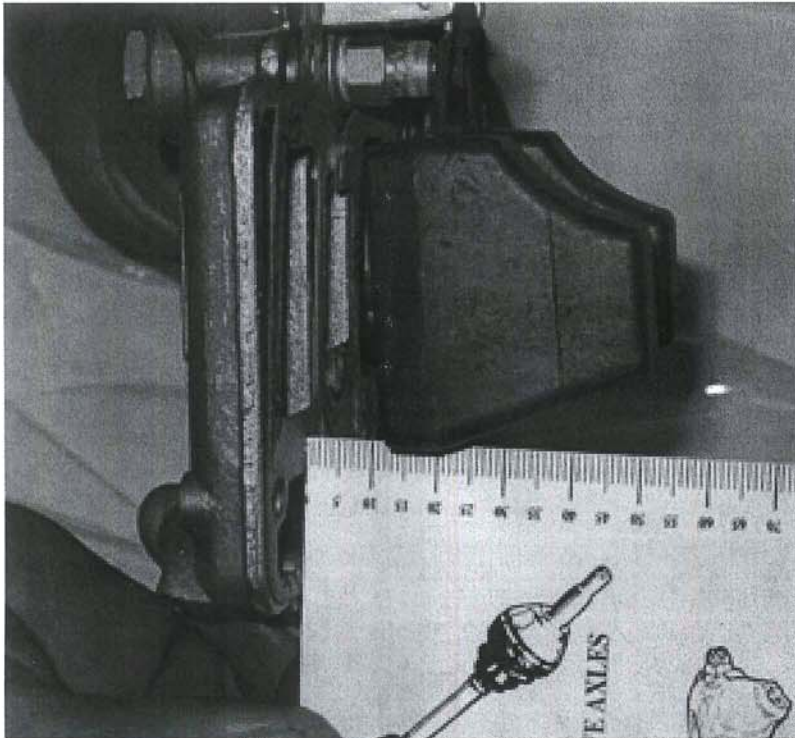
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2. **Float height** or level is **14mm** from the gasket, do not depress the ball and spring in the needle valve.
3. Float drop is 2.0mm needle travel, after the height or level has been set.

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IDF FLOAT HEIGHT ADJUSTMENT

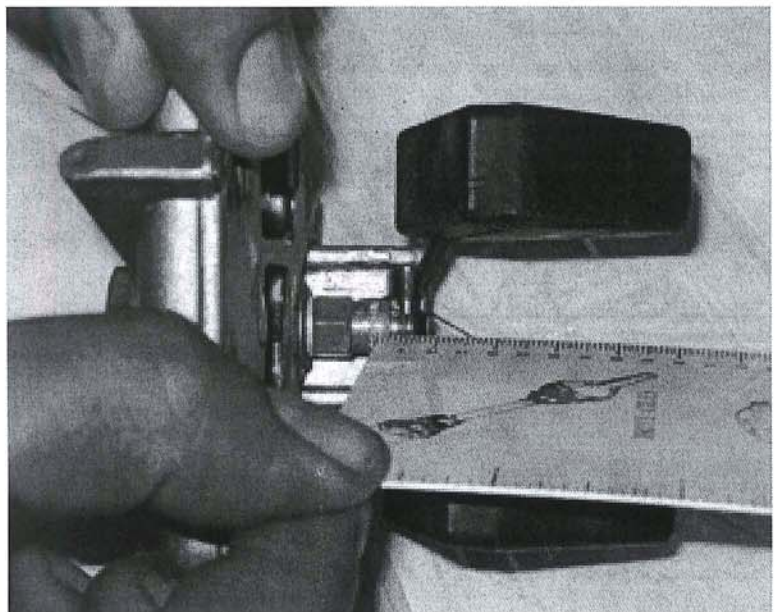


IDF Float Height Adjust

1. With the top of the carburetor in a vertical position, up and down, the float will hang downward from the float pin, closing the needle against the seat.
2. **Measure 14mm** from the gasket to the top of the float, as shown in the picture to the left.
3. The object of this method is: **not** having the weight of the float depressing the spring loaded damping ball in the needle.
4. **DO NOT INVERT THE CARBURETOR TOP, RESTING THE FULL WEIGHT OF THE FLOAT ON THE NEEDLE AND SEAT WHEN ADJUSTING THE FLOAT HEIGHT.**

IDF Float Drop

1. With the top of the carburetor still in the vertical position, up and down, the float drop is the needle fully open from its seat. 
2. We are looking for 2mm of needle travel, from the closed needle in its seat to the float fully opening the needle off of its seat. This is the needle travel, and we limit this movement to 2mm maximum.
3. In some racing applications where high "G" forces are experienced in turns, the "needle travel" is limited to 1.5mm of movement and float height at 15mm. This creates a micro switch, on / off and controls the fuel level in the fuel bowl in a more operable condition.



WEBER 40 IDF	Factory Sizes	Single Carb	Dual Carbs
AIR CORRECTION	2.00	1.60	2.00
EMULSION TUBE	F-11		
MAIN JET	1.15	1.45 (d)	1.15
PUMP JET	.50	.50 †	.50
IDLE JET	.50	.65	.55 (d)
VENTURII	28mm		

NOTE: Drill 2mm Hole in each Throttle Valve for Single Carb setup.

(d) = drilled

† = Uses .0 Bypass



WEBER 44 IDF	Factory Sizes	Single Carb	Dual Carbs
AIR CORRECTION	1.75	1.65	1.75
EMULSION TUBE	F-11		
MAIN JET	1.35	1.60 (d)	1.35
PUMP JET	.50	.50 †	.50
IDLE JET	.50	.65 (d)	.60 (d)
VENTURII	36mm		

NOTE: Drill 2mm Hole in each Throttle Valve for Single Carb setup.

(d) = drilled

† = Uses .0 Bypass



WEBER 48 IDF	Factory Sizes	Single Carb	Dual Carbs
AIR CORRECTION	1.80	1.80	2.00 (d)
EMULSION TUBE	F-2		
MAIN JET	1.50	1.70 (d)	1.75 (d)
PUMP JET	.50	.50 †	.50
IDLE JET	.55	.65	.60 (d)
VENTURII	40mm		

NOTE: Drill 2mm Hole in each Throttle Valve for Single Carb setup.

(d) = drilled

† = Uses .0 Bypass



WEBER 34 ICT	Factory Sizes	Single Carb	Dual Carbs
AIR CORRECTION	1.60	N/A	1.60
EMULSION TUBE	F-78	N/A	
MAIN JET	1.30	N/A	1.35 (d)
PUMP JET	.50	N/A	.50
IDLE JET	.52	N/A	.60 (d)

