VOLUME 11 • NUMBER 8

AUGUST 2008

VOICE OF THE HOT ROD, RESTORATION & PERFORMANCE MARKETPLACE

HOTROD & RESTORATION

Driveshafts & Rear Ends:
Choosing & Installing the Right Product 4

Exterior Trim & Molding 16

Nostalgia Engine Update 28

Block CNC-Machining 101 22

Profile: Burton Classics 52

Hot rodders love the delicious curves and intriguing contours of yesterday's sheet metal, which is why they update old cars with all the modern performance components the industry offers. But old engines have their charm as well, and many enthusiasts would prefer a Hemi, a Flathead or even a Rocket or a Nailhead, to the relatively faceless 350 horsepower engines they can buy in crate. But of course, those great old engines cost more, demand unobtainable parts and just don't deliver modern performance and efficiency. Or do they?

Just as the hot rod industry has put modern high performance and luxury under classic sheet metal, it's putting modern parts inside legendary engines—and creating new opportunities for sharp, creative retailers. "Every time a new platform takes shape and integrates into the marketplace, a potential new nostalgia market is born," said Jason Snyder, national sales manager for Edelbrock Corporation in Torrance, California. "Currently, nostalgia is out-performing the modern engine market [in sales]."

"The nostalgia market is continuing to expand due to magazines, TV shows and car shows exposing the public to the nostalgia style," said Sam Mandlin of Egge Machine Company in Santa Fe Springs, California. "We have seen a significant increase in demand for nostalgia parts."

"The nostalgia market— at least our part of it— seems to be expanding even now in a shaky economy," confirmed David Butler, owner of Butler Performance in Leoma, Tennessee. "More and more people are looking at their muscle cars as a safe investment, not just as a toy with no financial return. And many of our customers are Baby Boomers with a decent amount of disposable income."

"The nostalgia market is typically financed by an older demographic that has money," added LaVerne Schumann, of Schumann's Sales & Service in Blue Grass, Iowa, "so it's a stable market, financially. They also have ample time to research each and every parts acquisition. They know the technical advantages of modern parts versus flea-market new-old stock. They want their engines to be compatible with modern highway speed and Interstate traffic flow— and not limited by welded-up, patched-up, cobbled-up obsolete parts."

What's the downside? Increasingly, there isn't one, due to the wide supply of brand-new parts available today. And although you still can't build a vintage engine for the price a Chevy small block, you can build it about as inexpensively as you can build anything else.

"Modern engines suffer from sameness," noted Earl Floyd, owner of Earl Floyd Engines in Battle Ground, Washington. "The vintage and nostalgia engines can be anything you and your imagination can come up with. In this modern era, you can have a nostalgia engine of any stripe!"

Building Nostalgia

Most of the experts we consulted agreed that building a nostalgia engine costs more than building a modern-style engine—but that the additional cost was no barrier to nostalgia enthusiasts. "Depending on how rare or low-production an engine is," said Mandlin, "people are willing to invest two or three times as much in a nostalgia engine as they'd spend on a new-style engine."

"We're busier and busier," said Mike Herman, owner of H&H Flathead in La Crescenta, California. "A turnkey Chevy engine is $5,000, and a turnkey Flathead is $9,000. But most of the customers in this market have a huge amount of disposable income." And as for reliability, "It's like an all-new motor. The water pump, almost every internal part is brand new. They are pretty bullet-proof. Of course, carburetors and distributors require some attention by their very nature."

"It is a profitable segment," added Butler. "Customers are willing to, and maybe expect to, pay more for something that isn't readily available from just any builder or supplier."

"They're more expensive, for sure," said Jon Barrett, owner of Jon Barrett Hot Rod Engines in Oklahoma City, Oklahoma, "but the serious customers don't hesitate. The price is based on the look and the expectations of the customer." The biggest problem is finding what they expect. "Core engines 50 or 60 years old that can still be re-manufactured are not readily available. Sure, the aftermarket offers great brand-new parts for these engines. But a lot of customers want the genuine old stuff.

