

Part One

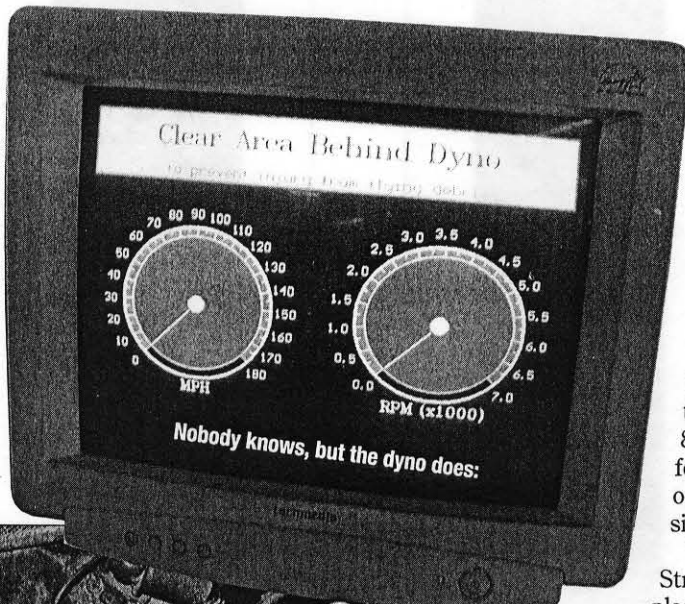
TRIED & TRUE

Swapping In a Four-Barrel Is an Old Speed-Seeker's Trick— And Still One of the Best

By Jeff Koch

With so much fuss about EFI, you'd think we'd given up on the good ol' four-barrel carburetor completely. It's hard to beat the tried-and-true four-barrel swap. For less than \$400 and a day, you can easily bolt 25 hp onto your car's engine.

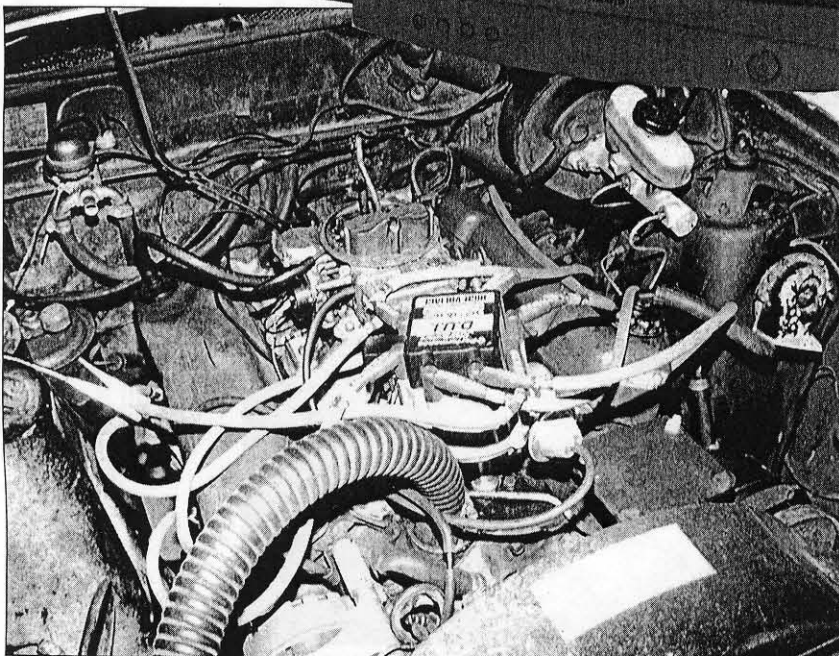
Our 140,000-mile 351 Cleveland is stock (down to the factory-original single exhaust), except



for the ignition, alternator, and air cleaner. We aren't looking to make our Montego an all-out strip blazer, so everyday driveability with decent torque is mandatory. We called Summit Racing and got our grubby mitts on a Holley 80457 carb: 600 cfm, vacuum secondaries, and electric choke. Anything more would have been overkill for such a tepid application, and the 80457 is a fine all-purpose four-barrel street carb to put on top of our Weiand #7516 single-plane intake manifold.

