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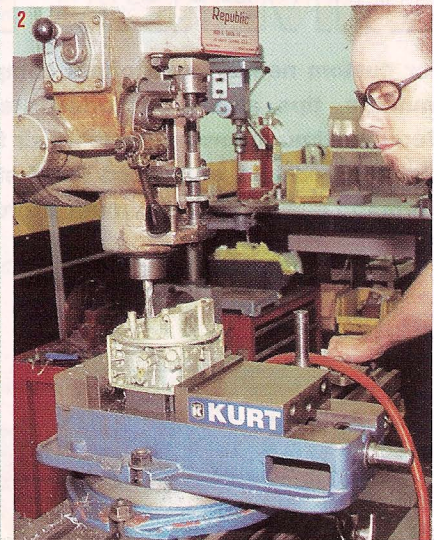
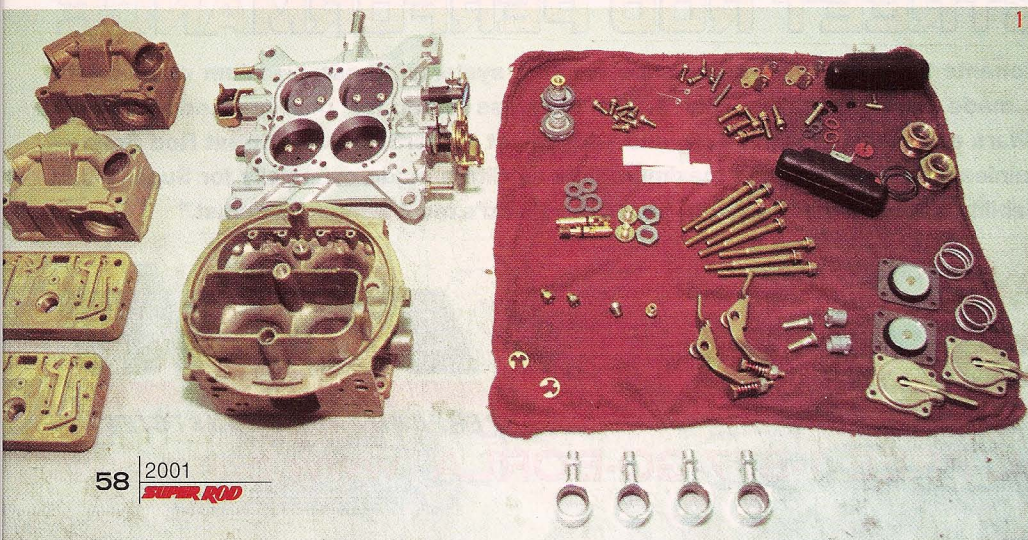
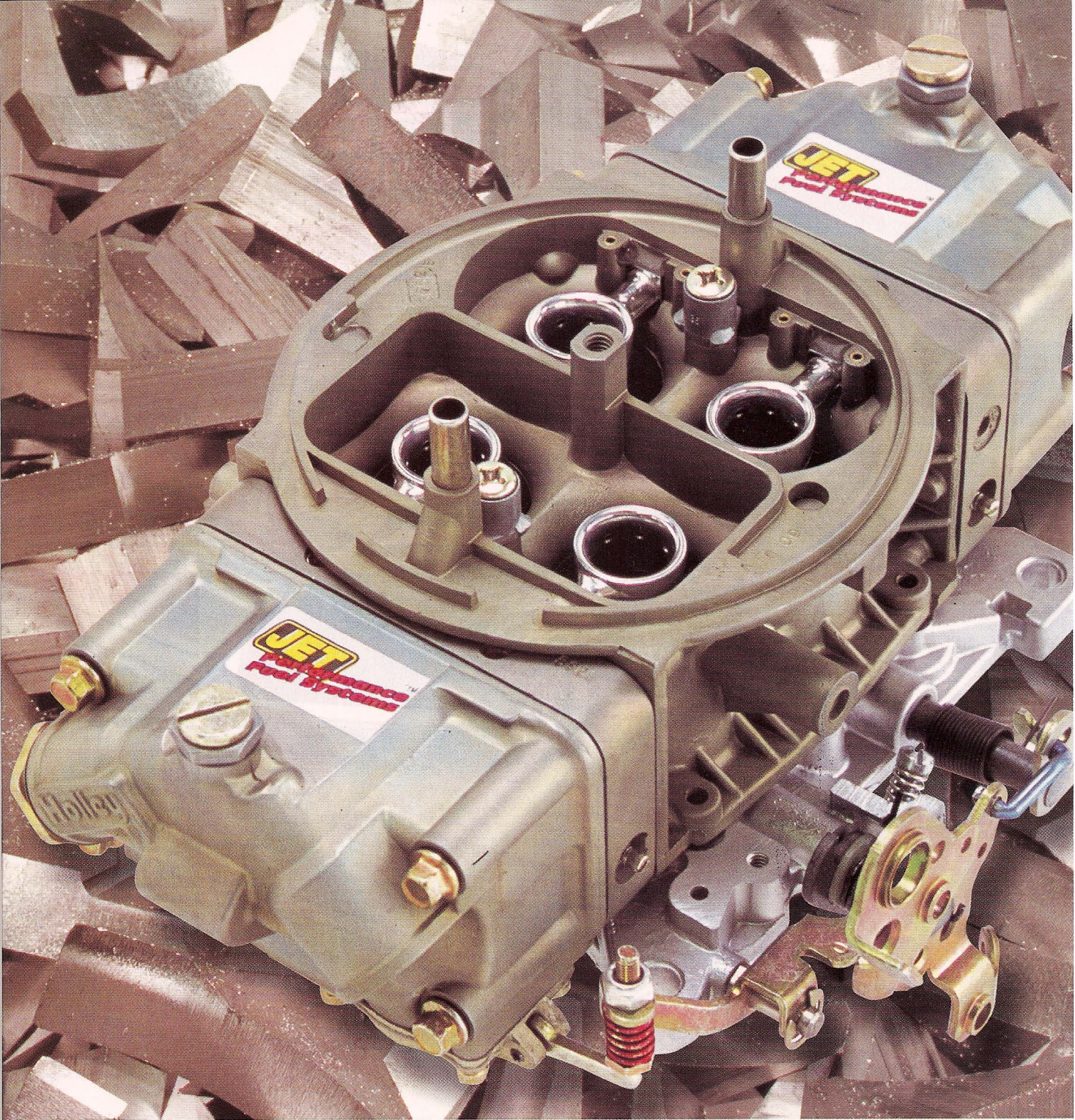


