

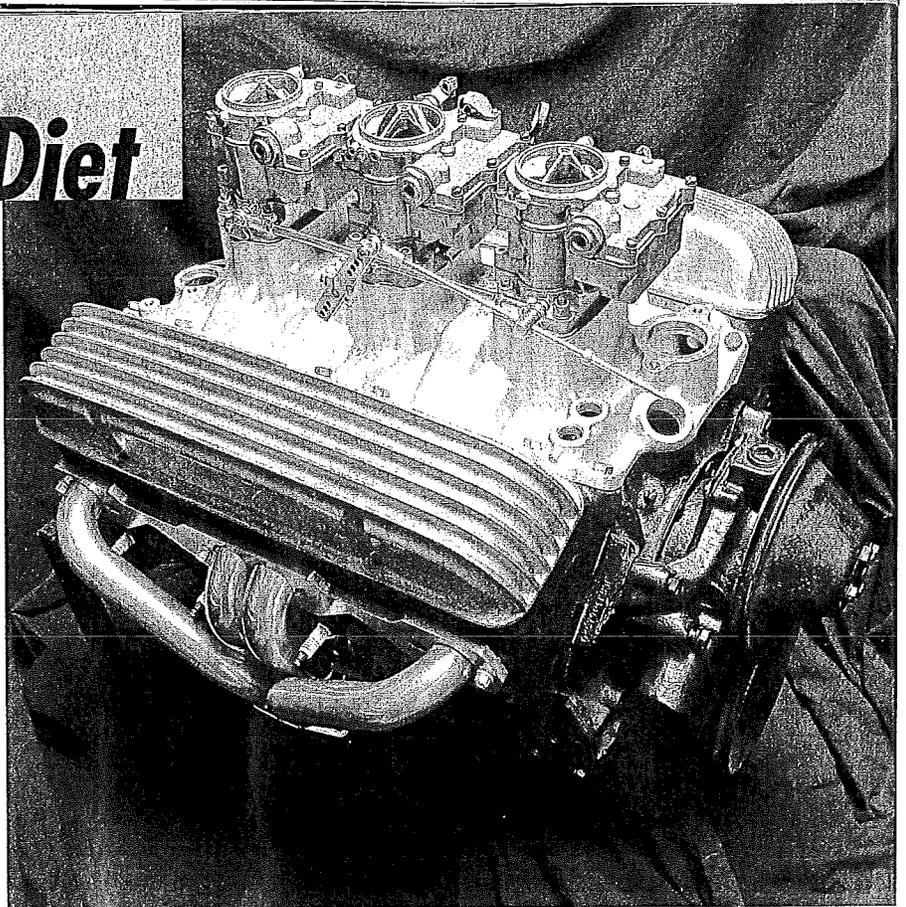
High-Carb Diet

By Kev Elliott

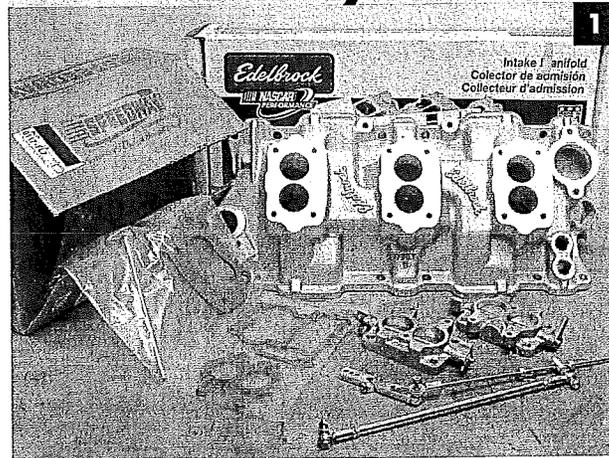
Nothing says “hot rod” quite like multiple carb setups, just as, according to the owner of my local speed shop, nothing says “hot rodder” more than building engines for cars you don’t yet own, and seeing as I purchased a bunch of rebuilt carburetors a while back that included a number of Rochester two-barrels, I figured it’d be neat to put together a tri-power setup for my next project. Except I didn’t fancy the idea of running all three carburetors all the time and wanted the setup to work properly.

