

SMALL ENGINES WITH BIG PUNCH

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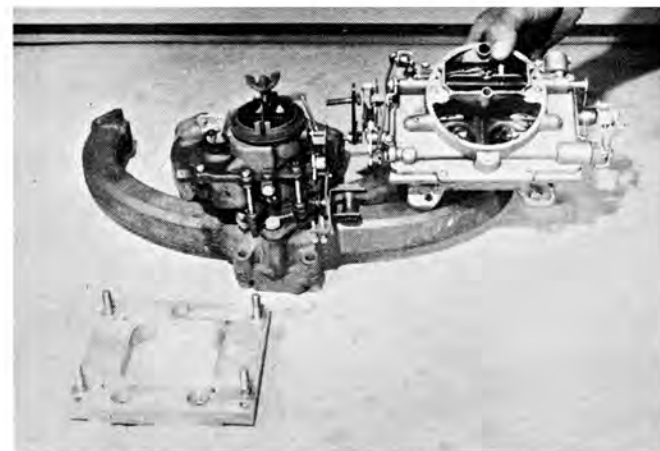
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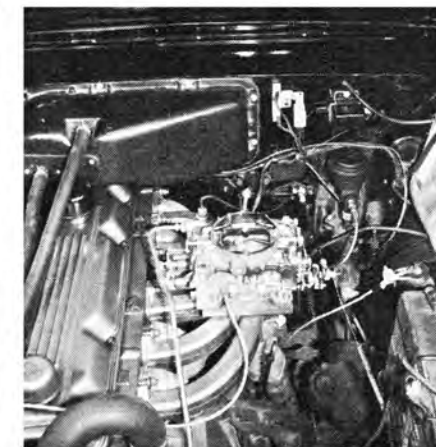
CHRYSLER CORPORATION'S SLANT SIXES HAVE "SOUPABILITY"



A Carter four-barrel replaces the two-barrel carb that's standard. An adapter, in the foreground, plus some machine work completes the conversion.



Long studs fasten adapter to a milled surface on the manifold, opened to match adapter plate.



Installation includes hot cam, milled heads. Less work is required for same power than with Hyper Pak kit.



Either a Dodge Sono Ramic or two truck-type, straight-through mufflers may be used in souping.

OUR FIRST acquaintance with a hot rodded Slant Six came at a Chrysler test track, when we had a chance to tool around in one of their dream cars, the XNR. Under the hood gleamed the longest aluminum manifold we had ever laid eyes on, and exhaust headers that would be a credit to any speed shop. Later that year, Valiants fitted with the same Hyper-Pak installation cleaned house

in Daytona to the point of thoroughly eclipsing all competition. Not long after, the 170 cubic inch Slant Six was joined on Lancer and Valiant by a stroked version, the 225 cubic inch mill. Since both engines will accept the same equipment, we'll just treat them as one.

Chrysler's own venture into the Hyper-Pak field seems to have been done on a "cost-no-object" basis. The

kits were sold to very few people such as selected dealers and a few name racers, and even one of our favorite millionaires, Briggs Cunningham of Le Mans fame, bought and installed one. However, with lack of availability and a \$500 price tag, installations were comparatively few and far between. Tractability of the unit in street use was poor, primarily because the long ram unit received no

heat supply and was intended for wide open running.

Since then, the situation has changed appreciably; more items have come into the open and some have been okayed for super stock use, which again places the Valiant in the forefront. Offenhauser came out with a twin dual carburetor manifold which is in the nature of a bolt-on. New Hyper-Pak kits are now

discontinued, but used ones have been available on occasion. They include long branch intake and exhaust headers, a hot cam, special valve springs with a flat wound damper, beefier push rods, a four barrel carb, a fabricated exhaust manifold and tail pipe combination, a beefy clutch and a few small parts.

Much more interesting is the idea of converting the existing Valiant

manifold to two-barrel operation. A little filing is needed to insure a flat mounting surface. The opening is enlarged and a two-barrel carb fitted. It is a job that requires a little tinkering, but not more than a day's work, and the improvements are immediate.