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# JET REBUILD

## Turning Holley's 750 Double Pumper Into Double Trouble

Photography: Matt Emery  
Words: Matt Emery

In the annals of hot rodding, there are not many names like Holley. And there may be no carb more famous than the 750cfm double pumper.

Passing 750 cubic feet per minute of air/fuel mixture, this carburetor is just the right size for a healthy Chevy 350 or Ford 351 small-block engine. This Holley unit can even be enough for a mild big-block-equipped vehicle. It will give reasonable fuel economy around town, but can open up enough to pull a boat or car trailer up a hill.

But that doesn't mean it can't be improved upon. A carburetor is a complex piece of engineering, where a few too many turns of a mixture screw can mean the difference between having your engine go fast or seizing up. Holley doesn't have a crystal ball to know exactly what it is you drive, so it set up the carbs to fit the average engine in that classification. The problem is that it may not be optimized for your actual engine specifications or driving conditions.

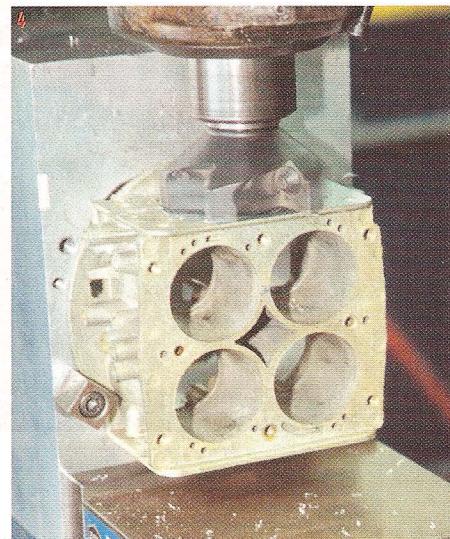
The key is to tailor the carburetor to fit your specific application. And that is where the pros at JET Performance Products come in. Based in Huntington Beach, California, JET has more than 30 years of experience in tuning and modifying carbs to exacting tolerances. In that time, vehicles equipped with its carbs have been successful in many different forms of competition. JET is also well known to the owners of high-performance street vehicles, since JET carbs can be seen on everything from muscle cars to street rods. JET also can tailor a carb for those who have their fun on the water, because the company knows both the idiosyncrasies of marine applications as well as the USCG regulations that may apply.