Small base (1 $\frac{1}{8}$ x3 $\frac{1}{4}$ -inch mounting pattern with 1 $\frac{1}{16}$ -inch bores—there are later, larger bases but it’s the small, early ones needed here) Rochester 2G-style carburetors aren’t exactly the hardest to find, but genuine tri-power examples are. However, Speedway Motors offers a kit to convert regular Rochesters to operate as a tri-power, with the front and rear carbs converted to act as secondaries, the center carb working as the primary. This center carburetor retains all its carburetion systems, such as idle, main metering power, pump, and choke, while the secondaries contain only float, pump, and main metering systems. When using a progressive linkage such as the one that is available with the Speedway kit, the center carb operates during idle and part throttle while at low speed, which has incidental economy benefits, then all three carbs will operate at higher and full throttle.

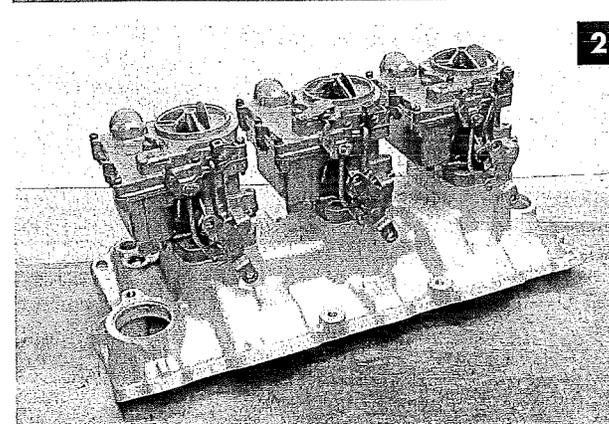
Of course a tri-power is one of the more nostalgic induction setups you could employ, so what could be better than sticking to the theme and mounting the carburetors on an Edelbrock triple deuce intake, complete with front oil fill tube for that traditional look? It just so



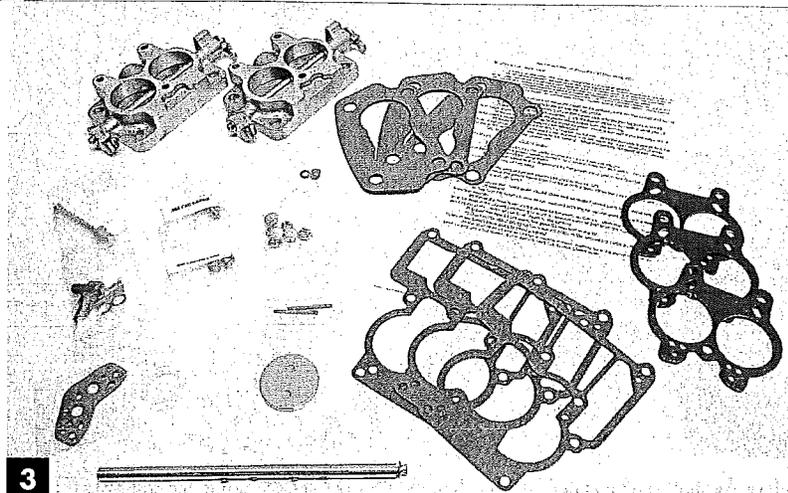
Increasing your carb intake the fun way!



1 With the exception of a trio of carbs, here’s almost everything needed to convert to tri-power: the Speedway Motors conversion kit and progressive linkage and an Edelbrock triple deuce intake manifold. You’ll still need air cleaners, a fuel distribution block, and fuel lines.

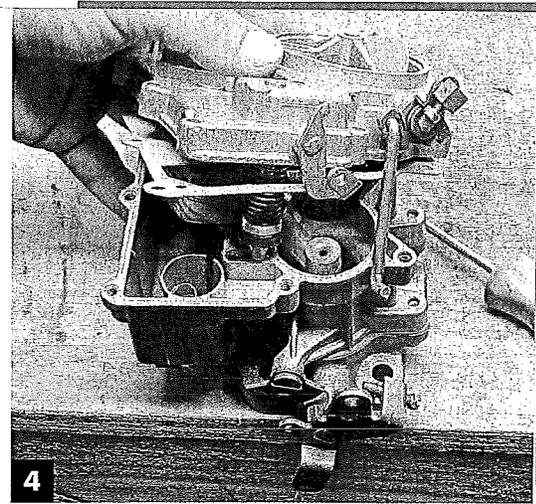


2 Three Rochester 2G carburetors perched atop the new Edelbrock intake. Usually the center carb will have an automatic choke fitted, but as I already had these three manual choke carbs and rarely require a choke anyway in SoCal, the center carb will retain its manual choke.



