

# LubeNews

## THIS ISSUE

**COVER**  
VISCOSITY RATINGS

**PROFILE**  
DEAN DICKENSON  
R&D RACING

**FEATURES**  
**SPOTLIGHT**  
YOU DON'T NEED  
OIL ADDITIVES

TENACIOUS II  
UPDATE

VINTAGE IRON

**TECHNICAL**  
SUPER M

**PRODUCT**  
**SPOTLIGHT**

FUEL STORAGE  
STABILIZER

FFT FOAM FILTER  
TREATMENT

**BACK PAGE**  
YOU'VE SEIZED  
YOUR ENGINE!

## HOW DO YOU RATE?

# Viscosity

### APPLES TO ORANGES

Quiz a group of riders about oil viscosity and you'll learn quickly that 9 out of 10 aren't aware that engine oil, gear oil and hydraulic oil each possess their own specific viscosity rating system. As a result, it's common for riders and parts counter professionals to paint all oils with the same broad brush. After all, what difference does it make whether you're pouring a quart into a crankcase or funneling a pint down a fork leg? Oil's oil, ain't it?

The differences in this classic apples to oranges comparison are huge and knowing how to select the correct fluid for the application will pay off in increased performance and fewer fluid related maladies.

### THE RATINGS GAME

**FLUID FACT #1:** The viscosity of SAE 10 weight engine oil equals that of SAE 75 weight gear oil. However, each is rated on its own specific index and their numeric ratings, 10 and 75, are unique and specific to each product. Properly identified, a comparable 10 weight fork oil would register a viscosity rating of 165 on the SUS (Saybolt Universal Seconds) scale. In fact, the clinically correct identification for Maxima 10wt Fork Fluid is 165-150. The number 165 denotes the fluid's SUS viscosity and the number 150 denotes its viscosity index rating (refer to Viscosity Glossary). **LN**

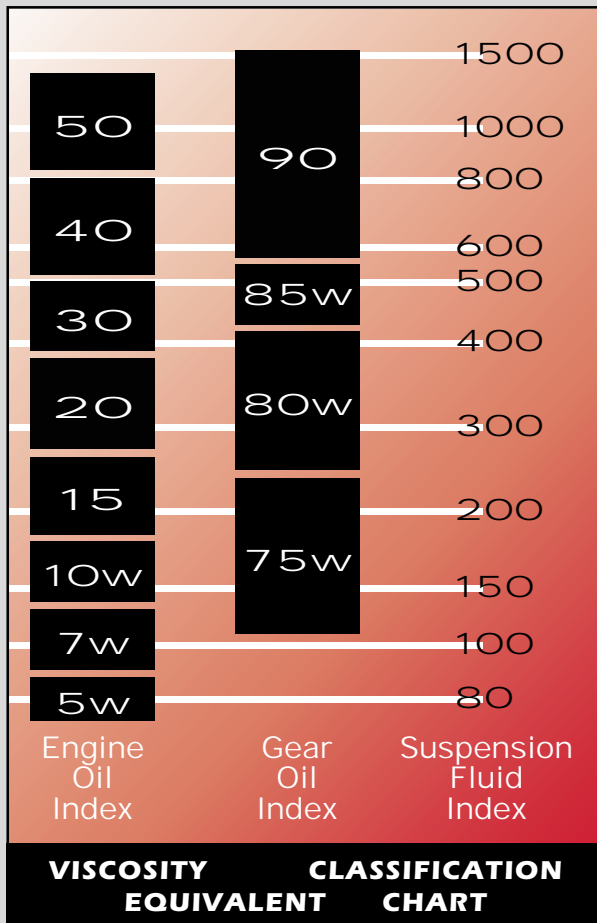
### VISCOSITY GLOSSARY

**VISCOSITY** A measure of a fluid's resistance to flow.

**VISCOSITY INDEX** All fluids are rated by viscosity index or VI which is the relationship of fluid viscosity to fluid temperature. High VI fluids, such as heavy-weight gear oil, tend to display less change in viscosity with temperature than low viscosity index fluids. The viscosity index is applicable to both engine oils and hydraulic oils.

**SAE** Society of Automotive Engineers. Oil ratings classifications are determined by this group.

**MULTIGRADE OIL** Oil that meets more than one SAE grade classification and can be used over a wider range than a single grade oil.