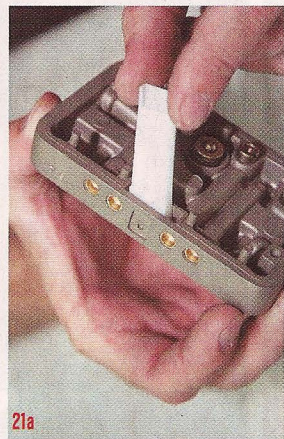
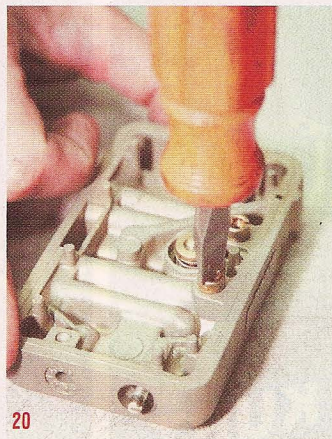
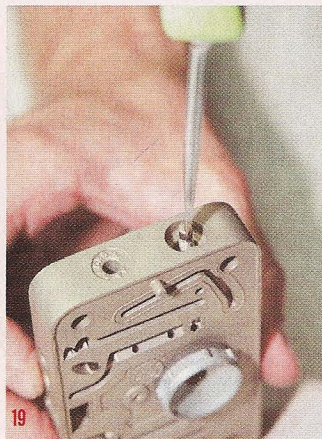
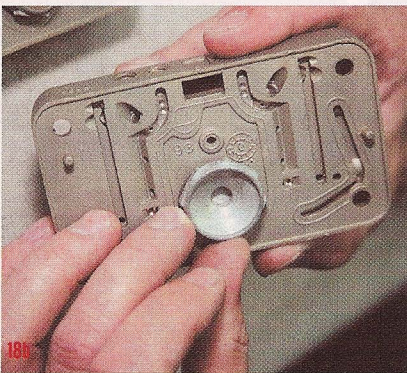
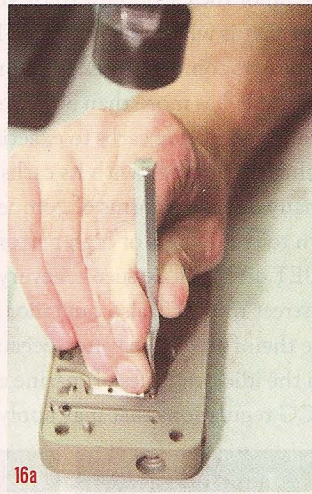
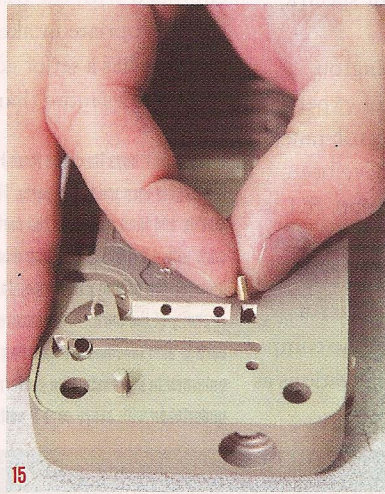
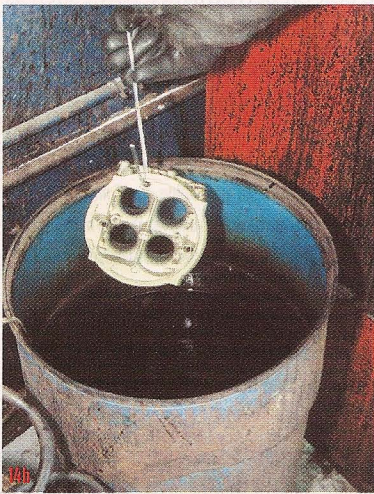
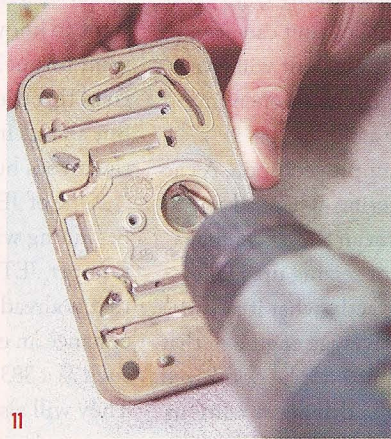
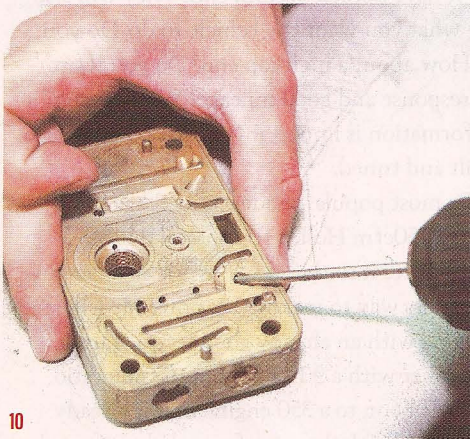
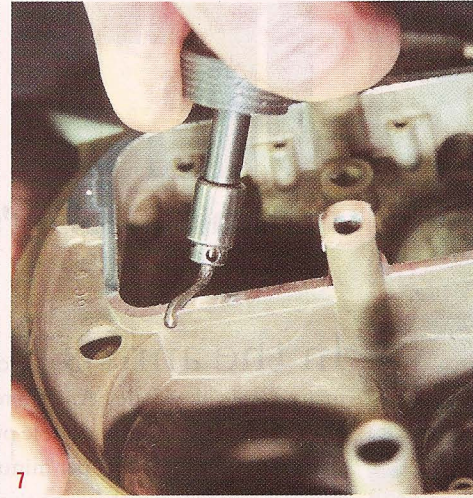
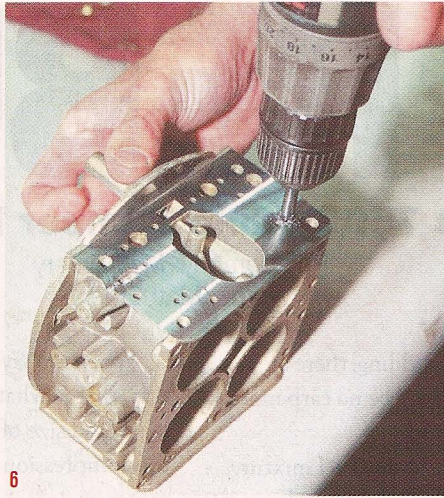
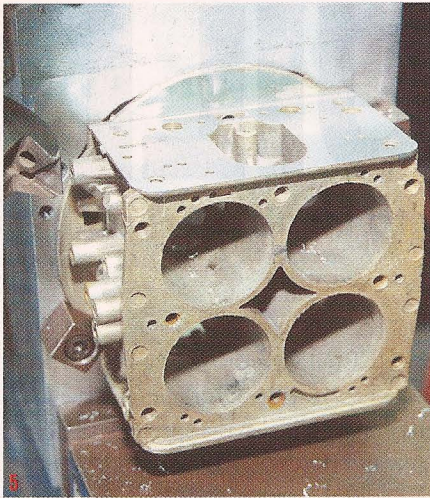
When we say that JET tailors a carb for your application, that is what we mean. It will ask for not only the make and size of the engine but also the specifics, such as the compression ratio and the cam grind specs. Is it a roller motor or does it have a stock bottom end? They will also want to know what you want the vehicle to do. Do you want torque? How about a high top end? Do you want good throttle response and good mileage? Who doesn't? But all this information is important and will dictate how the carb is built and tuned.