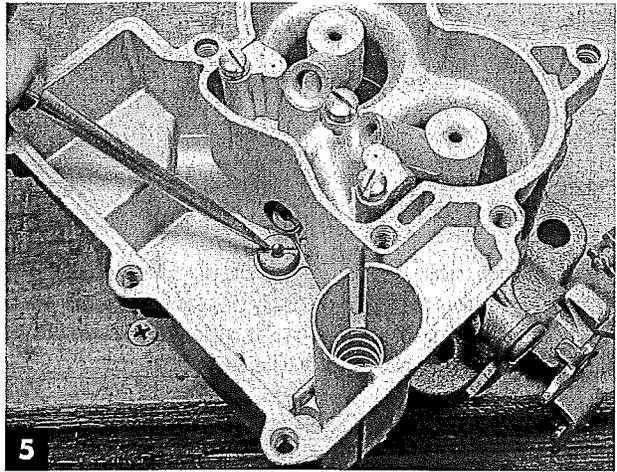
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Here's what you get in the Speedway kit: new bases for the outer carbs, gaskets, a new throttle shaft and plates for the center carb, plugs, jets, a power valve and modified piston, idle tubes, hardware, and instructions. The kit is also available with or without a progressive linkage.



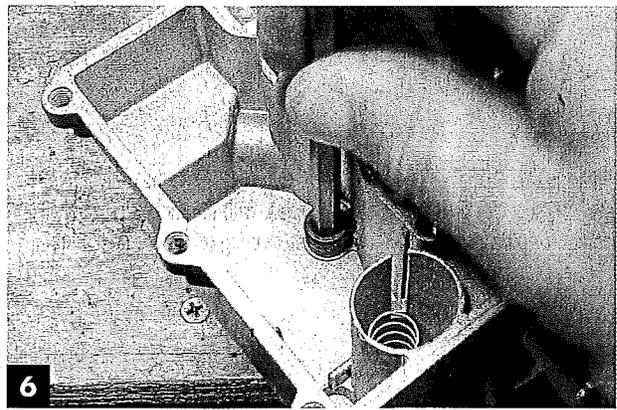
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I started with the secondary carbs by disconnecting the accelerator pump and choke linkages and removing the top, known as the air horn. My carbs had already been rebuilt (note new gaskets and accelerator pump) but now would be the perfect time to rebuild yours if needed.



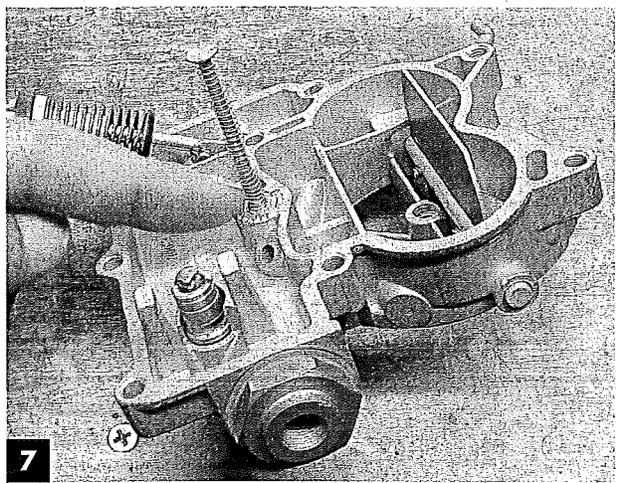
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The power valve in the main center carb was replaced with this one supplied in the kit, while the main metering jets (the two shown behind the power valve) were replaced with kit-supplied ones, 0.056 inch in the center carb and 0.055 inch in the secondaries.



