**Roil unveiling a revolution:**

Here is an amazing product you have probably never heard of. It can't be bought off the shelves, is used in winning Australian V8 Supercars, successful Bathurst 24 Hour racers, and Australia's 2000 Top Fuel dragster champion. It has been exhaustively tested by the State Government's Queensland University of Technology in Brisbane - their astounding results are published on page #79. Be sceptical, but we have seen further tests performed which back up their results.
The product is Roil, a US developed metal conditioner - not an oil additive. It is suitable for petrol, diesel and most other engines, gearboxes, differentials - and countless other applications. One of Australia's major tourist theme parks uses it on its rides to reduce wear, while cutting running costs because less friction in its engines means less power and expense.
However, Roil Metal Conditioner will not repair damaged metal, but if applied to any good surface subject to friction the benefits are incredible. As a preventative to damage we believe Roil is by far the best we have seen or heard of. In simple terms, Roil puts a new compound on metal surfaces, using oil as the carrier. It doesn't treat the oil, but the surfaces instead. It is explained in layman's terms by comparing it to being the opposite of a magnet. Rather than attracting metal surfaces, you could say this makes the metal behave like a positive to positive charge.
Mick Atholwood, the owner of 'Sainty', Australia's 2000 Champion nitro fueller dragster told us that he used Roil in his machine, and was faced with a dire decision prior to the final run in the Nationals at Calder Park. The engine costs for one pass are around $2000 without mishaps. A damaged engine can cost between $5000 and $50,000. However, when it came to that vitally important final in 2000 the engine of his dragster had lost most of its oil pressure and he feared his challenge was doomed to failure.
These types of engines produce a frightening 5500 bhp at 8000 rpm with 15,000 psa cylinder pressure! He had no choice other than to send his car out for that final 5.7 second quarter mile run, but with zero oil pressure he expected the engine to blow.
When it lit up, it kept going - and crossed the line to win - he was amazed.
Extremely happy, but puzzled as to why the engine had survived, he got a further unexpected insight when he got the engine back to the workshops and stripped it. He was gobsmacked. Everything was in tact, the crankshaft was undamaged, and although the bearings were scoured, the block was still fine. It believes it was due to Roil!
He has used it ever since, and gone to great lengths to promote it to anybody who wants to accept his advice. He immediately put it into the differential of his and his friends dragsters - and frequent rear end failures ceased! "I swear by it. I soak all the parts of our engine in it before assembly. It's like magic."
His own tests showed there was no trace of Roil in the original engine oil - it had correctly transported the Roil to all of the metal surfaces

and not left a trace in the liquid. He next trialed it in the grease used on the universal joints of his huge transporter, and the lubrication improved so much that in two years they have not been touched! He uses it on his wife's sewing machine, the lawn mower, in water pumps, wheel bearings and swears by Roil.

As a qualified engineer, he has observed that many additives end up in the oil filter or the sump, but he has never been able to find trace of Roil. We too have now used it in the engine of our Formula 1 Editor's racing car. During a recent total rebuilt we found that the crankshaft and crank case had been damaged following a big hit on a 'ripple strip' - but the meeting was completed successfully and we were unaware of the internal damage. We are convinced the engine would have been ruined without it.

Roil is not very expensive ($47.20 per 480 ml bottle in Australia) and only needs one full treatment, followed by small top-ups after an oil change.

However, it is not kryptonite, and won't prevent breakages if a component is not strong enough. If you want to run 400 bhp through a feeble differential or gearbox - Roil will not make it any less liable to break, and if it is broken already Roil will not make it better. It is designed to prevent wear. Everybody agrees that the biggest problem is getting people to try Roil. It can be used on brand new cars, but convincing people to put it into their new pride and joy is a problem. What believers in Roil say is that if you are hesitant about applying it to your new car - try it in an old one, and you will be convinced of its benefits.

Engines, gearboxes and differentials all run smoother and quieter - and are therefore less costly to run. The International Standard Falex tests conducted by the Queensland University of Technology are widely available, and compare friction levels using various oils, and even water, before and after treatment with Roil and some well-known additives. The full results can be seen on the next page.

One highlight was Cat Diesel oil which broke down after having 750 lbf of force applied to it.

When Roil was added to the same oil by QUT scientists, and put through the exact tests, it passed 4500 lbf - and didn't break down at that point even!