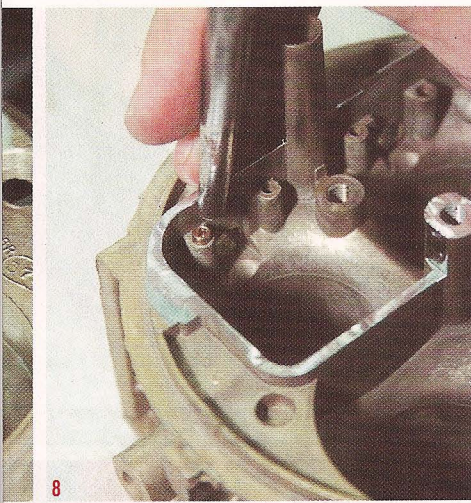
One of JET's most popular models is its Stage II. Beginning with a 750cfm Holley four-barrel double pumper, JET modifies it so that it will work on an engine that is already on its way to making big power. It will really enhance an engine with an already good torque rating, such as a 383 stroker with a 9:1 or so compression ratio. They will also be a boon to a 350 engine that is already equipped with the basic bolt-on performance parts, such as the appropriate intake manifold and headers, especially one that has a set of good-quality aftermarket heads.

JET does more than simply install the correct jets. The

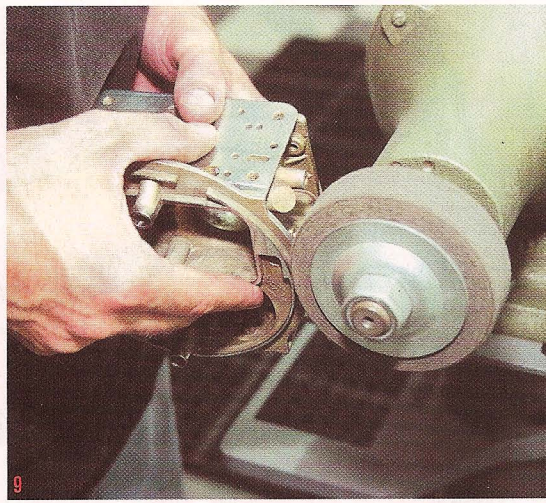
**1** When JET buys its carbs from Holley, it actually buys carb pieces. JET begins by thoroughly inspecting the parts. Then, depending on the application, it will machine, modify and then assemble the carbs. **2** Sean Murphy deftly removes the air horn of the carb with a Bridgeport milling machine. **3a-3b** This modification will balance the airflow between the primary and secondary sides of the carb. It will also increase the airflow capacity of the carb. **4** To ensure that the metering blocks fit true, the main body of the carb is also machined to exacting tolerances. JET is adamant about leaving no stone unturned in increasing the performance of the stock Holley carbs, so this process is undertaken with every carb it sells.



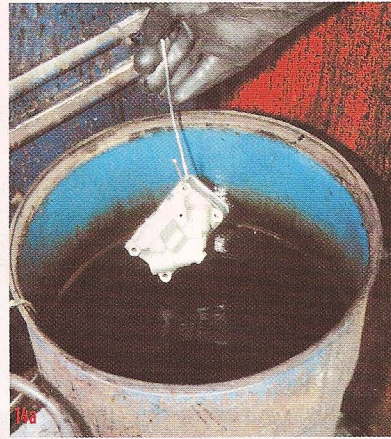
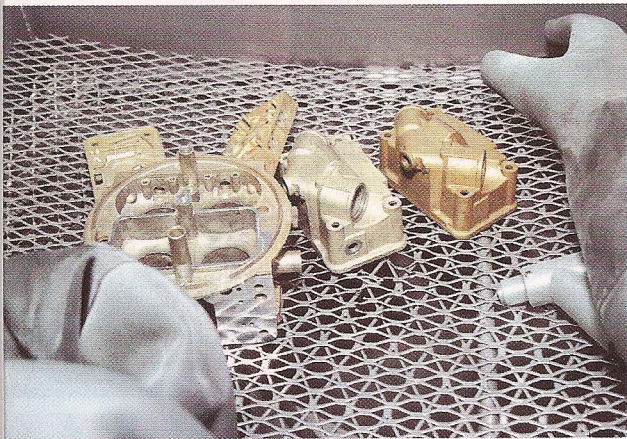