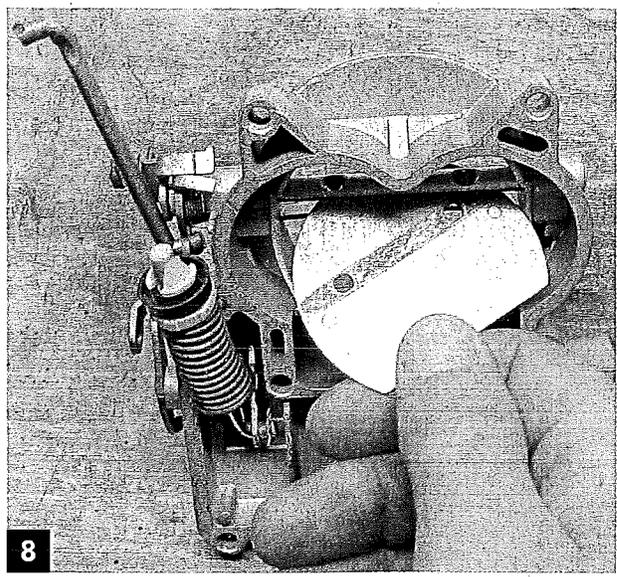
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The power valves in the secondary carbs were replaced with these "plugged" versions (Allen-headed bolts) from the kit (or can be filled with JB Weld or similar).



7

On the secondary carbs, the power valve piston is no longer required. Speedway recommends grasping the piston with side-cutter pliers to extract it from the housing, though I clamped the end of the piston in a vise and pulled the housing free. The float and its hinge pin were first removed, though the float needle is still in its seat here. This was also removed.

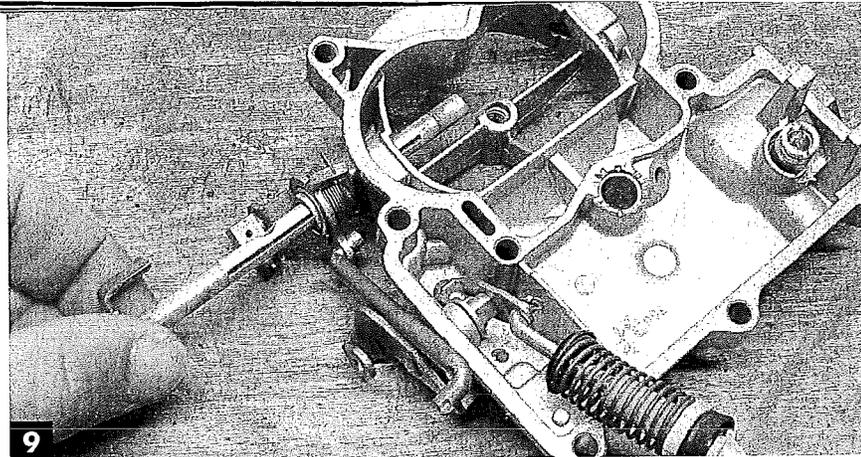


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The chokes on the front and rear carbs are no longer required, as these carbs will act as secondaries. The choke plate must be removed first...

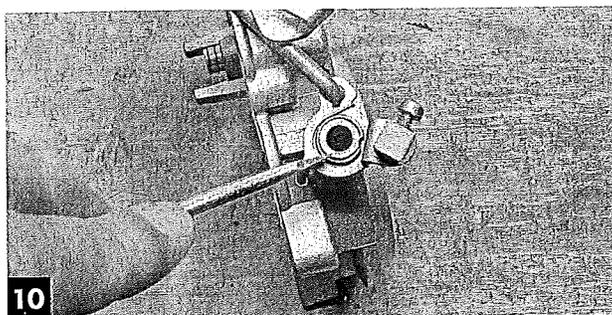
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happens that Edelbrock lists the three-two intake for a small-block Chevy as part of its current product range, so no trawling the swap meets is necessary, unless that's your kick. I already had a 265ci Chevy small-block under the bench with finned valve covers and no breathers, so this setup was a natural. Now I just need a car to put it in. What did that guy at the speed shop say? **R&C**



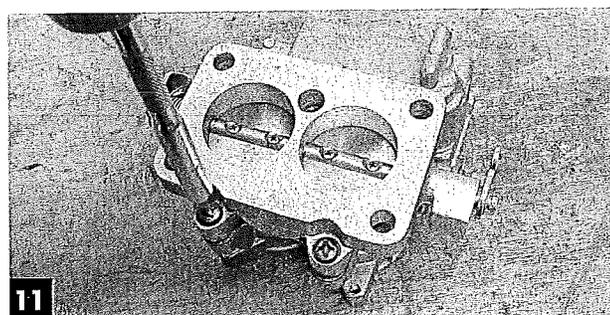
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... before the shaft can be pulled from the housing. You can see the slot in the shaft which the plate passes through.