**SUS VISCOSITY**

**VISCOSITY INDEX**

**SAE VISCOSITY**



### CHUCK GRAVES GIDDY ABOUT MAXIM4 EXTRA

Since making the switch to Maxima 15w50 synthetic 4-cycle oil, GRAVES MOTORSPORTS owner Chuck Graves, is ecstatic with its performance. After a teardown of Mark Miller's Graves/Yamaha YZFR1000 Graves had this reaction. "I've tested many oils over the years and I know which ones work and which ones don't." He said. "When we opened Mark's engine for the first time, I couldn't believe the cleanliness or the lack of wear. The oil is awesome - especially when you consider that this was originally a magazine test bike and Mark has raced it several times."



## WHEN KTM VP SCOT HARDEN WANTED A PERFORMANCE ADVANTAGE FOR THE COMPANY'S 1998 50 SXR PRO SR, HIS FIRST CALL WAS TO DEAN DICKINSON AT R&D RACING.

And the call didn't mean Harden lacked faith in KTM's Austrian based engineering team, either. "It's no secret that Dean has created some of the best parts and performance enhancements in the mini racing business, so naturally he was at the top of my list." Harden offered. "The 50 SXR Pro SR is the heart of the KTM Junior Sportmini line and we wanted to showcase the bike's performance potential at each KTM Jr. Supercross event in 1998. I knew the bike worked well with the Dominator™ clutch that Dean developed. As I'd hoped, it worked like a charm and made an already great little bike into a FANTASTIC little motocrosser. Besides that, Dean's the guru of mini racing and he's just an hour up the freeway, too."

Since the 1970s, Dickinson and R&D Racing have been names familiar to thousands of riders and families involved in mini racing. Motocross legends such as Broc Glover, Ricky Johnson and Ronnie Lechien all benefitted from their affiliations with Dickinson.

Today's mini scene continues dominated by R&D riders including mini phenoms Mike Alessi, Justin Buckelew, Donnie Kearny and Bruce Rutherford, as well as AC Racing Cobra hotshots Mikey & Davie Mead. Visit a mini National anywhere and you'll see R&D sponsored machines taking one win after another. Dickinson offers this insight.

"Minis are where we started and after all these years we've returned to our roots. Things like suspension have really changed the little bikes and the riding styles have improved quite a bit but we're still working with the same basic engine we worked with in 1972. And it's still winning races today."

"We're a family based business and relationships we develop with riders and families are important to us. Working with a rider like Mike Alessi and watching him achieve the success that he's been able to attain is very satisfying. It's definitely a two-way street. The knowledge we gain from working closely with our riders directly translates into technology and R&D products that the entire sport can benefit from." **LN**



## Tenacious II Update



**MANNING TEAM GOES DOWN UNDER FOR NEW LAND SPEED RECORD ATTEMPT**

Tenacious II, the world's trickiest V-4 powered motorcycle streamliner is headed to Australia for another attempt at breaking the current land speed record. According to owner/builder, Denis Manning, president of BUB Enterprises, a Grass Valley, CA maker of motorcycle exhaust systems.

"We'll be going to Bonneville (UT) the first week of August for a refresher course and hope to test our new transmission shifting system." Said Manning, "Bonneville will be followed by a trip to Australia in October.

Tenacious II is driven by former dirt tracker Rocky Robinson. His first attempt in 1997 to capture the LSR mark fell short due to run space limits and difficulties in the shifting mechanism. Thus far, Robinson has been able to reach 291 mph before running out of salt. The current record of 321 mph is held by 'Easy Rider', a twin-engine Harley-Davidson streamliner.

Confident of his eventual victory, Manning offers this. "We truly have the capability to have the fastest motorcycle of all time. We just need a place to run it. The October run will be on Australia's Lake Gairdner and the place is perfect."

During its 'down time', Tenacious II has been featured throughout the country at motorcycle shows and on Speedvision television. The bike has also undergone a number of modifications and upgrades including the redesign and fabrication of a new shift mechanism and testing on a dyno built by John Jans. **LN**

## Oil Change

Rick Doughty's Fresno, CA based VINTAGE IRON is the driving force behind today's vintage off-road racing scene. His shiny fleet of pristine motocross relics is a testament to his knowledge and artistry and nobody knows more about extracting reliable performance from old MX machines than Rick Doughty does.