"We don't build Flatheads," Barrett continued, "but we build vintage small block Chevys— with Hilborn EFI, three-twos, superchargers, etc.— that have the early look with today's performance. And we have a lot of experience with the Hemi as well. We have a complete engine-building business that's old-school by today's crate-motor standards. We've raced and we've worked with some of the top racers in the country, in top fuel, alcohol funny car, and now vintage drag racing and sprint cars along with our line of performance street engines."

Floyd doesn't even necessarily agree that nostalgia engines are all that more expensive than their modern counterparts. "Much depends on the look and sound that the customer wants." The biggest problem, he agreed is "finding suitable cores to work with." Fortunately, "more and more obsolete parts are being manufactured. You can literally buy more first-class parts for these engines now than when they were new! We work on mostly Ford Flatheads and early Chrysler Hemis, and manufacture billet aluminum main caps for these engines."

A surge of new parts from Hot Heads and other suppliers has made an early Hemi affordable to build and reliable to run.

Hemi Spheres

Each the icon of a hot rod generation, the Flathead and Hemi remain the two engines most commonly mentioned in any discussion of vintage/nostalgia power. "Our business continues to grow," reported Bob Walker, of Hot Heads Research & Racing in Lowgap, North Carolina. "Even the most devoted Chevy or Ford guy has respect for the Hemi.

Fuel. So history has shown that aluminum is the way to go."

Additionally, TA is about to release a new 455 V-8 aluminum block, "with many modifications from stock. We engineered it for a maximum bore of 4.500 inches, and offer it with a standard 10.570 deck height, or an optional tall deck of 11.700."

Wherefore the Y-Block?

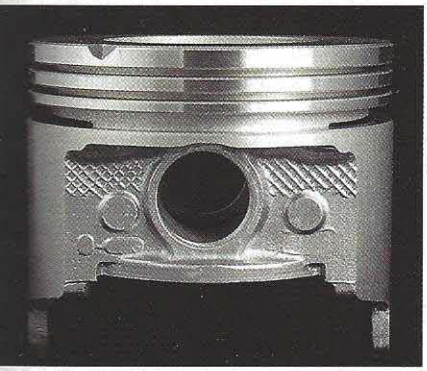
Schumann's specializes in Ford Flatheads and Y-Blocks. "Our involvement with the Y-Block has been extensive since it was released by Ford in 1954," said Verne Schumann. "We offer the industry's only metallurgic ally compatible, parabolic-specification replacement mushroom tappet for the Y-Block; and the only 'police' valve-spring retainer kit that replaces the troublesome two-piece original product. We also have tubular moly pushrods rated 250, 500 and 650 pounds."

In August, Schumann's plans to release new street-or-strip rocker shafts.

"[They will be} centerless-ground and feature a heavier radial wall thickness and thorough heat treating. Furthermore, the oil-distribution hole to the rocker pivot will have a diagonal radial slot for better oiling of the rocker arm surface. And our price will not be higher than the current, intermittent source for these shafts."

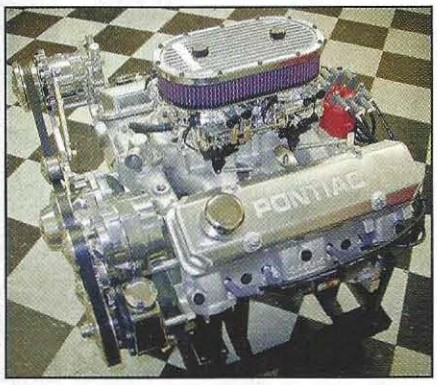
Schumann's also plans to release new Y-Block valves, "completely upgraded in all specifications to 21-4N stainless, fully machined, and solution-heat-treated, with stems surfaced in thick hard chrome."

