

The Island **GROWLER**

Newsletter of

THE JAGUAR CAR CLUB OF VICTORIA

Victoria, British Columbia, Canada

Issue #4

March 2004



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- A THING OF BEAUTY - THE JAGUAR IRS
- HOW TO GET THAT BROKEN BOLT OUT
- KEEP BRAKE CLEAN OUT OF YOUR EYES!
- REPORT ON OUR FIRST DRIVING EVENT OF THE YEAR



THE JAGUAR CAR CLUB OF VICTORIA
2017 Cadboro Bay Road, Box 112
Victoria BC Canada V8R 5G4
founded 2003

The Island Growler is published monthly, and is distributed by mail and electronic file to members of JCCV.

Submissions are encouraged.

Copy deadline is the first of each month.

All information and advice is presented in good faith, and no liability whatsoever will be assumed by JCCV. Opinions expressed herein are not necessarily those of JCCV, the executive of JCCV, or of the editor.

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ADVERTISING

Display advertising of possible interest to Jaguar enthusiasts on Vancouver Island is accepted. For rates, publication dates, and other information, please contact the editor.

Classified advertisements can be placed at no cost, and will run for three issues. Please contact the editor for more information.

MEETINGS

JCCV meetings take place on the fourth Monday of each month, except December, at 7:30 pm in the cricket clubhouse at Beacon Hill Park in Victoria. Our Annual General Meeting is in November.

We are affiliated with
Jaguar Clubs of North America
www.jcna.com



2004 EXECUTIVE

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MEMBERSHIP

Membership in JCCV is open to anyone interested in and enthusiastic about Jaguar automobiles. There is no need to currently own one of these fine cars to be a member.

For more information, contact any of the executive or drop us a note in the mail. We'll send you complete information.

If you believe that a Jaguar is more than just a car, you are one of us!

COVER PHOTO

This month's cover features the 1970 XJ6 Series I of JCCV member Jim Farrell. Only recently acquired, Jim's car was built to European specifications, and was originally bought by a Canadian serviceman in Germany, who eventually brought it to Vancouver Island.

It has SU carburetors rather than the Zenith-Strombergs that were fitted to North American cars, a special order compression ratio of 9:1, no pollution control equipment, no side running lamps, wind-up windows, no air conditioning, and a manual gearbox with overdrive. Thirty-four years old with only 56,000 miles on the odometer! The car has been repainted, but other than a new headliner the interior is original.

Jim says it is a fine stable mate for his 1959 XK150OTS.

Photo by the owner.

MESSAGE FROM THE EXECUTIVE

Keeping You Informed

In this column, you will find information regarding the administration of the Club, as well as various updates and items that may be of interest.

Information about the Jaguar Car Club of Victoria is available to all members, so if there is anything you would like to know more about, please contact any of the executive.

The Club's financial position is currently strong, with just under \$2,800 on hand at the end of February. There are still some payments outstanding, as the posting of newsletter production costs lags a month or so behind and we have yet to be billed for our meeting space rental. We have accounted for our JCNA dues. We do have a small amount of advertising revenue still to receive. The major source of revenue is your membership dues, and these are received primarily at the beginning of the year. Our sale of Leatherique Rejuvenator Oil has been very successful, earning nearly \$400 for your Club, and our initial supply is almost sold out. With our lack of history and the resulting uncertainty, the executive will chart a conservative course to ensure our finances serve us well for the entire year.

We have 53 paid up members as of the end of February. This is really quite outstanding considering the Club is not yet one year old. Member rosters are available by request to the Membership Administrator or at Club meetings.

Our application for affiliate status with the Jaguar Clubs of North America is proceeding, and approval is expected to be just a formality at the JCNA board meeting on March 12th. Our members have been assigned their JCNA membership number, and our Club has been designated as Affiliate #61. Watch for your JCNA membership card and your first issue of the Jaguar Journal in the mail. We are still awaiting approval of our logo by Jaguar Cars Limited. Once this step is completed, we will be able to consider some JCCV regalia.

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EDITOR'S NOTES

Doug Ingram

With each successive issue, my job as editor of the Island Growler seems to get easier. So many in my position seem to scramble for material for every issue, but this month I had the luxury of having too many submissions to fit them all in. So, thanks to all those who contributed, and if you don't see your piece this month, keep watching!