"We've changed one sponsor in 10 years. This season we made our move to Maxima for one reason alone: RESULTS! Two-stroke or four-stroke, there's no finer lineup of performance lubricants and additives available anywhere."



# Product Spotlight

## TECH TALK

Dear Maxima,  
I've been a satisfied long time user of blue Maxima Super M. I buy it from my dealer in 5-gallon pails and use it in my motocross bikes and our Jet Skis™. Currently there's 1/3 of a pail left of blue Super M but I'm concerned about blending it with the new orange Super M that I just purchased. Will it work, or will I experience problems doing this?  
JD, New Jersey

Dear JD,  
Go ahead and do it! Both Super M blue and new orange are completely compatible and you'll have no problem making the transition. Both Super M Premix and Injector mix perfectly with ol' blue and they provide the same award winning two-cycle performance and protection that they have in the past. Only now, it's better.  
Maxima Tech Dept



## Consumer Reports Magazine blows the cover on bogus oil treatments **TOO GOOD TO BE TRUE?**

An October 1997 Consumer Reports feature begins  
**"Anyone using today's high-quality motor oils shouldn't need an additional engine or oil treatment."**  
The article examined bogus claims made by some of today's best known oil marketers and emphasized that these products offered no substantial benefits over quality motor oil. Infact statements from the Federal Trade Commission indicated that tests did not prove that SLICK 50 reduced engine wear by 50 percent nor that a single treatment reduced engine wear by 50,000 miles. Last year the companies that manufacture and market SLICK 50 were fined and barred from making further claims about the performance, benefits, or attributes of engine lubricants without "competent and reliable evidence." **LN**



### AND THE WINS GOTO...

Is there any end in sight to the dominance of Florida's fastest redhead? Not only did Ricky Carmichael begin the year by taking all eight rounds of the 1998 AMA 125 Eastern Supercross series, he added an exclamation point by winning the East/West 125 Supercross Shootout in Las Vegas. Within a few days, Ricky was in San Bernardino, CA to defend his 1997 outdoor MX title during the opening round of the 1998 AMA 125cc National Motocross Series held at Glen Helen Raceway. Always true to form, RCaced both motos at that event, too.

### FOR SAFE KEEPING Maxima Fuel Storage Stabilizer

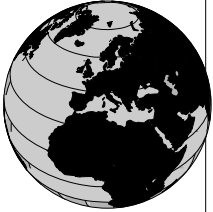
Maxma Fuel Storage Stabilizer prevents the formation of gum and varish in both fuel systems, fuel cans and storage containers. Stabilizer eliminates the need to drain and dispose of fuel over long periods of storage or non-use. Ideally suited for motorcycles, snowmobiles, personal watercraft, outboard motors and motorhomes, too.




## BIG AIR

**FFT Foam Filter Treatment**  
Race proven FFT is a water-resistant filter oil unequalled in protection from dirt and fine dust particles. FFT won't wash out from carburetor fogging and it will not migrate off the air filter, even under the most severe riding conditions. FFT is available in convenient 16oz bottles.

**ATTENTION  
OVERSEAS  
DISTRIBUTORS!**



**Join  
Maxima's  
worldwide  
expansion by  
becoming a  
distributor in  
your country.**

**For more  
information  
please con-  
tact**

**Chuck**

**Ramage**

**Phone**

**619-449-5000**

**Fax**

**619-449-9694**

**Email: info@**

**maximausa.com**

## LUBENEWS TECHNICAL FEATURE

# YOU'VE SEIZED YOUR ENGINE

BY **DICK LECHIEN**

This article appeared in SAN DIEGO OFFROAD MAGAZINE and was written to assist those riders who are equipped, capable and comfortable with motorcycle engine maintenance and repair. A common repair situation was chosen (piston seizure) and our intention was to highlight the importance of a basic diagnostic technique: leak down testing (see LUBE NEWS Jan/Feb 98). Of course, your situation may or may not coincide with this story and no claims are made that the information will apply to you. After reading it you may also decide the "do it yourself" approach is not for you. For that reason we strongly encourage you to secure the services of a professional motorcycle mechanic.