For Flatheads, Schumann's offers 21-4N stainless valves in standard and oversize-head diameters, "fully machined, with hard chrome stems. We also have



Egge has recently re-introduced pistons for the Oldsmobile 350, Buick 300, Ford 260 and Studebaker 289, due to high demand and limited availability.

replacement valve guides for unleaded fuel, and gasohol-compatible fuel pumps (for 1934-'53)." Also coming soon will be a timing gear set for line-honed or line-bored Flatheads, consisting of an aluminum cam gear and steel crank gear which have b adjusted for .005/.007 compatibility. " industry has never addressed this iss Schumann added. "Since 1932, count hours have been spent hand-fitting th components."



This Butler Performance 467 cubic inch crate engine with 400 Pontiac factory block features optional low-rise two-four carbs and aluminum heads.

Mike Herman said that H&H now of a SCoT (Supercharger Company of Tori blower manifold, originally popular in 1940s and '50s. "It's an exact replica of original," he noted, "so it bolts right on. it's a better casting, thicker and new Herman is also excited about the Den 98 carburetor, which we described June (see "Feeding the Fire: Carburet Injectors & Manifolds"). A modern riff the classic Stromberg 97, the Demon "r better, is easier to adjust, and flows cfm, vs. 150 for the 97," Herman said. It vintage manifolds like the Barney Nava units that H&H also sells.

Flathead Jack of Walnut Cre California emphasizes authentic

The eight-dollar-a-gallon exotic

With fuel prices rising to unheard-of highs, and some kind of carbon-emission regulati increasingly inevitable, a hot rod enthusiast might rightly question whether there's any futu for antique engines designed for an era of 17-cent-per-gallon gasoline and blithe environment naïveté.

But according to Steve Farkaly, owner of Uncommon Engineering in Indianapolis, the great engin of the past are hot rodding's best ticket into a more environmentally conscious future.

"We're reproducing one of the most complex vintage engines every built," Farkaly noted, when v called him to talk about nostalgia power plants. "We've been carving it out of aluminum for month It is an exact replica of the Novi V-8 Indianapolis engine. We just got the castings in for the ge towers. We're moving into exotics, because the street market has fallen off due to gas prices. The are going to be some fundamental changes to this industry. But never fear: American ingenuity a the American spirit are still here. The panic is premature. The rest of the world has been stuck wi these kinds of gas prices for decades. This industry will survive. But it is going to be different. Th smart people will lead, and the people who hang on to the past will disappear."

By "the past," understand that Farkaly means the big-inch V-8s that are currently popular. Wh he foresees for the future is a return to the great moderate-displacement mills of hot rodding's mo distant past. "And that's good for us, because what's going to disappear is the 500-inch big blo Chevrolet with a Chinese crank and rods that gets 16 mpg on its best day. Pretty soon those thin are going to be keeping boats from floating away— while people build more 239-cubic-inch Flathea Fords. We need to build practical hot rods, and with a 220 hp Flathead that gets 30 mpg, we'd ha something to discuss."

Farkaly is even investigating biodiesel conversions for Flatheads. "Or, replace that 486c Chevy small block with an overhead-cam Offenhauser. It's a more classic look, with a third of t displacement. I can build an Offy 220 and get 28-30 mpg. I'd like to send one to the Oakland Roadst Show where it could compete against the Lamborghini-powered '32 Fords. But people are going have to realize that the big-bore days are over, and it's time to move on. Let's get rid of the V-8s a build engines with good-looking aluminum castings, like an Offy, or something like the 183 No We're building that one for a 1956 Curtis Indy chassis, but the principle is applicable to hot rods.

"It's the way to go. You dial the boost up or down to control the fuel consumption. And we control the cost, because cost is based on how many you build. It's time to re-introduce that kind engine. The displacement is right, the price will be right, and the gas mileage will be right. How mu more of a win-win package can you get?"