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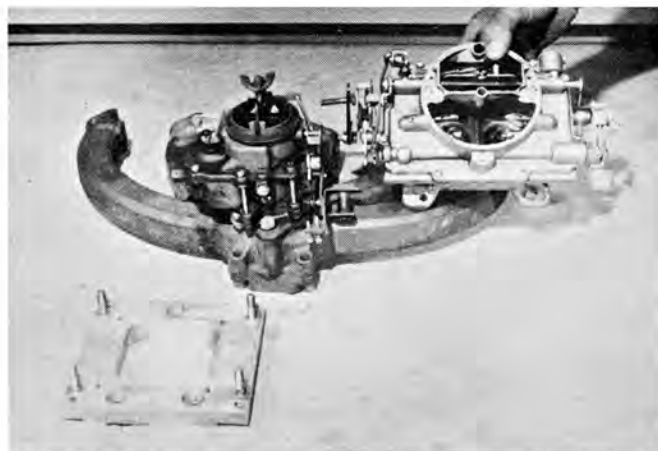
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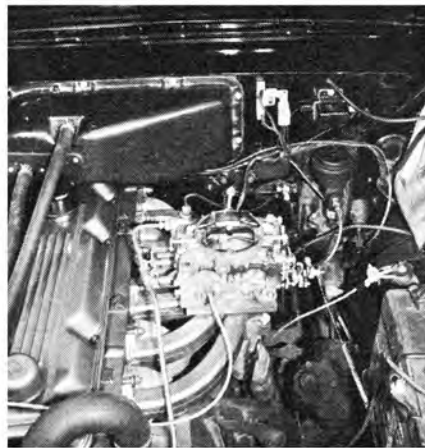
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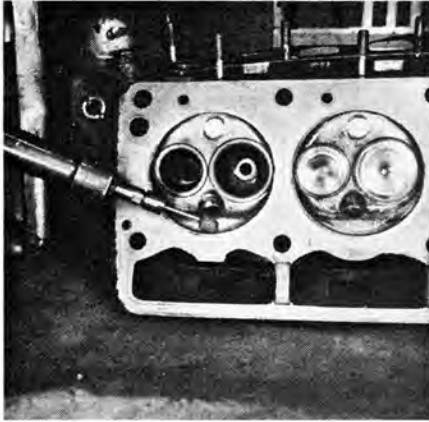
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Combustion chamber surfaces can stand a good bit of polishing-up. Also, the valves should be unpoCKETED.



Match ports to manifold and smooth them out. Don't enlarge them; you can't increase manifold same amount.



Use manifold gasket as pattern in laying out ports. Deposit traces show amount of mismatch on stock parts.



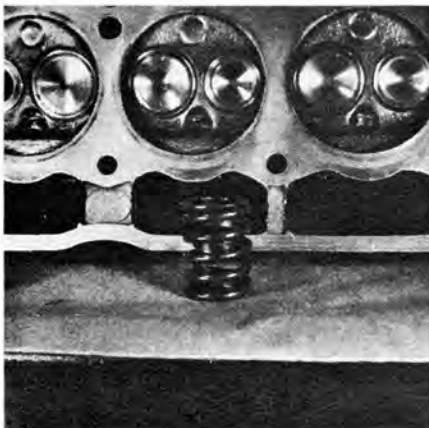
Measure combustion chamber volumes with a burette and equalize them by grinding. Take into account piston-to-deck clearance variations.



Completed Hyper Pak installations have earned owners many trophies. Long branch exhausts require reworking of starter, movement of parts.



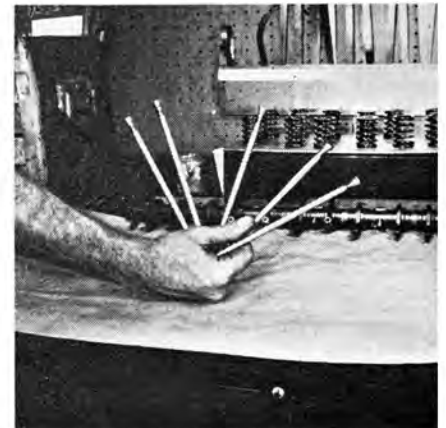
Cut wooden blocks to fit ports and use them to align manifold and ports. Then centerpunch manifold and head outsides for reassembly alignment.



You can prevent spring surge at higher rpm by using a flat wound damper. Iskenderian is one manufacturer who supplies them.