On February 29th, Eileen and I had an enjoyable time on the Club's first driving event of the season, which organizer Mike Skene reports on in this issue. If you recall when you joined this Club, you were asked to indicate your areas of interest, one of which was *Driving Events*, and another *Social*. Mike's events, the next few of which are detailed on page 13, cover both of these areas rather well. The basic format goes like this - meet somewhere, visit with friends and get to know new friends, go for a pleasant drive and possibly visit an interesting place, then have something to eat while continuing the visiting. Given that 80% of you selected *Driving Events* and *Social* on your member information form, there is little doubt that

(Continued on page 4)



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(Continued from page 3)

MESSAGE FROM THE EXECUTIVE, continued

Before too long, we will need to strike a committee of members to consider JCNA issues. JCNA bylaws, competition rules, and other practices are subject to revision and ongoing discussion, and we are about to become part of the decision making process. This committee would only need to meet occasionally, perhaps twice a year. If you are interested, please speak up.

As an active affiliate of JCNA, we will host an annual event, which we anticipate will be attended by Jaguar enthusiasts from all over the region. We have consulted with the other Clubs in BC, Washington, and Oregon to ensure that our standing annual date is not in conflict. Thus, we have set the weekend *after* the BC Day long weekend each August as our event date. This year, on Saturday, Aug 7th we will hold a mock concours for Club members to participate in and gain experience. Our first JCNA sanctioned event will be next year, on Saturday, August 6th, 2005.

Our last meeting on Feb 23rd was attended by 18 members. Although our planned presenter was a last minute cancellation, we heard from many members on the topic of automotive batteries, and there were many enjoyable discussions. Mike Hancock was the lucky winner of the draw for an electronic battery minder.

While on the topic of meetings, several members have suggested that we try to find a more central meeting place, an idea that makes good sense. We need the help of all our members to find something suitable. The key issues are that it be easier to access for our members who travel from all over the area, including from north of the Malahat, and that it meet our needs for space, facilities, and cost. Please think about this. If you know of somewhere that may be suitable, please let us know.

See you at a meeting or event!



(Continued from page 3)

EDITOR'S NOTES, continued

Mike's program of events will be very successful. Why not come out for the next one on March 28th?

I recently had the rear suspension out of our 1987 XJ6 for a complete rebuild, and in this issue you will find two articles coming from that experience. The first is about the Independent Rear Suspension itself, which is an engineering and design marvel, especially when you consider it first came out nearly 50 years ago.

The second piece is about what to do when faced with a nasty broken-off bolt, like the one I had to deal with when disassembling my IRS. As you'll see, it all worked out fine, which is not always the case. Regardless, it's all great fun, I assure you!

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Our designated "Safety Guy", Dave Cooke, brings us yet another well researched and carefully thought out article about keeping ourselves safe and healthy. In this issue, Dave considers the hazards of all those chemicals we have nearby and so often grow complacent about. It's something we could all pay better attention to.

New contributor Bob Bowen shares his enthusiasm for all things Jaguar with an interesting article about the past and present of the marque's racing programs. This month, Bob provides an overview and looks forward to the coming racing season that is about to begin. Bob assures me he has more to say on this topic. Jaguar has a long and storied racing heritage, and I'm sure we will all look forward to hearing more from Bob on this interesting subject.

Winters at this latitude are always a difficult time for a confirmed car nut such as I. Too wet, too dark, the garage too cold. The longer days, and the growing warmth of the sun when we are blessed with its presence remind me that it won't be long before we are in the thick of the season. My thoughts turn to enjoyable driving on winding roads, crisp exhaust notes, relaxing in the sunshine with gleaming chrome and paint all around.....and the company of good friends who share this wonderful hobby.

It won't be long, and I can hardly wait.



A THING OF BEAUTY

The Jaguar Independent Rear Suspension

by Doug Ingram

photos by the author except where noted



After World War II, Jaguar chassis engineer Bob Knight did some investigating into independent rear suspension systems (IRS) with the intent to fit one in upcoming models. A system, originally patented by Georges Roesch of Clement Talbot Ltd, was generally accepted by Sir William Lyons and the rest of Jaguar management, but was then set aside. Ten years later, in the 1950s, Jaguar considered their existing chassis rather outdated, and revisions were considered vital for the new series of cars.

