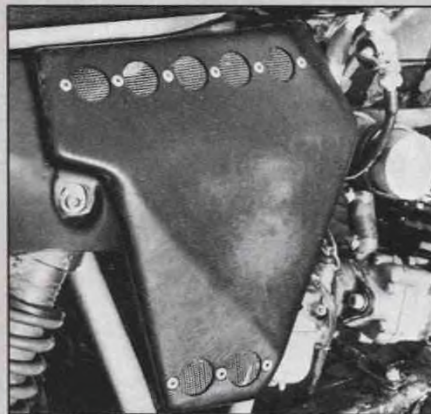
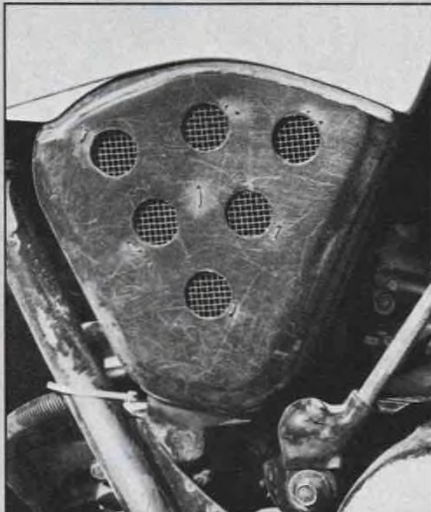




On '82 Yamahas, drilling the airbox is a must. The left side should have screen riveted behind it to keep garbage out.



Huskys breathe pretty well; adding some holes will help, though. We punched a line of them on the top and the bottom of the right-side cover.



Both sides of the Suzuki airbox need to be drilled. This goes for the 125, 250 and the 465. Like the YZs, run a protective screen on the inside.



Some of the Kawasakis have rubber plugs on the airbox. On these models you don't have to drill—simply pop out the plugs.

# HORSEPOWER HOLES

Drilling for performance

By Tom Webb

On the local race scene, everyone's doing it. Same goes for factory-level machinery. You've read about its importance. Touted as the cheapest and most effective horsepower gain going, it's easier than bolt-on boost improvers. What is it? Simple. Drilling holes in your airbox. On any weekend raceday, a large percentage of the riders have machine-gunned the sides of their bikes with numerous openings that don't appear on stockers.

Why do they do this? What's the importance? Letting more oxygen into the bike lets it breathe better. Airflow equals power. An example would be taking a bike jetted for 2000 feet and attempting to ride it at 8000 feet. The air is much thinner and turns your normally responsive rocket into a festering slug. Two, three and even four main jet sizes smaller might get it to run clean, but it still doesn't have nearly the power it used to.

## HOW CAN YOU TELL IF YOUR BIKE ISN'T GETTING ENOUGH AIR?

There is an easy and effective test for just about any bike, no matter the size.

First off, start with a fresh, clean air filter. Make sure it's properly oiled, greased and sealed. Next, figure out where your bike draws most of its air from. Some

bikes breathe under the seat, others from the side of the airbox. For example, Maicos, Hondas, KTMs, and Can-Ams draw air from under the seat; Yamahas, Suzukis, Huskys and Kawasakis (some Kawasakis breathe under the seat) suck from the side.

## DB ACID TEST

If your bike draws from under the seat, simply pop off the seat and take a quick, hard spin through the gears. Then put the seat back on and try it again. Same thing goes for the side breathers. Snap off the side cover(s) and ride, then try it with it back in place. There should be no doubt as to whether the bike runs stronger. If it runs the same, then airbox mods aren't necessary. Any increase means that some work is needed.

## HOW MANY? HOW BIG? WHERE?

There is no cut-and-dry answer here. Use some discretion; you don't want giant gaps that will allow half the track to infiltrate inside the airbox. Some opt for lots of real small holes, some go for fewer of the bigger variety. A one-inch hole is about the biggest you need. When you have four or five one-inchers, it's a good idea to pop-rivet a protective screen behind the perforations. This will keep boulders out of the box and won't stifle its

drawing ability.

In most cases, the holes will have to be placed on the sides of the airbox. On side-breathers (Yamaha, Suzuki), drilling the cover(s) is the only applicable solution. Both Yamaha and Suzuki gain tremendously from these mods.