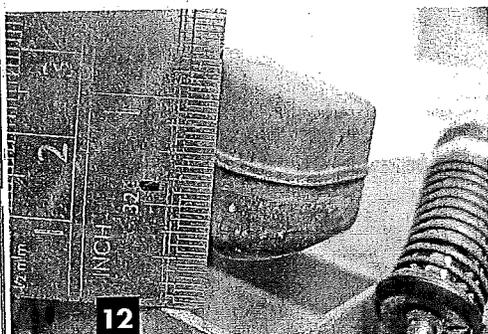
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With the shaft removed, this circlip is removed, releasing the choke linkage and spring, which are also no longer needed. With the choke shaft and all associated parts removed, the holes in the housing can be plugged using chrome plugs supplied in the kit.



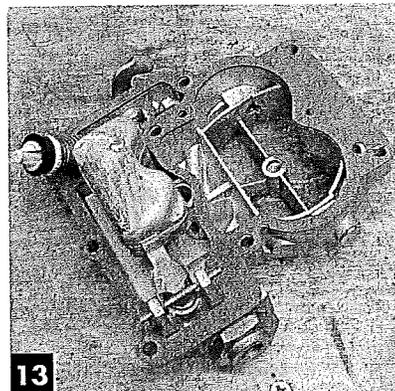
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New bases which contain new throttle shafts and plates were supplied for each of the secondary carbs and were simply swapped for the originals. These are 0.090 inch lower in height than the originals, but the difference is virtually undetectable once the three carbs are installed on the manifold.



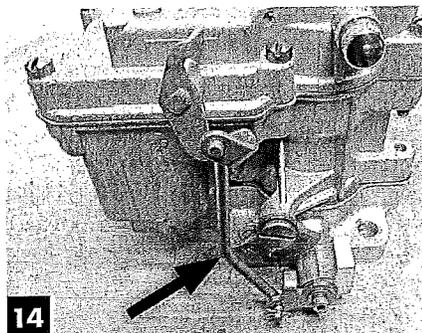
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Before the housing was reassembled, the top section was inverted to reset the float level. With the float in the closed position, it should measure $\frac{3}{4}$ inch from the seam at the center of the float to the casting.



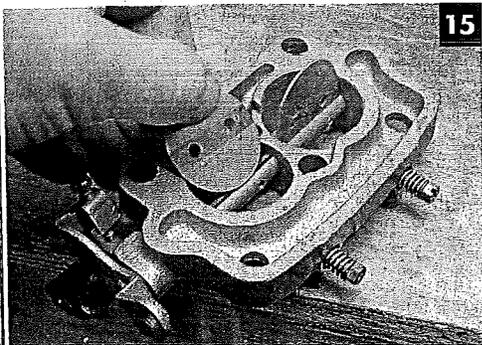
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With a new gasket installed (all gaskets required are supplied in the Speedway kit) the air horn could be refitted.



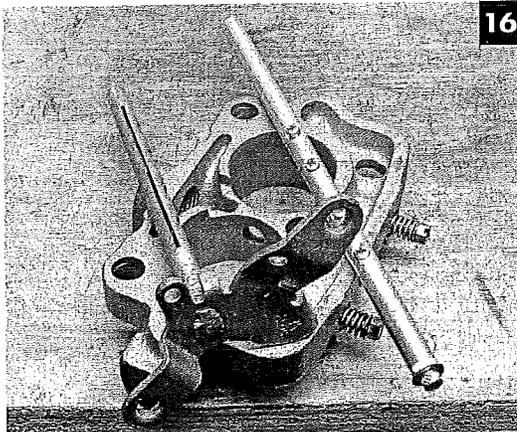
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The accelerator pump linkage (arrowed) may require rebending slightly to ensure full stroke is achieved, yet the throttle plates aren't held open. Don't forget to reinstall the clip on the lower end of the rod.