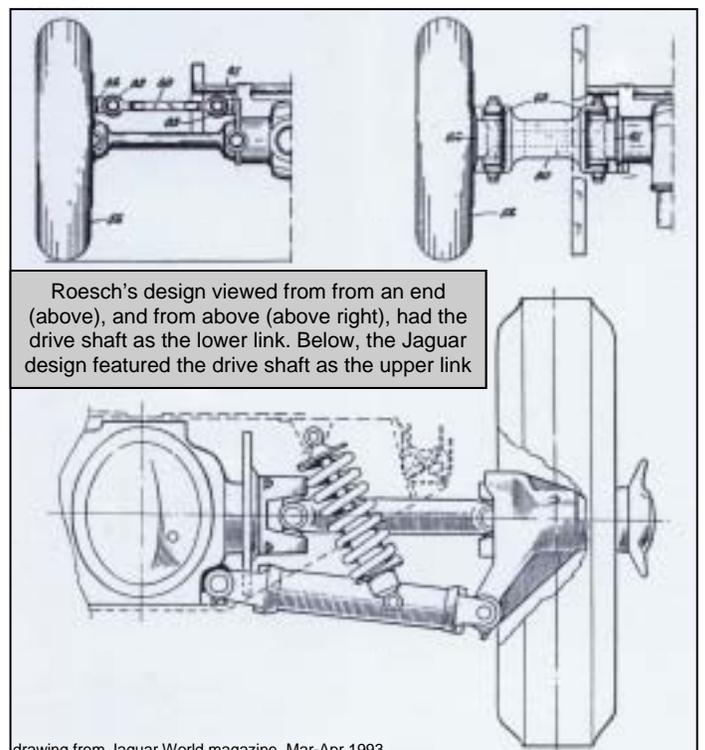
According to Knight, the new IRS was first tested in a saloon car as a result of a bet with Lyons in 1958. During one of his customary rounds of the plant, Lyons called in to see Knight, and informed him that he would like to see an IRS fitted to a saloon car. In response, Knight advised Lyons that he thought they could have a prototype within a month, and was subsequently challenged with a bet that he would be unable to meet that deadline. Afterwards, Knight realized that Lyons would win either way, as he would either win the bet or get his prototype! As it turned out, Knight did make the deadline and won the bet.

The IRS used in the saloon project had already been used on E1A, the highly secret prototype sports car that would evolve into the E Type.

In Roesch's original design, the drive shaft was used in place of a lower wishbone link, with a solid upper link

pivoting at both the inboard and outboard ends. Jaguar tested this concept thoroughly and found it to be very

(Continued on page 6)



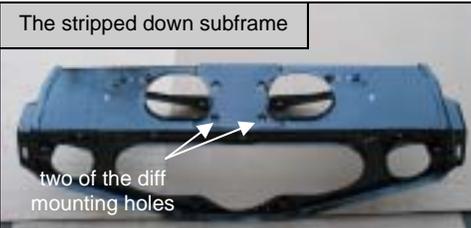
drawing from Jaguar World magazine, Mar-Apr 1993

(Continued from page 5)

A THING OF BEAUTY, continued

effective, but eventually modified it to put the driveshaft at the top. See the comparison in the diagram on page 5.

In 1961, the Mark X and the E Type became the first production Jaguars to feature fully independent suspension on all four wheels. With few changes, the system was used for more than 30 years, being installed on all E Types, the original S Type, the 420, all XJ Series I, II, and III models, the XJS until 1992, and the Daimler DS420. Even today, more than 40 years since its appearance, the superb engineering and design is recognized by hot-rodders and kit car builders, who covet the Jaguar IRS for its strength, simplicity, and handling qualities.

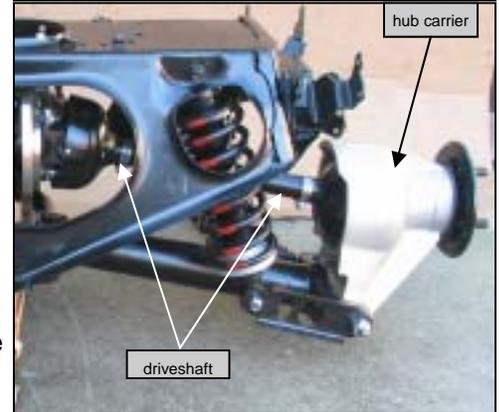
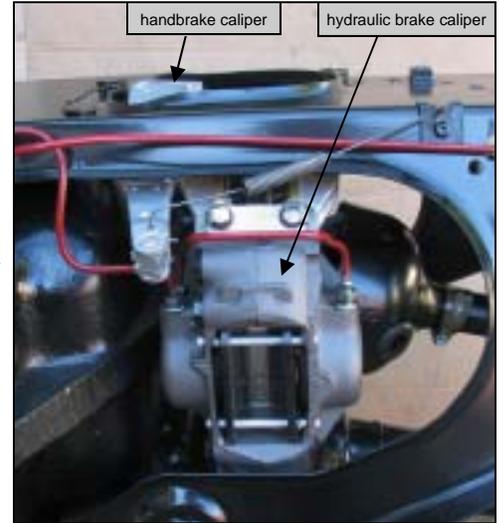


The basic structure of the IRS is formed by a pressed and welded steel frame, or cage, which is remarkably light-

weight given the task assigned to it. The heavy differential casing is mounted to the inside centre, hung by four bolts through the holes indicated in the photo above. The differential is also supported from below by a tie plate, so don't worry about yours falling out anytime soon!