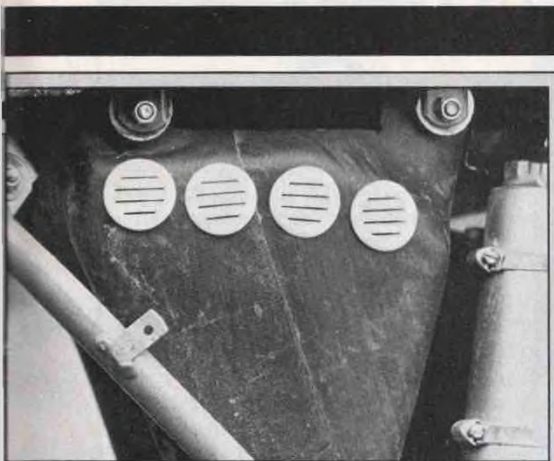
Under-the-seat models require holes placed high up on the sides of the box. You have to be careful not to drill inside the actual sealing area of the filter. On Maicos, this is critical. The filter sits on the left side of the box; holes should be placed just on top of the sealing area, none below. On the opposite side, larger holes can be placed lower without affecting the sealing area of the filter.

If you're a Kawasaki owner, don't drill right away. Most Kawasakis have several rubber plugs on either the side or the top of the airbox. Pop these off before you drill. Usually, their removal will be enough and further mods unnecessary.

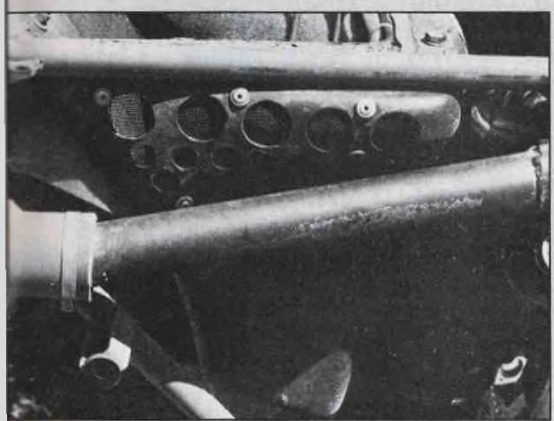
## DIRT BLOCKERS

Now that your airbox is riddled with new inhalation points, it's a good idea to help protect the air filter/airbox itself from getting roused with excess dirt. As we said before, protective screen, riveted over the holes, still allows the air to flow while deflecting debris. Normal wire mesh





Pro-Vents are a good way to increase airflow, while minimizing crud entering the airbox.



On Maicos, drilling the right side of the box lets them breathe, helping performance. Don't drill the left side, the filter seals there.

from a screen door works fine, as does plastic mesh found in most hardware stores.

Another way is to drill one-inch holes, then install Pro-Vents. These are louvered baffles that allow air to pass and stop carnage from seeping into the airbox. The Pro-Vents snap right into the holes, and can be easily cleaned by popping them out and washing them. Pro-Vents are a really good idea for wet conditions. They seem to keep water out better than a mesh screen. Pro-Vent's number is (206) 435-2780.

#### A WORD OF CAUTION

Once you've modified your airbox and installed the protective screen, maintenance becomes critical. Because of the greater flow of air, there's much more crud circulating inside the airbox. Cleaning becomes mandatory. Every other ride or so, a complete major should be done on the airbox. This means removing the filter and cleaning it. Then clean the entire inside of box, being careful not to dump any dirt into the mouth of the carb.

If you do the protective maintenance, there should be no hassles. Your bike will run stronger and cleaner with the mods. Any jetting nightmares are effectively eliminated. That's the hole story. □

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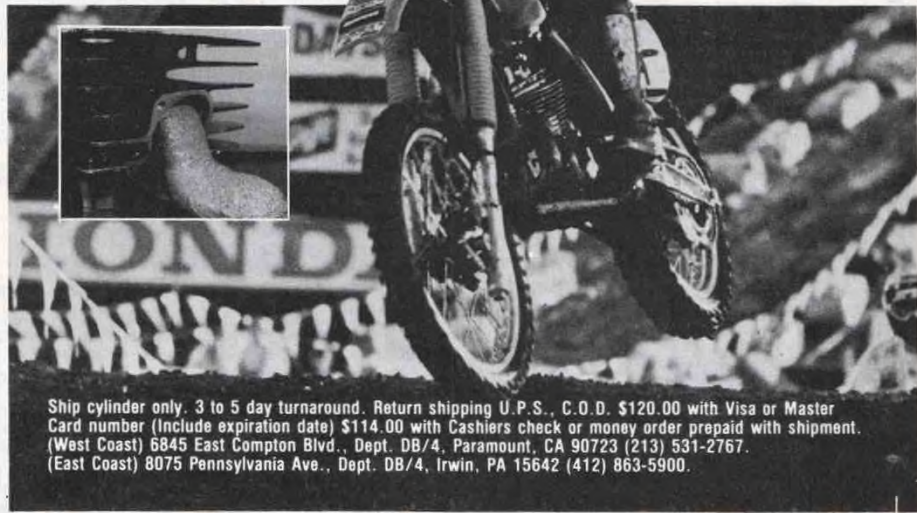
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