15

With both secondary carbs rebuilt and modified, the center carb could be addressed. I removed the base from the housing and then removed the throttle plates.



16

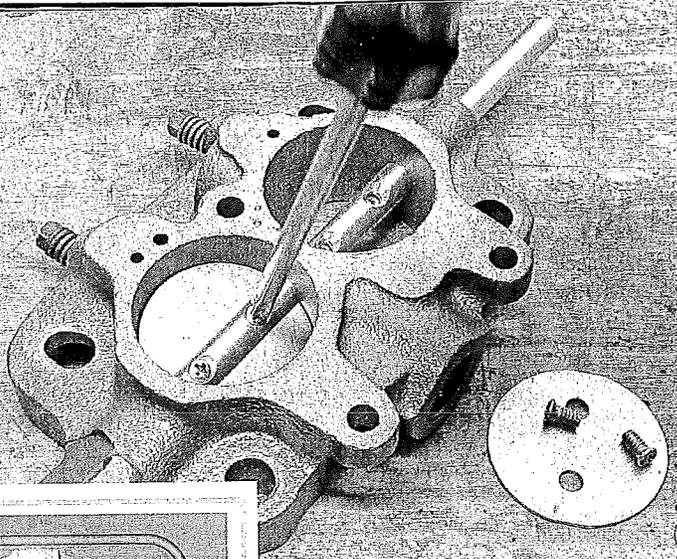
The shaft was removed next, to be replaced by the longer version included in the kit.

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New throttle plates were provided, which was useful as one of mine was bent. As can be seen from the plate on the bench, the holes are offset, so ensure you fit them the correct way round, with the bevel on the plates in the correct position.

Also, use thread locker on the throttle plate screws. You don't want them coming loose and dropping into the intake manifold!

17



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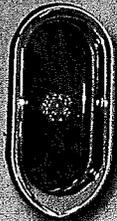
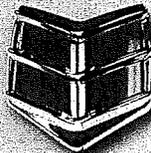
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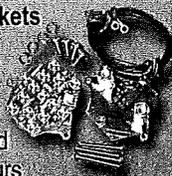
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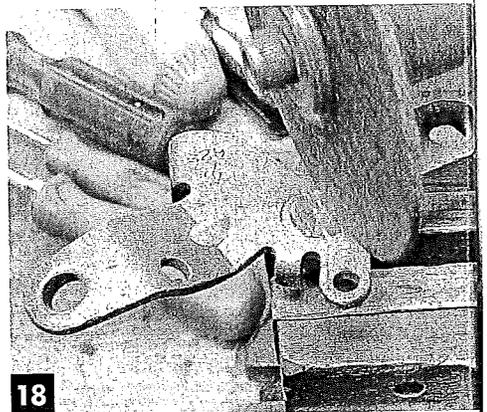


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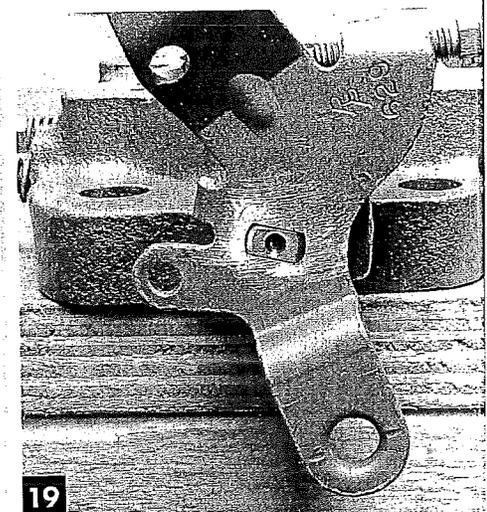