Disc brakes are mounted inboard, on either side of the differential. The purpose of having the heavy rotors and callipers in the middle, rather than the more common location at each wheel, is to reduce what is referred to as unsprung weight. The lower the unsprung weight, the less work the shocks and springs have to do to keep the tires in contact with the road over bumpy surfaces. Previously, inboard brakes were only seen on racecars and exotics, so the Jaguar design was revolutionary in production cars. Even today, you often get surprised looks when explaining that your Jaguar has inboard rear brakes. Two calipers adorn each rotor, one for the pedal operated hydraulic brakes, and the other for the mechanical handbrake. The location of the braking components create difficulties if repair work is attempted with the subframe in place, so the wise mechanic lowers the complete assembly from the car, making the job rather easy.

Holding the rotors in place, and bolted to the differential's output shafts, the driveshafts run through two covered universal joints per side to large cast aluminium hub carriers, each of which holds two massive wheel bearings. The hub carriers are very light (the unsprung weight issue again) and with a little effort, clean up nicely to a rather beautiful appearance.



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PAST EVENTS

The Saanich Prowl

Sunday, February 29th

report by Mike Skene

The Saanich Prowl was run on Sunday the 29th of February. The participants met at our pre-arranged meeting point in the bowling alley parking lot opposite the Jaguar-Land Rover Victoria Dealership. The morning was sunny but a little cool

due to a north wind and, after standing around talking for a while we departed on the run at 11:30am right on schedule.

The group consisted of four Jaguar saloons, an E-type, a Ford, an MGB plus a rare Nissan-Jaguar. The route took us along many back roads of the Saanich Peninsula, along the waterfront and through Sidney where some light rain



Before the run, David Wardell takes the opportunity to get some advice from Gregory Andrachuk.



The very rare Nissan-Jaguar

started to fall. We continued on toward the Swartz Bay Ferry Terminal then easterly along Lands End Road. There was not much traffic on this part of the trip which enabled us to open the cars up on a nice windy piece of road made

just for sporting cars. By the time we reached our lunch destination, the restaurant at the Glen Meadows Golf Club, the sun came out and it turned into a beautiful afternoon.

As only twelve of us sat down to lunch we were able to order food from the reasonably priced regular menu, although we have to admit the service was rather slow. The waiting allowed us to indulge in some interesting conversations and we finally disbanded for our journey home at around 2:30 pm. All who participated seemed to have enjoyed the day.



Motoring along Lands End Road

Our next Club

The beautiful E Type Series III coupe of Paul Gerrard



run is The Tour de Britain, on Sunday March 28th and we hope to see more club members in attendance. Please note that it starts from the parking lot at Cattle Point in Uplands Park at 11:00am.

See you there!



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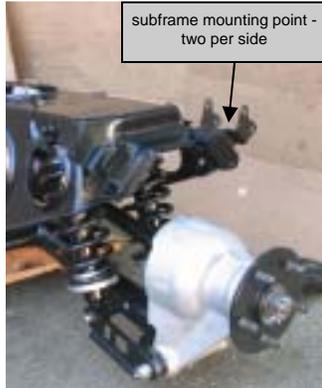
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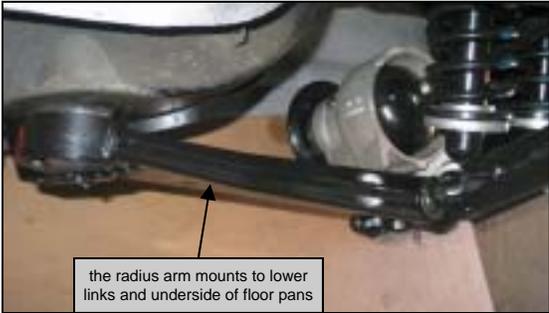
A THING OF BEAUTY, continued