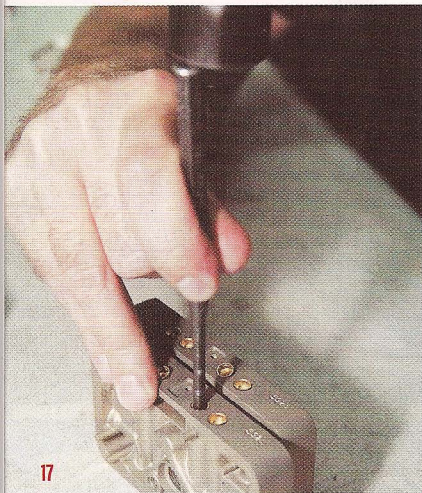
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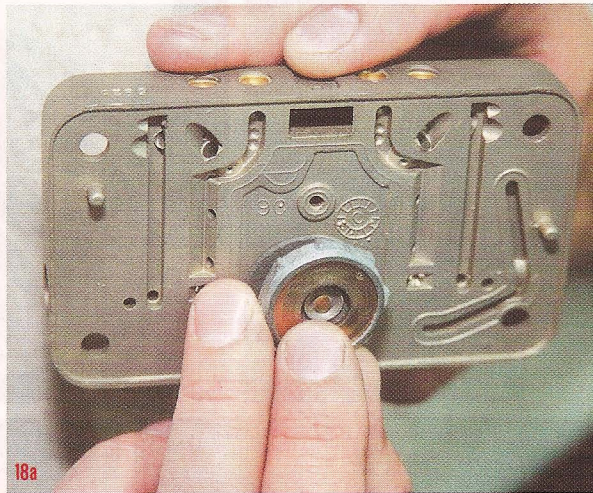
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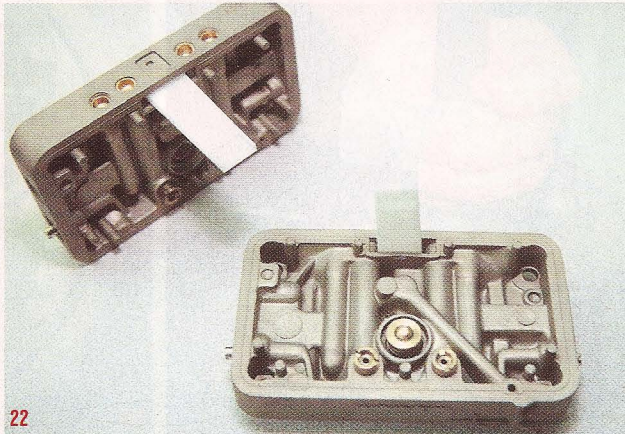
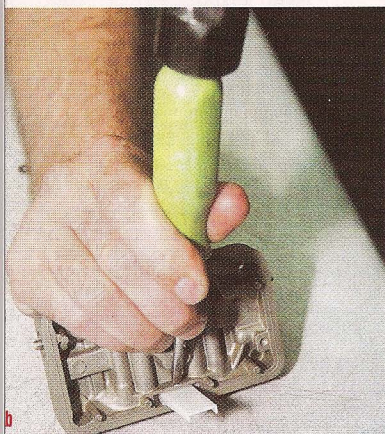
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18a



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company also modifies and tunes the metering blocks to fit with the engine components. There are a lot of little holes and passages in a metering block, and they all have to work with the rest of the carb. Size is everything when it comes to achieving the proper air/fuel ratio.

The best part is that, for \$525, JET does all this without

**5** Once machined, the body holds much tighter tolerances. **6** A de-burring tool is used on all holes. **7** A machinist's knife is used to give the corners a slight radius. **8** The air bleeds are tapped into place. **9** All modified edges are dressed and de-burred on the grinder.

**10** Depending on the application, the main well openings and exits are enlarged to the required size. **11** The power valve channel restrictors are also re-sized, depending on the customer's needs. If the customer wants good fuel economy, JET will install main jets that are relatively small. But when the engine requires more fuel, as during full-throttle applications, the additional flow provided by the enlarged power valves will come into play. **12** Emulsion holes are modified to change the fuel curve depending on the application. **13** With the machining and drilling finished, the body and metering blocks are lightly sandblasted...

**14a-14b** ...and then dipped in dye-chromate. This will add to the life of the carb and gives it a nicer appearance. JET also offers chromed models for those on the show circuit. **15** Think of the idle speed restrictors as the jets for the idle circuits. **16a-16b** The restrictors come in only one size. They are drilled after installation to the size needed. A simple hand drill is used. Compressed air is then used to remove all debris. **17** Brass plugs are driven into the main wells. **18a-18b** The power valve is

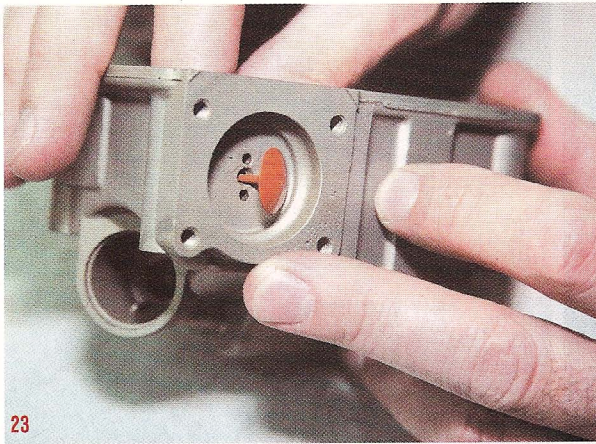
screwed into place. Only one power valve per carb is used. This will be installed in the primary metering block, while the secondary block just gets a plug. **19** Idle-mixture screws are put in place. There are two of these per metering block. **20** The main jets are installed. Again, there are two per block. A 68 main is used on the primary side and a 76 is used on the secondary. **21a-21b** Vent baffles are used to keep the fuel from sloshing around in the bowl. The baffles are held in place with a sharp rap to the open end of the slot. **22** With that, the metering blocks are done.