Wait. Single-plane intake? Street motor? Isn't that single-plane stuff for high-revving race motors where a deep-breathing top end is the name of the game? Aren't we building a street motor where torque is king, especially in LA's annoying stop-and-go-but-mostly-stop driving? Well, yeah, we thought so, too. We raised a collective editorial eyebrow and hemmed and hawed for a while. But the folks at Weiand swore that its single-plane tuned-runner design will help the engine build all the torque we'll need, as low as 1,500 rpm. We remained skeptical, to say the least, and planned to hook the results up to the dyno to see who's right.

There was no porting, no matching, no optimizing, no such hodgepodge to skew our results: We plunked the things on as they came out of the box...and ran them. Our candidates



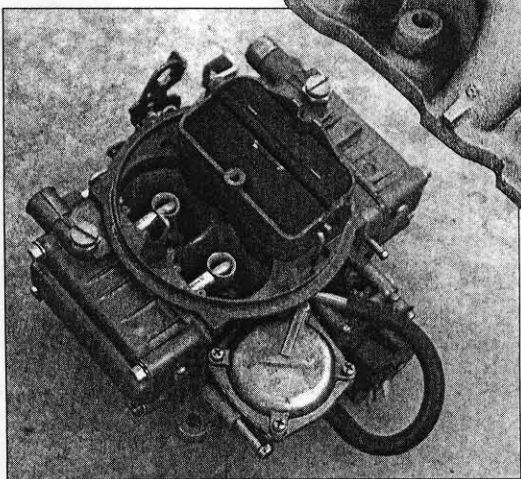
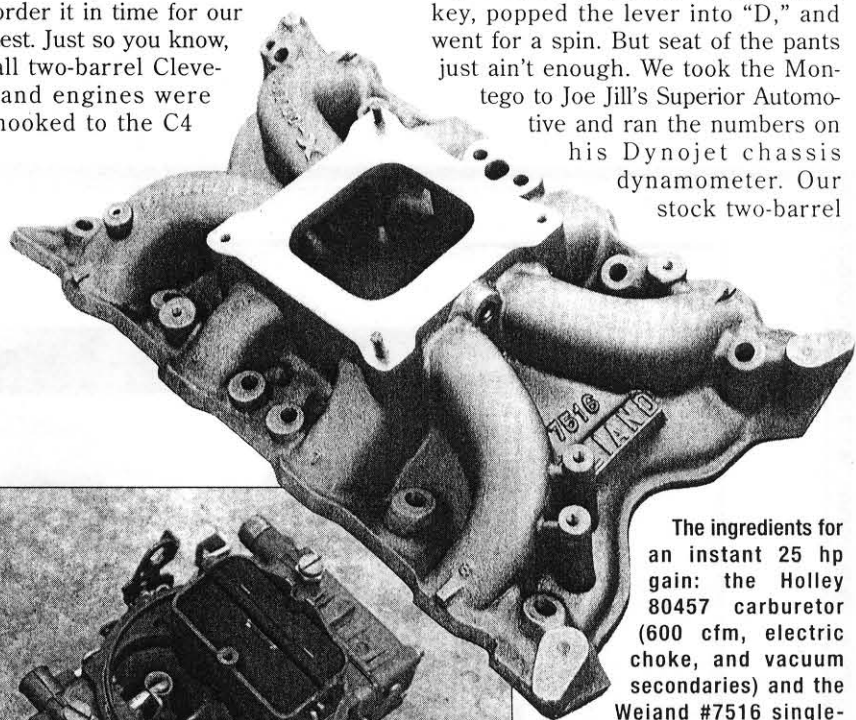
Photography: Jeff Koch