**THINGS COULDN'T HAVE BEEN ANY BETTER.** Temperature in the mid-80s, two days left of a three day holiday weekend and your trusty Honsukawi KRM 250 is ripping up a sandwash faster than you'd ever dreamed. Suddenly, like a bolt from the blue, your engine makes an irreverent belching sound and everything comes to a tank slapping halt! The dust clears and you immediately take a mental and visual inventory of your bikes vital systems.

"Hmmm", the gas valve's on. I've got plenty of premix in the tank, and it can't be the plug, put a new one in this morning." Engage clutch, find neutral, jump on the kickstarter. . . won't budge! "AAARRRGGGHHH . . . Gawd, this can't be happening to me!!!

Congratulations, you've just seized a piston and total postponement of weekend fun is now in progress. To further enhance your situation (and because you've ridden with such skill and agility over the past 30-minutes or so) there's absolutely no trace of your riding companions. Solid proof that those laggards can't even stay in your dust, right?

Not to worry, that lonesome walk back to camp shouldn't take more than a couple of hours and it'll give you plenty of time to think about the repair ahead. Here are a few things you may want to ponder as you stroll happily along.

### **HELPFUL HINT #1 Don't touch anything!!!**

The most common reaction to piston seizure is immediate and total engine teardown. Off with the exhaust pipe, carburetor, head, cylinder, piston and anything else that looks like you can remove it. Heck, it seems to make sense, doesn't it? The piston's stuck, so naturally it's gotta be replaced, and you can't do that without tearing the engine down. Right? Drop the wrenches and take a minute to determine WHY your piston seized in the first place.

**HELPFUL HINT #2 Why did my piston seize?** The seized piston is unfortunate but it's only a symptom. Your REAL problem is RUNAWAY HEAT, a condition that can exist for several reasons, key among them is an engine air leak\*. Typically air leaks can be caused by a worn engine seal, a leaking base gasket, cracked manifold, ill fitting cases and even excessive porosity in engine castings. Each situation allows air to seep into your engine and create deadly runaway heat. And when it happens, engine failure is just around the corner (or just down the sand wash, whichever is further away). (\*NOTE: Runaway heat may also be due to insufficient lubricant-to-fuel ratios or coolant loss, but those are topics for a future article.)

### **HELPFUL HINT #3 This is only a test.**

It's very important to determine what condition(s) caused the seizure. Moderately priced (about \$40-50) leak down test kits are available from most dealers and the test is easy to conduct. (We won't go into the actual procedure here other than to say that if you can drive and eat at the same time, you should have no problem performing the test.) Armed with your kit and an ounce of patience, you're primed to zero in on Public Enemy #1 (read: air leaks). At the same time, you'll be taking an important step to ensure that future air leak related seizures won't become a recurring nightmare.

### **HELPFUL HINT #4 Fix the REAL problem.**

Eureka! Your leak down testing tells you that the rubber carburetor manifold has a small crack and it's been leaking like a White House staffer. You'll need a new one so don't bother trying to repair it. Toss the defective part and add a new carb manifold to your parts shopping list. Move forward with the top end teardown and rebuild procedure.

### **HELPFUL HINT #5 Before you start your 'new' engine.**

Ok, you've replaced the defective carb manifold and completed rebuilding the engine (.030 over rebore, new piston and ring - consult your dealer for specs and rebore recommendations. ). Hopefully, all leaks are sealed and you're about to bolt on the last few items (exhaust pipe, carburetor, airbox...) and kick this puppy over. BEFORE YOU GO FURTHER perform another leakdown test (let's hope the last one!). It may seem like overkill but any professional engine builder will tell you that the post assembly leak down test is the most important one of all. Chances are everything is A-OK -- you just want to make darn sure that the engine you just invested all that time and money on won't leave you stranded again. If this test shows that you've fixed the problem and the engine is now airtight, install the remaining parts and start the bike.

**If you still detect a leak.** You may have overlooked something. Continue leak down testing and leak repair until ALL leaks are sealed. If you run out of options and your engine continues to leak (ie: you've replaced all gaskets, seals and manifolds, etc.) seek the advice of a professional mechanic.

**LN**



9266 Abraham Way Santee, CA 92071

Phone 619.449.5000 Fax 619.449-9694

Email maximausa@juno.com Website www.maximausa.com