Other published tests are equally impressive. It is recommended that Roil is added in ratios of 1:14 for car engines, 1:40 in automatic transmissions or manual gearboxes, power steering or hydraulics 1:64, grease 1:5 and for various other uses as little as 1:100.

We don't know what precisely makes up Roil, buy we are told it contains no suspended solids such as teflon, graphite or moly. Roil doesn't contain films or coatings which may plug filters, or build up on internal moving parts.

It reduces engine heat by cutting friction and increasing heat transfer, guards against corrosive build up, minimises repairs costs, helps prolong tool and equipment life and is formulated to blend with petroleum or synthetic oils. We photographed a series of tests, which are published here, and which had a bearing pressed against a spinning metal wheel using a torque wrench to measure the pressure. The power used by the motor was measured by an amp metre. Using a respected engine oil, the wheel and bearing soon squealed loudly

when as little as 20 lbs pressure was applied.
When that rose to 50 lbs pressure the noise was unbearable, and the amp meter needle rose dramatically. After a small amount of Roil was added, the squealing quickly subsided and disappeared. The wheel continued to spin against the bearing much more easily - and the needle an the amp meter dropped to less than half of what it was reading previously! A large number of similar tests were conducted, up to a maximum of 80 lbs pressure on the torque wrench, and the results were precisely the same.
When the bearing was removed after rubbing with oil only, the pitting was very obvious. When Roil had been used and the pressure applied the same bearing (which had been fixed in a different spot) this time had very few marks on it.
Some tests were conducted using tap water (which quickly boiled), and then were re-run with Roil put onto the spinning wheel still running in the water. Results were no less different - the squealing disappeared and the needle dropped. This, of course, equates to less power used, and therefore, savings. Another test used a good brand of radiator coolant as the carrier - outcomes were the same.We were convinced, and are backed by the claims of others, and our own experiences with the racing engine.
As we mentioned at the start of this feature, Roil cannot be purchased over the counter, is not advertised in magazines, and is a closed secret for most. If readers wish to know how to purchase it for testing, or to put it straight into regular use, we will be pleased to assist you. We believe Roil is worthy of being hailed as a revolution, and could prove to be of enormous benefits to readers' own cars, fleet vehicles or many other personal products.
**For a reprint of the Roil test from the Jaguar Magazine, please call us on 07 3349 0322, fax 07 3349 0181, or e-mail us at jagmag@ecn.net.au for assistance.**

## An astounding response from our readers
## Metal conditioner brings a reaction the likes of which we have not seen before

It's gratifying when we receive a strong response to products we mention in the magazine, but in our nineteen years of production, we have never experienced one like we have had to Roil Metal Conditioner. We tested that product for our previous edition (see Technical Topics pages #66-69), and have been overwhelmed with enquiries and endorsements from readers in places as widespread as Canada, England and New Zealand. New Zealand reader John Russell wrote to us with his thoughts on Roil.
He said: "I read with interest the article on Roil Metal Conditioner in edition #107. It is very pleasing to see the opinions of some qualified engineering experts who have used and evaluated the effectiveness of Roil Metal Conditioner. "I have been using Roil in my car for about the last five years. Before the current Roil Metal Conditioner became available there were three separate products for lower engine, transmissions and differentials. "The first time I used the lower engine product, at oil changing time, the running temperature of my Series 3 XJ6 engine dropped by five degrees. I then used it at every oil

change. "I now have a Daimler XJ40, and at the last oil change I used the 'old' Roil Metal Conditioner as the current one was not yet available. At the next due oil change I will most certainly be using the 'new' Roil Metal Conditioner. "I also use the Roil Fuel Treatment. I have found that using this product my XJ40's fuel consumption has improved by around 10%. Has your team done any testing on this product?" The answer is, no not yet, but it is the next project on our testing agenda.
As we mentioned in our previous edition, our Formula 1 editor uses Roil Metal Conditioner in his racing car, but not only in the engine, gearbox and differential. He also treats any object on the car which need lubrication, and takes particular care to observe the performance benefits which are achieved. The results are very favourable, and as we mentioned in edition #107, Roil Metal Conditioner is an astounding product which we thoroughly recommend to our readers.

For those who missed the story, we are very happy to pass on a reprint to any readers who wish to know more about it.
**We can be e-mailed at jagmag@ecn.net.au, telephoned on 07 3349 0322 or faxed on 07 3349 0181. Roil is not sold through retail outlets.**