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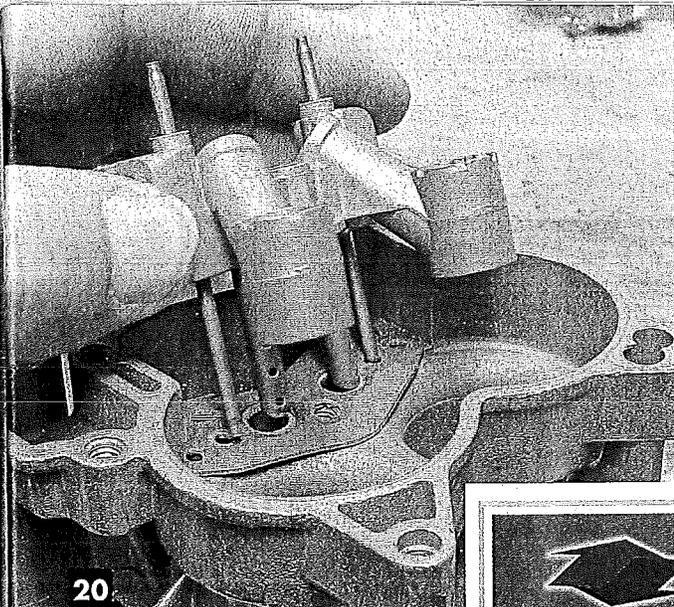
18

The linkage bracket from the old throttle shaft had to be reused. Some are simply peened over while others are brazed, requiring a little work with a cut-off wheel or grinder to free it from the shaft.



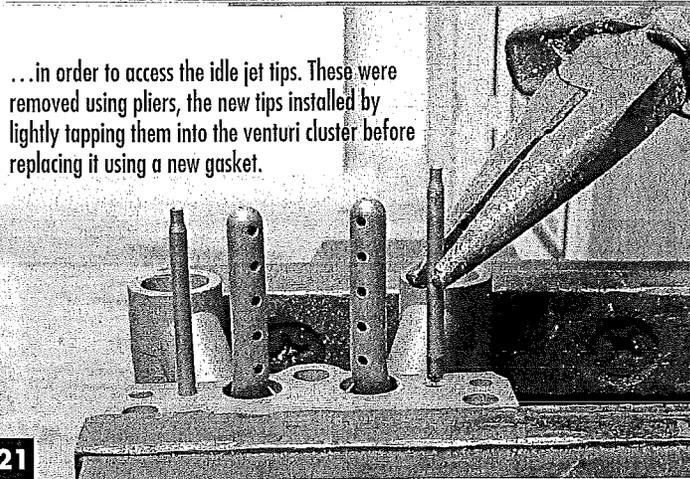
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Once it was removed from the old shaft, the linkage bracket simply fit over the end of the new shaft as shown and was secured with the bolt supplied using thread locker.



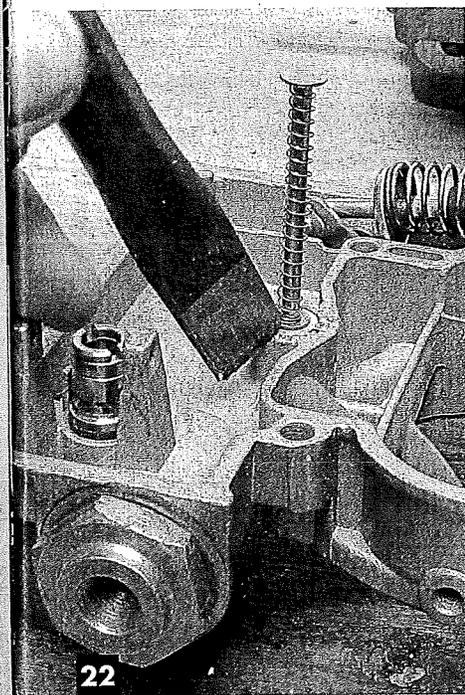
20

The center carb required more work than the outer two, and the venturi cluster in the main body had to be removed...



21

...in order to access the idle jet tips. These were removed using pliers, the new tips installed by lightly tapping them into the venturi cluster before replacing it using a new gasket.



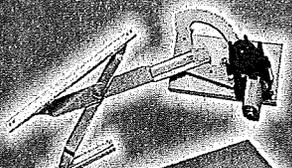
22

As with the outer carbs, the power valve piston was removed, but on this carb it was replaced with a modified version, staking the edge of the piston with a punch to prevent it from falling out. The float level was reset as per the other carbs, then the carb was reassembled.

