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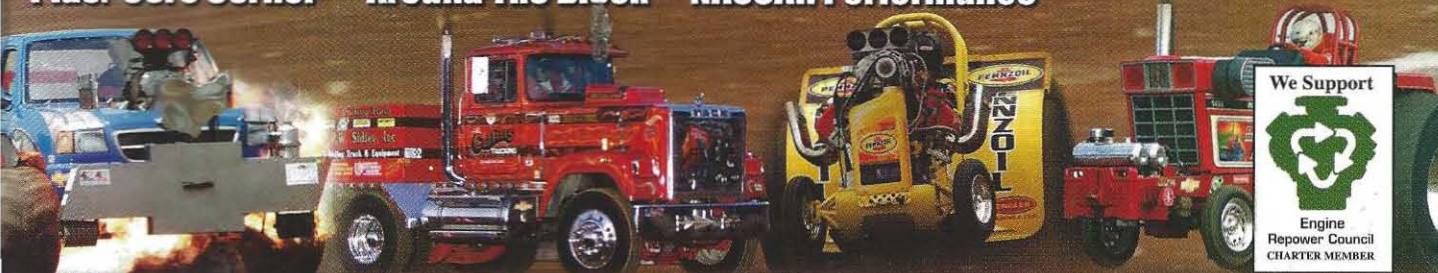
## TRACTOR PULLING ENGINES

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increased durability thanks to better materials and a special nitride heat treatment. These work well with Rocky's "Red Zone" lifters, which come in .904" and .937" diameter sizes and are designed to handle higher spring pressures (over 800 lbs.).

"We also have a new line of performance springs for the more popular Honda engines, and are working on developing some camshafts for Honda and several other popular sport compact engines," says Tubangui.

Hunter Betts of Enginetech in Carrollton, TX, says his company is offering a new line of high performance engine kits that offer a choice of six different cam grinds - all for the same price. "It makes ordering a lot easier and gives our customers the flexibility to pick a grind that best suits the application."

Betts says the most popular cam grind is the low rpm high torque RV style cam. It's a good choice for trucks as well as any street engines that needs better low speed acceleration and power. The next most popular cam is a mid-range cam that provides good power from 2,000 to 4,800 rpm. For those who want a "pumpy-bump" idle, Enginetech has a "stage three" cam. And for circle track racers, Betts says all-out performance and custom grinds are always available.

Betts says the market for cams today is changing. "We're selling fewer individual components and selling more kits. Engine builders don't want to stock parts anymore. They want to order a kit when a job comes in."

Ed Plebanek of Topline in Chicago, IL, says Topline is now manufacturing its own lifters for domestic engines thanks to the recent acquisition of Hylift-Johnson Lifters' manufacturing plant in Muskegon, MI. The plant is producing a full line of flat mechanical and hydraulic lifters, hydraulic roller lifters and IC hydraulic last adjusters.

"We now have performance lifters for Chevys and Fords," says

Plebanek. "The lifters have a unique disk and seat design that can handle higher internal pressures with no leakage. The clip that holds the piston in the lifter body is also a stronger design so the lifters can safely handle higher valve spring pressures and rpms."

A new line of performance lifters is also being offered by Schumann's Sales and Service in Blue Grass, IA. "Camshaft suppliers have been having fits

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over poor quality lifters in recent years," says Vern Schumann. "We decided to address this issue by developing an all-new line of premium quality lifters that include better materials, a better design and are 100 percent inspected."

Schumann says his lifters use the highest metallurgical alloy provided, have correct and consistent heat treatment throughout, have a hollow shell that is 20 grams lighter than an OEM lifter, and feature a redesigned oil feed band and two .040" oil holes 180 degrees apart for better lubrication.

The parabolic crown surface on the bottom of his flat lifters is ground to an accuracy of .0002" at .0025" per radius diameter, with a 360 degree concentricity specification of .0002". The crown surface is also mirror polished with no grinding marks, and is

heat treated to a Rockwell C spec of 58 to 62.

"These are precision lifters that nobody else can match," says Schumann. He also says the lifters are designed so they can be easily disassembled for cleaning. Applications include most popular Chevy, Ford and Chrysler V8 engines.

Schumann says he also has a new twin lube design H-11 tool steel crown cap lifter with a special diamond wear treatment for NHRA drag racing applications that run extremely high spring pressures.

"Some of these guys are now running ceramic lifters. But the ceramic lifters can shatter if you get any lash or slap in the valvetrain. Our tool steel lifters can take the higher spring pressures and pounding without failing," Schumann says.

Dave Grob at Jesel Valvetrain in Lakewood, NJ, says his company has just introduced a new line of "double roller followers" for late model overhead cam engines such as the Cadillac Northstar V8, the sixty degree 4-valves-per-cylinder V6 in the Cadillac SRX, STS and CTS, the GM Echotech 4 cylinder engine, and Ford's SOHC and DOHC 4.6L engines.

"We're seeing more of these engines in drag racing, off-roading and even Bonneville. The OEM cam followers have a roller for the cam lobe but not the valve. Our followers have rollers for both to reduce friction and to handle higher spring pressures and rpms. These are a solid lash type of follower, so lash is adjusted with shims," says Grob. EB

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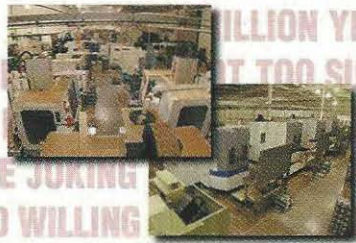
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