The lower link is a length of heavy tubular steel, yoked at each end, and coupled to the hub carrier and the differential through outer tapered and inner roller bearings. Each side sports two coil springs, each with a shock absorber in the middle. This is another uncommon feature of the Jaguar IRS - four shock absorbers at the rear!



subframe mounting point - two per side

The entire assembly mounts to the car via 4 heavy rubber and steel bushings, two per side, the outsides of which are visible behind the road wheel. This type of mounting system provides considerable cushioning of road vibration and noise for the occupants of the cabin, and contributes significantly to that wonderful smooth Jaguar ride that we all love.



the radius arm mounts to lower links and underside of floor pans

Two radius arms run from the lower links to attachment points on the underside of the floor pans. These are fastened through rubber and steel Metalastik bushings, again to isolate vibration and noise. The forward ends of these radius arms are frequently a challenge to dismantle, especially if they have become rustbound. Be sure to use copious quantities of copper grease when you reassemble yours!

Sadly, with it tucked away at the rear of the car, the independent rear suspension on many Jaguars is not just forgotten but often seriously neglected. Many cars that just don't feel right on the road can be transformed by some attention to the lower link bearings, drive shaft universal joints, sagging springs, worn out shock absorbers, and the mounts. With proper attention and service, an IRS will give years and years of service, and will deliver the kind of handling performance and ride comfort that we expect from our Jaguars.



The Jaguar name first appeared in 1935 on a redesigned model range produced by SS Cars Ltd. The name was chosen to distinguish the new, higher performance products from their rather pedestrian, although stylish, predecessors.



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JAGUAR RACING NEWS

by Bob Bowen

In this column I will provide some information on the racing heritage of the Jaguar marque, the cars, and the milestones over the years, as well as keeping you up-to-date on current Jaguar Racing news. I will borrow information from many sources and would welcome input from any interested party.

The story really began in 1922 when William Lyons and William Walmsley formed the Swallow Side Car Company in Blackpool, England. The illustrious Jaguar marque grew from the humble beginnings of two men building, by hand, motorcycle side cars. Their business was very successful, with one of the reasons being the fact that their creations were practical as well as stylish.

In 1926, the business began custom coach building, and was renamed The Swallow Sidecar and Coachbuilding Company. They purchased Austin Seven chassis onto which they mounted two seat bodies. Lyons and Walmsley combined their talents to create practical, inexpensive but fashionable modes of transportation. The company grew at an amazing rate, barely able to keep up with the young Mr Lyon's imagination.

In 1934 the partnership was dissolved and the pair parted company. A year later the company went public and was renamed SS Cars Limited which was later changed to SS Jaguar. The first sporty car produced was the SS90. In 1936, Lyons felt that it was time for the company to have more engineering design performed in-house. By a stroke of luck, some say genius, Lyons hired 32 year old William Heynes and made him Chief Engineer. It was Heynes who, among other things, helped design the XK engine.

The SS100 was so named as it attained a speed of 100mph, using the 3.5 liter version of the Standard engine. This car, dominant in hill climbs and rallies, led Jaguar into competitive motoring. It was built for several years prior to World War II when automobile production ceased to allow for the manufacture of products needed for the war effort.

In the post war era, the name 'SS' was dropped for obvious reasons, and the company became known as Jaguar Cars Ltd. The company learned that Standard Cars, Jaguar's engine supplier, was moving into the production of smaller cars and would no longer be able to supply large engines. Lyons, quick to see an opportunity, offered to purchase the tooling in order to continue the manufacturing of 6 cylinder engines in Jaguar's name. The Standard Six, having previously been converted by engineer Harry Weslake to an overhead camshaft design (thereby increasing the horsepower from 75 to 105hp) helped inspire the development of Jaguar's own six cylinder engine. The XK engine was introduced in 1948 and had several inno-

vative features such as twin overhead camshafts and an all aluminum hemispherical cylinder head. With 3442cc displacement, the engine developed 180hp. It has been said that the beautiful and successful XK120 was intended to be a limited production car built to introduce the new XK engine. As it turned out, the wildly popular XK120, which had a top speed of 120 miles per hour, was the fastest production car in the world.

In 1949, race prepared XK120s were winning competitions on both sides of the Atlantic. In 1950, an XK120 with an almost stock XK engine was entered into the Le Mans 24 hour endurance race. Although the car did not win, the results were encouraging. In 1951, an XK120C won at Le Mans with a record average speed of 93.49 miles per



hour. The XK120C, or C-type, was designed for competition, with a 210 hp engine, all aluminum body, independent front suspension, and torsion bar rear suspension. The body was attached in three sections

for speed and ease of access to the frame, engine, and transmission. Top speed was 144 mph with 0 to 60mph reached in 8.1 seconds. Around this time, "Lofty" England, who had joined Jaguar shortly after the war as Service Manager and had been associated with many of Britain's great drivers, became Racing Team manager.