charging much more than a stock Holley. And delivery time for a JET product is usually about two to three weeks after the initial phone call.

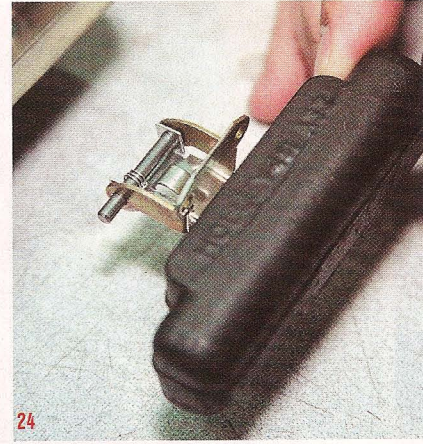
Just remember that building an engine is a group effort. All the parts, including the driver, have to be able to work together. Having a plan before anything is done is critical. It is important that you know how you expect the engine to run before simply throwing cash at various

**23** On to the assembly of the float bowls. The first step is to install the accelerator pump check-valve. **24** JET uses a Nitrophenyl composite float in its carbs. Unlike hollow brass or plastic floats, the Nitrophenyl float is a solid piece. This will ensure that the float will never split and fill with fuel, causing it to sink to the bottom of the bowl. **25** The float hinge is installed in the bowl. **26** JET uses a 120-needle jet and seat. The 120 model provides higher fuel flow than stock. Installation is simply a matter of screwing it into the top of the carb. **27** Prior to installation, a squirt of WD-40 is used to lube the O-ring on the main jet. A 120 jet is used for this application. **28** The sight plugs are installed. Proper float height puts the fuel level with the bottom of the opening, so fuel should barely dribble out when the plug is removed. This operation is performed with the engine running, but it should only be done on a cool engine (with a fire extinguisher nearby). **29** The accelerator pump is assembled. Assembly is the spring, diaphragm and cover, in that order. **30** Care should be taken not to over-tighten these or any screws on the carb, as the body is relatively soft and it is easy to strip the threads. With that, the pump covers are done. Now for the main body. **31** For the 383 that this carb is for, Murphy drills out the idle air bleeds to 0.0073 inch. **32** Next, the high-speed air bleeds are drilled out to 0.0031 inch.

**33** Rather than run the stock discharge booster, Murphy installs an annular discharge booster (top). This will aid in driveability and throttle response on the bottom end and the mid-range. **34a-34b** A special tool is used to flare the ends of the boosters. **35** Even though the ends are flared, epoxy is used to secure the boosters in place.