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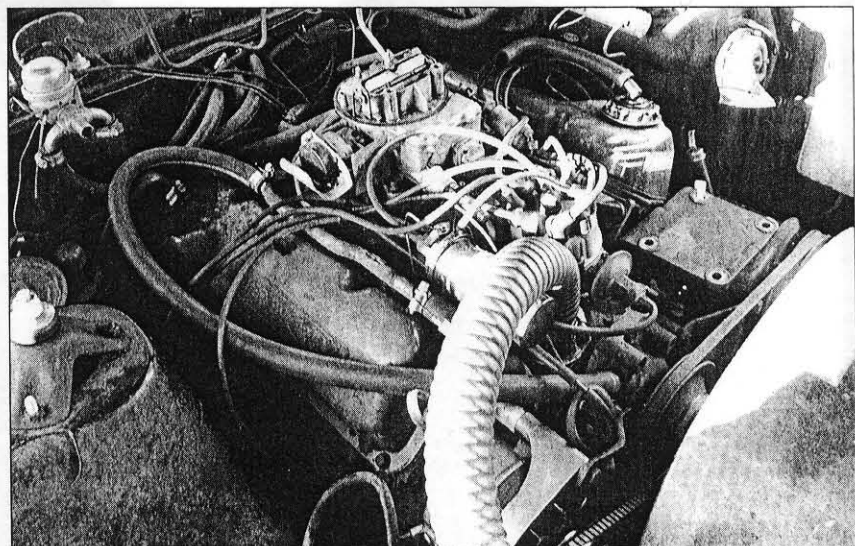
had to stand on their own merits. Bolt-
ing it together took less than a day all
told. Holley offers an adapter to con-
nect the original kick-down lever under
PN 20-41, but we didn't
order it in time for our
test. Just so you know,
all two-barrel Cleve-
land engines were
hooked to the C4

transmission; factory four-barrel Cleve-
lands were backed by the small-bell-
housing C6.

We felt a noticeable seat-of-the-pants
improvement as soon as we twisted the
key, popped the lever into "D," and
went for a spin. But seat of the pants
just ain't enough. We took the Mon-
tego to Joe Jill's Superior Automot-
ive and ran the numbers on
his Dynojet chassis
dynamometer. Our
stock two-barrel



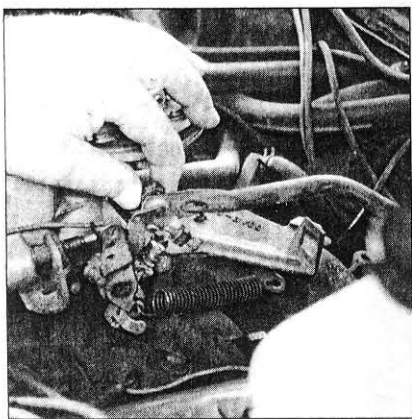
The ingredients for
an instant 25 hp
gain: the Holley
80457 carburetor
(600 cfm, electric
choke, and vacuum
secondaries) and the
Weiand #7516 single-
plane intake manifold. You
also lose 23 pounds, which ben-
efits handling, and get better gas
mileage....Hmm, where's the
downside? We were skeptical that
the single-plane intake would give
us the desired results out of our
stock Cleveland, but the numbers
have proved our fears unfounded.



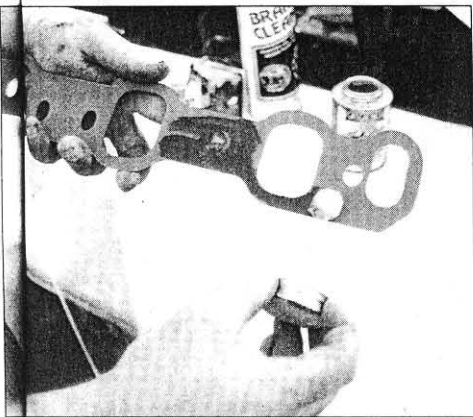
Who's bringing sauce for all that pasta? Much of the emissions and (nonfunctional) heater/AC hose spaghetti seen here is redundant and will be removed for a nice, clean install. Check your state's emissions laws before altering your older car's emissions system. While you're pulling things apart, check to see that none of your vacuum hoses are rotting, cracking, or splitting. If they are, replace them. Be especially careful of the plastic vacuum-junction block on the firewall—it can become brittle after 30 years. Slice the hose off, and replace it.

wheezer started out at 150 rear-wheel horsepower at 4,600 rpm and 250 lb-ft of torque at 2,500 rpm (Factory rated horsepower in 1970 was 250, but when you knock off 20 percent for gross-to-net ratings and 20 more percent for driveline losses, 150 hp sounds about right...unfortunately). The resultant power levels: 176 hp at 4,800 rpm and 250 lb-ft at 2,500 rpm. The torque did not take a dump with the single-plane, defying our predictions—although it didn't gain either.