Lyons could see that racing improved the breed and promoted sales, so the decision was made to enter competitive motoring in a serious way. The innovative thinking and lessons over the past 50 years have given us the Jaguar cars of today.

The Formula 1 Racing season opened on March 7 with the Australian Grand Prix in Melbourne, Australia. Hopefully, this will be a season where Jaguar can improve on last year's successes. Finishing seventh in the constructors championships was encouraging, as was the performance of lead driver Mark Webber. Mark, in his rookie season in Formula 1, had several front of the grid start positions and finished the season with 17 points. Recently hired second driver, 21

year old rookie Christian Klein hopes to improve Jaguar's position. The new and innovative R5 car will be powered by the Cosworth V10 engine. The second race of the season will be the Malaysian Grand Prix in Sepang, Malaysia on March 21 followed on April 4 by the Bahrain Grand Prix in Bahrain. For those who can get up in the middle of the night, these races can be seen live on Sports Net or later taped on Speed Vision.



Trans Am racing, less well known, is another arena where

(Continued on page 13)

SAFETY MATTERS

Tips For Surviving Our Hobby

by **Dave Cooke**
THE SAFETY GUY

Chemicals Can Be Dangerous!

It's rather strange: now that I have been named the JCCV "Safety Guy", I always seem to be thinking of personal experiences I can use in my articles. Even more odd is the perverse feeling of relief I get when I have a mishap in the garage. Excellent!...more grist for the "Safety Matters" mill! Last week, I experienced this contradiction in emotions when I had the pleasure of an unpleasant mishap in my shop. I think the incident ties in well with what I had planned for this month's sermon.

I was refurbishing the brakes on my car, (okay, I'll admit, it was my Buick, not my beloved VDP) and I had the dirty master cylinder on the bench to give it a good going over with Gunk Brake Clean. Using the little straw attachment on the spray can nozzle, I was squirting cleaner into the various holes in the cylinder. All was going well until, much to my surprise and agony, Brake Clean squirted out of a hole, streamed under my glasses and into my left eye. If the effect of Brake Clean on an eyeball is any measure of how effective it is



as a parts degreaser, I can tell you it is superb! Flushing my eye with copious quantities of water finally settled things down, but I was done in the garage for that night. My little misfortune brings up two issues: firstly, the importance of proper Personal Safety Equipment - in this case, glasses did not provide enough protection. I now wear goggles when I use brake cleaner. Secondly, and this is the focus of this article, the importance of knowing what chemical hazards are contained in all those aerosols, spray bottles, and containers that we have in our shops.

Manufacturers are required to label their products with appropriate safety warnings, but I think a lot of us become complacent over what appear to be generic warnings on labels. A more complete breakdown of chemical ingredi-

**OUR
NEXT
MEETING**



**The next regular meeting of the
JAGUAR CAR CLUB OF VICTORIA
is on
Monday, March 22nd
at 7:30 pm
in the Cricket Clubhouse
Beacon Hill Park
Victoria**

**Featured is a presentation by
Doug Unia.**

**Doug is a fellow JCCV member, and
he will share his expertise in a
presentation about carburetors .**

Be there - don't miss out!

ents, hazards, safety precautions, storage and handling procedures can be found by referring to the Material Safety Data Sheet (MSDS) labelling system. The MSDS system evolved from generations of chemical labelling systems that were primarily aimed at safe shipping practices. MSDS was adopted by the United Nations in 1992 at the "Earth Summit" and is one component of The Globally Harmonized System of Classification and Labelling of Chemicals. In Canada, it is an integral part of the national safety communication standard, called the Workplace Hazardous Materials Information System, (WHMIS).