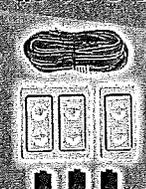


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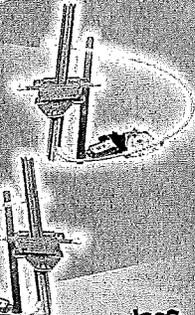
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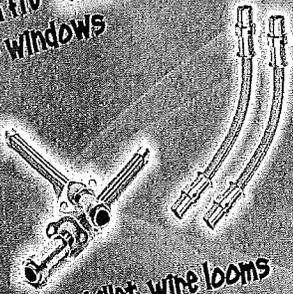
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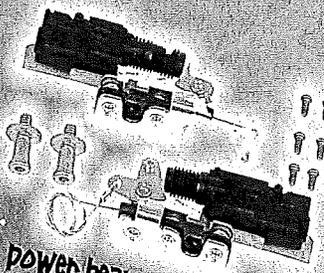
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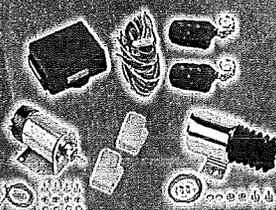
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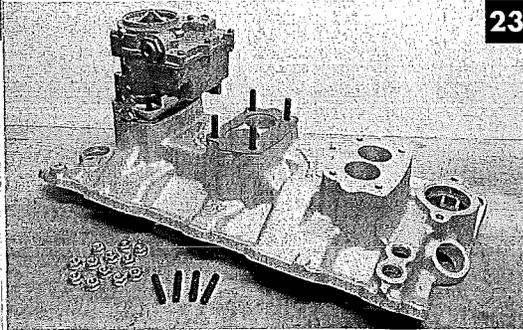


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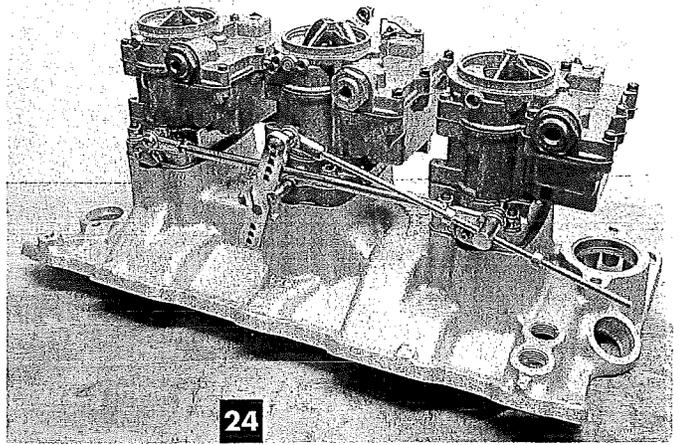


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23 The trio of modified carbs can now be installed on the intake manifold, though new studs and nuts will be needed. The gaskets are supplied in the Speedway kit.

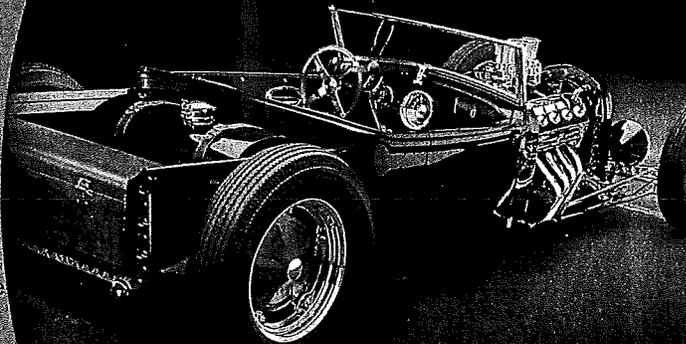


24

With the carbs mounted on the Edelbrock manifold, Speedway Motors' progressive linkage could be installed. This is the reason for the extended throttle shaft on the center carburetor, the linkage allowing the center carb to operate before the front and rear come into operation at part throttle. The Edelbrock C-357-B manifold is designed for 1955-86 262-400ci small-block Chevy motors and has a balanced 180-degree firing order port runner arrangement. It includes an exhaust gas heat riser and the facility for a front oil fill tube.

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