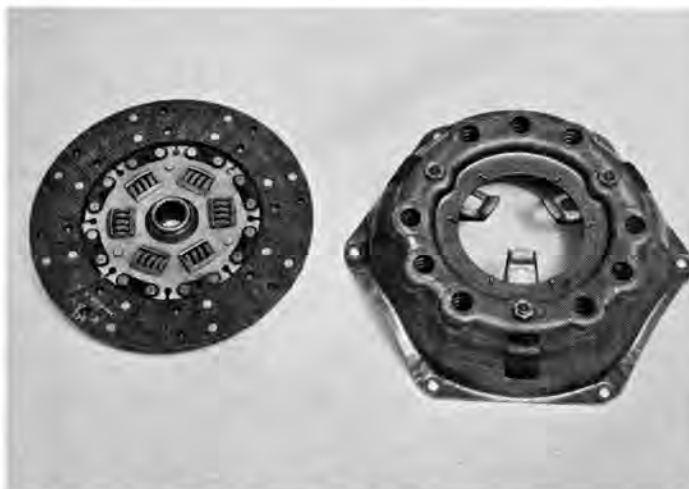
Cam may be changed, without removing engine, by pulling grille. Timing on Kuhl cam is about same as on the Hyper Pak.



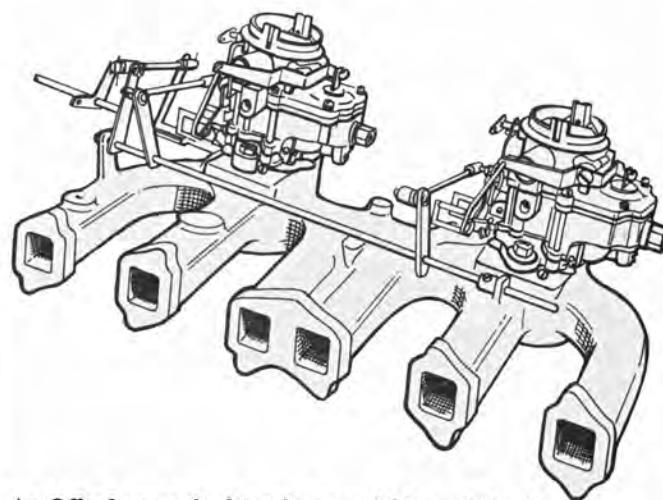
Beefier pushrods used to be available with the Hyper Pak kit, but have been discontinued. However, you might get them from Iskenderian.



Large plenum chamber of intake manifold (left) leads to branches tuned for peak torque at given rpm. You'll save money by making your own. Paxton blower installation (below) delivers air to a pressurized plenum chamber over the carb. Volumetric efficiency, torque are improved throughout.



Spring pressure on the Hyper Pak kit is increased from 1,200 pounds to 1,775. Also, instead of the 9¼-by-6¼-inch stock clutch plate having 71.8 sq. in. of area, the Hyper Pak plate measures 10-by-6 inches, giving a 100 sq. in. area.



An Offenhauser dual intake manifold available for the Slant Sixes is exhaust-heated and accommodates a pair of stock, single-throat carbs. It fits both the cast iron and aluminum versions of the 225 cu. in. Six as well as the 170 cube version.

proved by Dodge as optional equipment. Kuhl Enterprises produces an adapter kit which, with some machining, will transform the long branch single-barrel manifold into one able to accept a four-barrel. Since exhaust heat is supplied to the underside of the intake manifold, the car remains eminently tractable in traffic, yet will run away and hide from any stock compact we know.

Jim's kit includes, for a moderate fee, a cam that is quite similar to the Hyper-Pak one. Lift is .409 instead of .375 on stock intakes and .360 on stock exhausts. An exhaust system with less kinks and bends plus a two-inch pipe diameter on exhaust and tail pipes reduces restriction and offers respectively a quarter and a half-inch gain over

the stock product. Dodge SonoRamic or straight through truck mufflers placed in series and a megaphone complete the exhaust system. The carburetor is a rejetted Carter AFB with 1¾ primaries and 1 9/16 secondary bores. You have to mill the heads .090 inches, and use cad-plated flat washers under the head bolts to keep them from bottoming. Jim Kuhl runs his own Valiant with considerable success, with 15-second ET's and a top of 90 in the quarter at the last writing. This is, according to Jim, three seconds and 14 miles better than what a stock machine will do. Before you reach for a pen and ask us for his address, here it is: Kuhl Enterprises, P. O. Box 511, Mount Clemens, Michigan.

If you are a blower enthusiast,

you'll find that Lancers and Valiants respond very well to a Paxton blower installation. It is pretty much of a bolt-on job, but you'll find that the exhaust system must be enlarged to uncork full power. Then, of course, there is nothing to keep you from combining the blower with either a Hyper-Pak or a Kuhl type installation except for the rise in compression. Also, to our mind, there is a largely unexplored field in manifolding the Slant Six with a set of three dual horizontal carbs and fabricated steel headers. It may sound like a lot of work, but the results would certainly be worth the effort, since the fixed cross section of the manifolding cannot be effectively ported and prevents the ports in the head from receiving proper attention.