"Everybody wants to make Chevys out of these things," commented owner Jack Schafer. "But we make the traditional parts. Most of our customers are old guys who built Flatheads years ago. We are old-school."

That said, Schafer recommends using moderation when building a Flathead. "We used to run 331-cubic-inch Flatheads, but you need a brand-new block for that. I'm partial to a 284: That's a 3-5/16-inch bore with a 4-1/8-inch stroke. And we've never gone over 8.25:1 compression; that's touching the valves against the head." Schafer runs what he builds: his nostalgia fuel dragster packs a pair of 284cid Flatheads, makes about 1,000 total horsepower, and clocks over 170 mph in the quarter mile.

According to Edelbrock's Jason Snyder, finding all of the "complementary components" can be the biggest challenge to building a nostalgia engine.

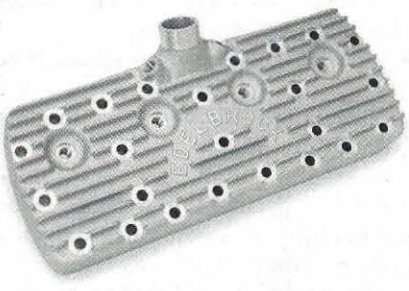
"This would be a good venture for SEMA, to put together a more comprehensive network of manufacturers to develop complementary parts in tandem, so the end-user has an affordable, readily available product at the retail level." Edelbrock, he pointed out, already offers cylinder heads and induction systems for Ford Flathead, FE and Cleveland; Buick; Chevrolet 348/409; Oldsmobile; Pontiac; and AMC. Egge has recently re-introduced pistons for the Oldsmobile 350, Buick 300, Ford 260 and Studebaker 289— "because the demand was high and availability was limited, said Mandlin. "We machine the ring lands on some of our pistons to accept modern ring packs."

Mandlin noted how the lack of zinc in modern motor oils adversely affects antique flat-tappet engines. "Egge has partnered with Torco Advanced Lubricants to market ZEP, a zinc-enhanced engine protector, as well as synthetic and petroleum oils and assembly lubes containing a high percentage of moly, phosphorus, and zinc (MPZ)."

Yet another problem associated with antique engines "is lack of knowledge or information about them available to the potential customer." Egge trains all of their sales team to assist customer with technical problems.

Schumann confirmed that "many vintage and nostalgia engines are not fully compatible with today's high-tech synthetic oils, but prefer natural crude-based oils containing anti-weld and anti-wear agents such as zinc, calcium, sulfur and phosphorus."

It's that kind of detailed knowledge that can spell the difference between success and failure in this field. Still, building a nostalgia engine has never been easier or more affordable— while still lending personality and prestige to any hot rod business.



Edelbrock offers a block-letter logo Flathead Ford cylinder head, as well as ones for Buick, Chevy 348/409, Oldsmobile, Pontiac and AMC.

Sources

Butler Performance
For more information call 1-800-306-0133, ext. 18358.

Earl Floyd Engines
For more information call 1-800-306-0133, ext. 18359.

Edelbrock Corporation
For more information call 1-800-306-0133, ext. 18360.

Egge Machine Company
For more information call 1-800-306-0133, ext. 18361.

Flathead Jack
For more information call 1-800-306-0133, ext. 18362.

H & H Flathead
For more information call 1-800-306-0133, ext. 18363.

Hot Heads Research & Racing
For more information call 1-800-306-0133, ext. 18364.

Indy Cylinder Heads
For more information call 1-800-306-0133, ext. 18365.

Jon Barrett Hot Rod Engines
For more information call 1-800-306-0133, ext. 18366.

Performance Distributors
For more information call 1-800-306-0133, ext. 18367.

Schumann's Sales & Service
For more information call 1-800-306-0133, ext. 18368.

TA Performance
For more information call 1-800-306-0133, ext. 18369.

Uncommon Engineering
For more information call 1-800-306-0133, ext. 18370.