As our mushy Montego will primarily be a road-handling car, the 23 pounds we took off the nose by installing the Weiand aluminum intake and Holley carb will come in handy in helping balance our package out. Additionally, and subjectively, the aural aspects of a four-barrel—the heady in-



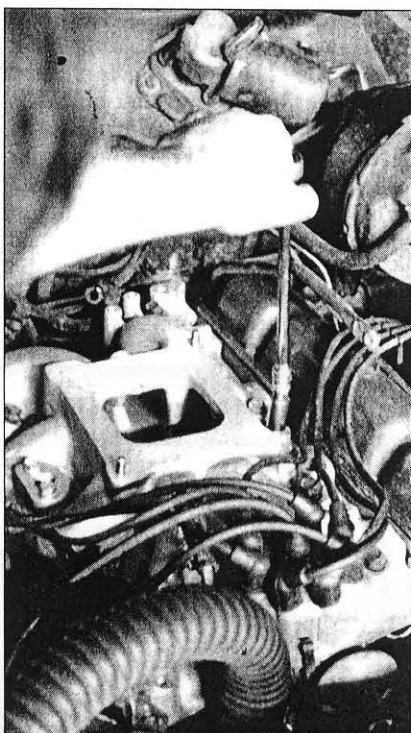
You will need to order Holley PN 20-41 (*not shown*) to adapt your two-bbl kick-down linkage to the new carb.



After removing the valley pan, put a towel down and clean the attendant muck and gungus with a can of carb cleaner and a rag (or a putty knife or gasket scraper in the case of old gaskets). Paint some spirit-gum adhesive onto both the head and the gasket for a tight seal. Cork end gaskets have been known to pop out or come loose, so we built up a healthy layer of Ultra-Black Permatex silicone, front and rear, to prevent that particular malady.

take of air that fills your ears as the secondaries kick in, mixed with the punch in the small of your back under hard acceleration—cannot be denied. What's more, a four-barrel can often increase gas mileage over inefficient factory two-bbbls. And there is now a 75mph sweet spot that our Cleveland never had before.

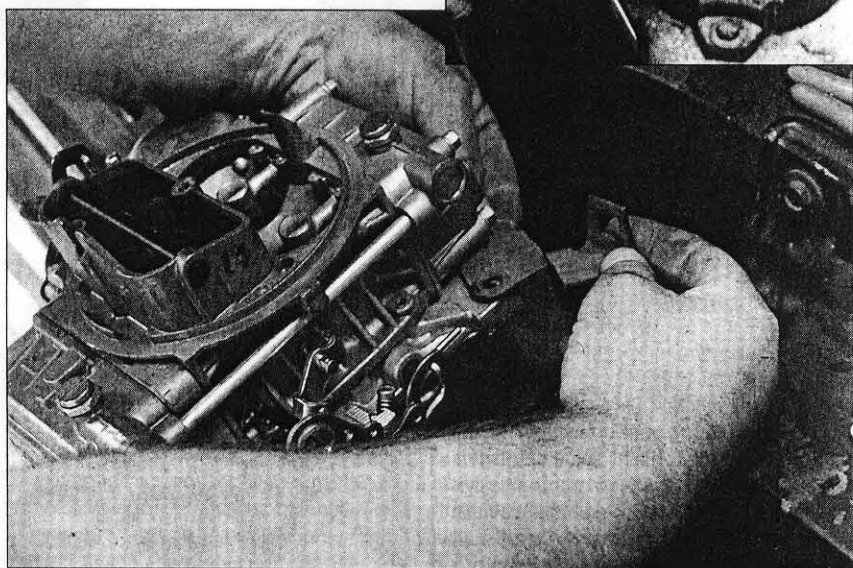
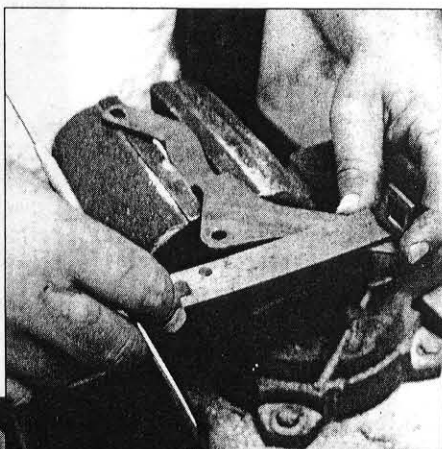
We realize that we haven't helped ourselves by keeping the factory exhaust manifolds, single pipe, and two-barrel cam—those are other installs for other times. Doubtless the increases reflected here would be even more dramatic with other parts already installed. We felt a little soft around town, however, and wished that the torque increase would be in line with the horsepower gain. Meanwhile, 25 hp is nothing to sneeze at for less than a day of dirty fingernails. Stay tuned as we try out a dual-plane intake, and see if we can boost the torque as impressively as we boosted our horsepower. **HR**