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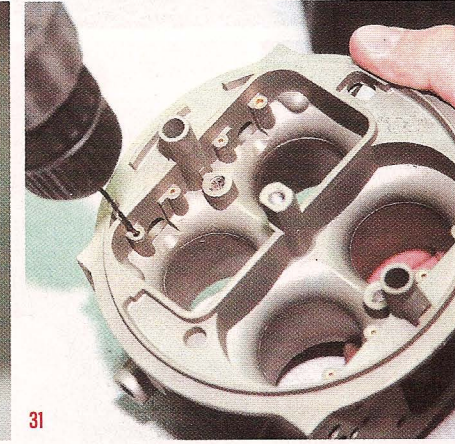
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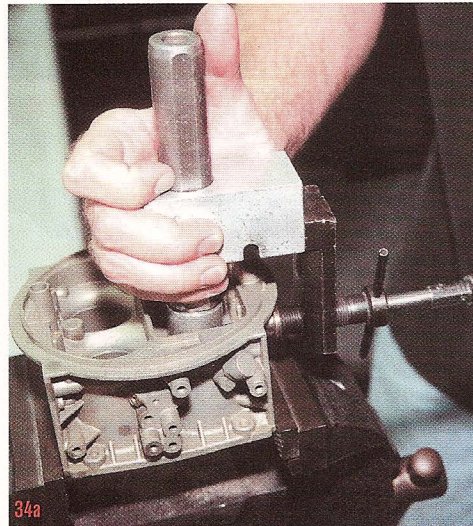
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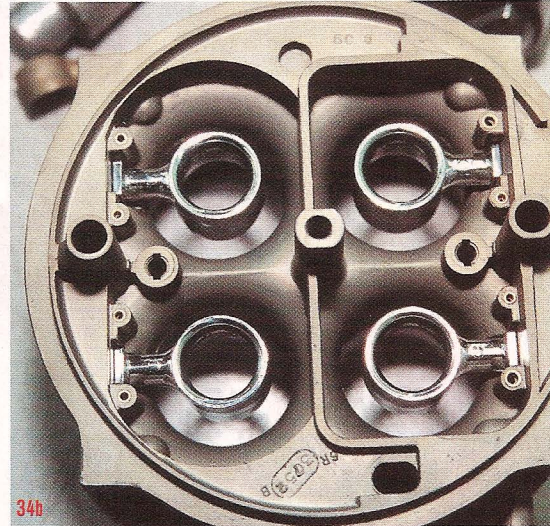
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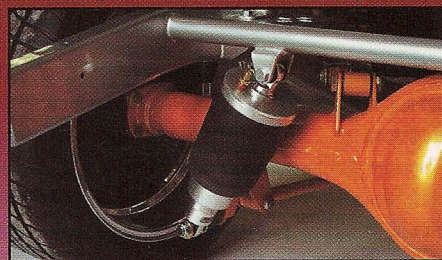


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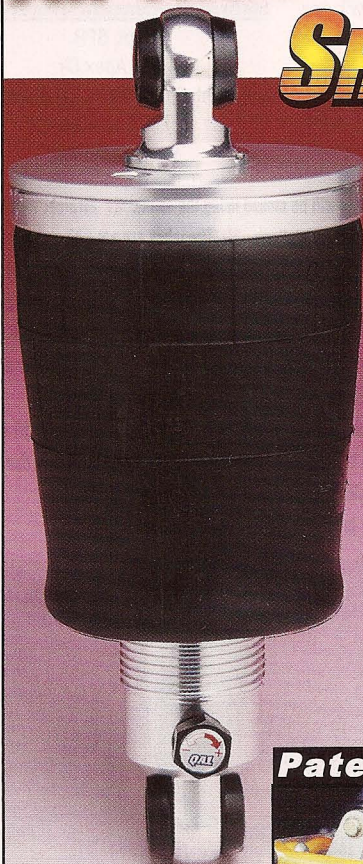
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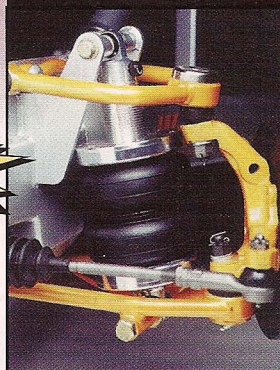
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aftermarket part manufacturers. This will ensure that you get not only bigger horsepower numbers out of the engine, but also that the engine builds that power where and how you want.

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**36** There is a hole where the choke rod ran, but it is not used anymore. This hole will be closed using the epoxy. **37** Straight vent tubes will be used in this case, but JET also has the J-tubes needed to comply with USCG regulations. **38** The tubes are set with a special guide and a hammer tap. **39a-39b** Accelerator pump check pins are dropped in place and covered with the accelerator pump discharge nozzles. The nozzles also are metered and come in different sizes. **40** The nozzles are held in place with a "squirtier" screw. With that, the main body is done. **41** As they come from the factory, the baseplate is equipped with thicker secondary throttle plates (0.0054 inch), but JET replaces them thinner blades (0.0040 thou). This swap will increase airflow during wide-open throttle. **42** Also replaced are the standard large-head brass screws. The smaller stainless steel Allen-head-type screws will provide less restriction for the airflow. **43** Murphy also opens up the idle air bypass holes found in the blades. This will enhance throttle response during light-throttle driving and helps maintain a clean idle. **44** To allow both sets of the throttle blades to be vertical at wide-open throttle (something they don't do stock), Murphy adds to the bend in the secondary connecting link. By the way, JET also machine surfaces the baseplates. **45** The required gasket is set in place before the main body and baseplate are joined.