MSDS sheets are information records produced by the manufacturer of hazardous products that provide very

(Continued on page 11)

(Continued from page 10)

SAFETY MATTERS, continued

thorough details on all of the following:

- * product identification
- * hazardous ingredients of mixtures
- * physical properties of the material
- * health hazard data
- * emergency first aid procedures
- * reactivity data
- * spill leak and disposal procedures
- * personal protection

MSDS sheets are not normally provided by the retailer, however it is easy to look up the data on the internet. The following sites will serve you well if you would like to find out everything there is to know about the hazards of a product:

Cornell University, Department of Environment Health and Safety: <http://msds.pdc.cornell.edu/msdssrch.asp>

MSDS Search Depository: <http://www.msdssearch.com/msdssearch.htm>

So how would MSDS information have helped me in the case of the Brake Clean in the eye incident? Well, here is the extract from Section 6 of a Brake Cleaner MSDS:

SECTION 6. HEALTH HAZARD DATA

Inhalation health risks and symptoms of exposure:

Respiratory irritation, headache, nausea, fatigue, drowsiness, impaired coordination, cardiac sensitization

Skin and eye contact health risks and symptoms of exposure:

Skin: may dry the skin; prolonged contact may cause moderate irritation.

Eye: liquid or vapour can irritate; prolonged contact may lead to corneal dam-

age.

Skin absorption health risks and symptoms of exposure:

Not easily absorbed. Solvent action can dry and defat the skin causing the skin to crack, leading to dermatitis.

Ingestion health risks and symptoms of exposure:

Not a likely route of exposure. If swallowed, do not induce vomiting. Seek immediate medical advice and/or attention.

Health hazards (acute and chronic):

Acute: eye irritant. Skin irritant. Narcotic in high concentrations. Chronic: liver and kidney disease. Skin irritation and dermatitis. Chronic overexposures have caused liver and kidney toxic effects in experimental animals. Can cause central nervous systems effects, irregular heartbeat and possible death if too much is breathed. Deliberate concentration and inhalation of content may be harmful or fatal. Can elevate carboxyhemoglobin levels following exposure.

Carcinogenicity: ntp carcinogen: yes iarc monographs: yes

OSHA regulated: yes

This product contains chemicals known to cause cancer.

Medical conditions generally aggravated by exposure:

Acute and chronic liver and kidney disease, anemia, coronary disease or rhythm disorders of the heart

Emergency and first aid procedures:

Inhalation: remove to fresh air. Administer oxygen if needed. Apply artificial respiration if breathing has stopped. Get medical attention. Do not administer adrenalin to an affected person.

Ingestion: do not induce vomiting; call a doctor if condition remains, get medical attention. Never give anything by mouth to an unconscious person.

Skin: wipe off with towel. Wash with soap and water. Get medical attention if irritation persists.

Eyes: wash immediately with large volumes of fresh water for at least 15 minutes. Get medical attention.

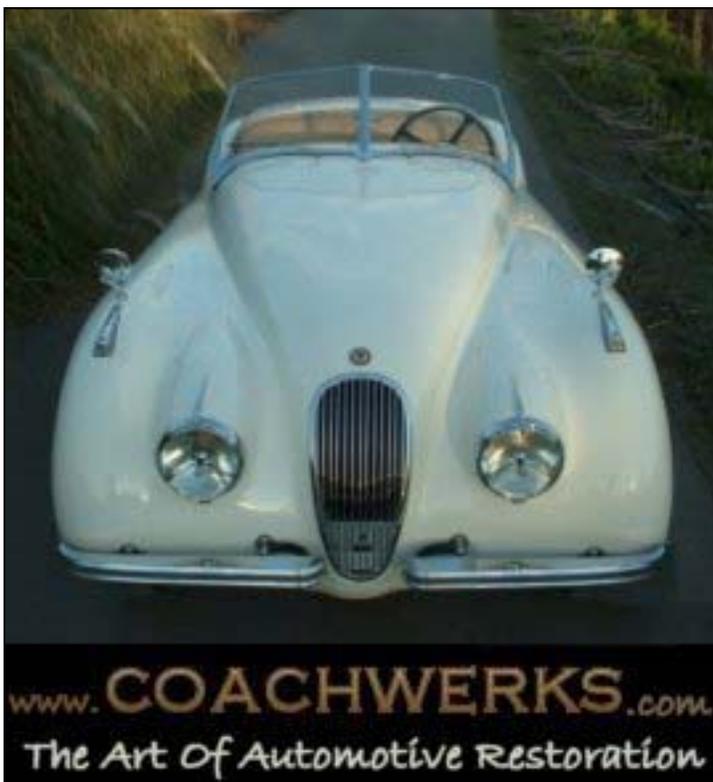
It can be seen that brake cleaner in the eye is a *thing to be avoided!* Had I referred to it first, I might have been more cautious: worn goggles and rubber gloves, and ensured that I had good ventilation in my shop.