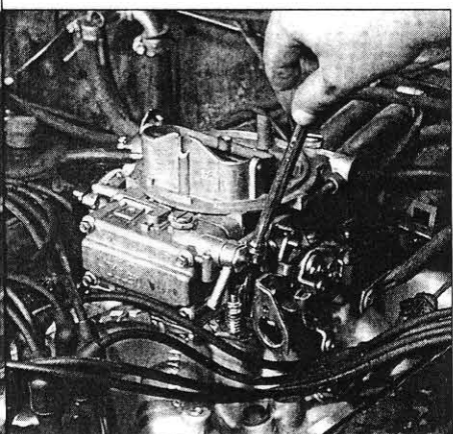
When installing the new intake, start the 25 lb-ft torque-down sequence around the carburetor and work out from there.



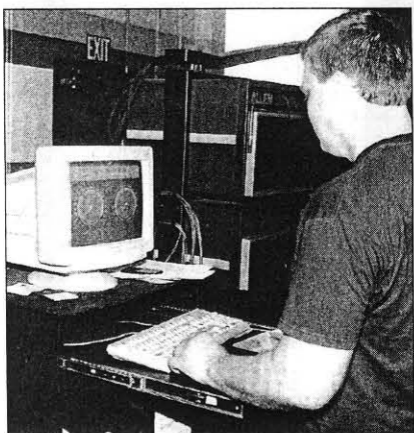
A heat riser block-off plate had to be manufactured. A little more Permatex black silicone helps seal the deal.



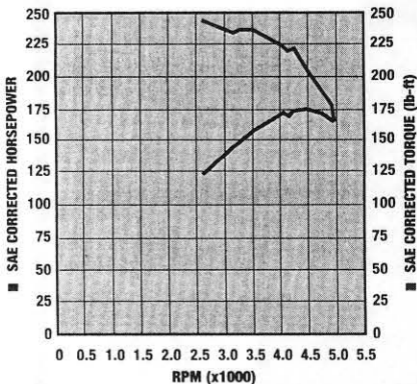
A new throttle bracket will be needed to move the accelerator cable 1½ inches forward. Or you can section the factory one like we did, which took about 45 minutes of cutting and welding.



Install the carb using washers under the bolts, so they don't dig into the carb's feet. Hook everything back up, and off you go.



Joe Jill Jr. gives our Montego a run on Superior Automotive's chassis dyno and confirms our solid 25hp gain.



SOURCES

Holley

Dept. HR12, 1801 Russellville Rd., Bowling Green, KY 42101, 502/782-2900

Summit

Dept. HR12, P.O. Box 909, Akron, OH 44309, 800/230-3030

Superior Automotive

Dept. HR12, 12020 Western Ave., Garden Grove, CA 92841, 714/984-9711

Weiland

Dept. HR12, P.O. Box 65301, Los Angeles, CA 90065, 213/225-4138A