I can state without hesitation that what happened to me was both humbling and extremely painful. On the plus side however, the experience gave me the opportunity to



introduce the Material Safety Data Sheet system to those of you who may not have encountered it before. Now armed with MSDS, we can better appreciate the hazards in all those chemicals that we use on our cars *before an incident occurs.*

The XJ40 was the last Jaguar design with which Sir William Lyons had a connection. Although he had retired in 1971, he remained fairly active and visited the factory regularly, not least to see how the XJ40 design was progressing. In the early 1980s, examples of prototypes were taken to his home at Wappenbury Hall for his inspection - a practice that went back to the early post-war years, when Lyons would often drive prototypes for extended periods. The development of the XJ40 model began before the XJ6 Series II was introduced in 1974. The XJ40 was finally launched in the summer of 1986, more than 13 years after it was conceived. Sadly, Lyons died in 1985 and never saw the completion of the project.



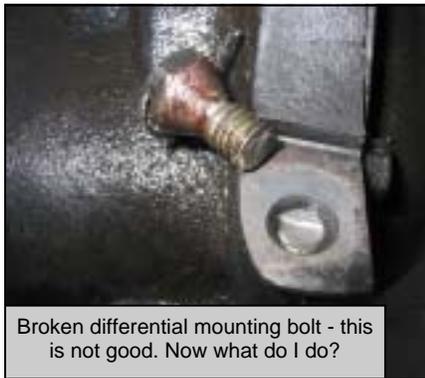
TECHNICAL CORNER

Extracting a Broken Bolt

by Doug Ingram
photos by the author

Argh! That's my usual response when I encounter a bolt that has broken off deep inside the mating part. (Well, if the truth is to be told, what I say is often a little more colourful!)

This happened to me recently during the rear subframe rebuild I was undertaking on our 1987 XJ6 VDP. With the entire sub-assembly out of the car and on the floor, I was in the process of separating the differential from the subframe itself. I wanted to attend to the diff's pinion and output shaft seals. There are four bolts which pass through the subframe and into threaded holes in the top of the differential casing, and two more on each side. Interestingly, these are special coarse threaded bolts with a partially countersunk head, and holes for mechanic's locking wire. The left rear side bolt had sheared off, and there was plenty of evidence this had occurred many miles ago.



I decided to try my luck with a screw extractor, so I hoisted the heavy differential onto my workbench, and used a punch to make a dent in the center of the broken bolt. This keeps the drill bit from wandering. Using a drill bit of a size appropriate for the diameter of the extractor tool, I drilled a pilot hole approximately 1/4" deep into the broken bolt. It's important to not drill through the end or sides of the bolt - the idea is to get it out with no evidence that there was ever a problem.



I then applied a little fastener-release lubricant to the hole. The one I use is called Moovit - there are others such as Kroil, Busty, and even Rust Check can help. I do

find that WD-40 is the next best thing to nothing. Whichever one you use, take a coffee break after applying it, to give it some time to do its work.



Next, out came the extractor tool. Look carefully at the photo below and you will see that its tapered threads are reversed, or left-handed. This means



that the tool will dig deeper into the broken bolt as it is turned counter-clockwise, with the aim being to back the offending

piece out of the hole. The extractor tool has a square drive which is easy to grip with an adjustable wrench. It's important to apply turning pressure gradually at this point, ensuring that the business end of the tool gets a good, deep bite into the bolt.



Made of hardened, and therefore somewhat brittle steel, the tip of the



tool can be snapped off fairly easily if it is not well bedded. Ask me how I know!

In this particular case, the broken bolt came out rather easily. It doesn't

always work that way, and you can end up with the frustrating job of drilling out the bolt, and breaking it into pieces, all without damaging the threads in the hole. Any car restorer will agree that its often not easy, and usually not much fun. Careful preparation, drilling the right size hole for the tool, allowing the fastener release product to do its job, and plenty of patience will give the best chance for success.



LOOKING AHEAD

Upcoming Events

by Mike Skene
Events Coordinator

Our Sunday runs for the next few months are listed below. Please note that some of the times and meeting places have changed. If you have previously marked your calendar with information from earlier issues of the Growler or from past meetings, take another look - what is shown below is correct.

All members, their families, and friends are invited to join in. The runs have some common elements - we will meet somewhere, go for a bit of a drive or to an interesting place, and then have lunch, which will cost around \$20 per person. There will always be plenty of opportunity for socializing.

It's very important to understand that you DO NOT need to drive your Jaguar to join in. Many of us have our cars off the road for winter projects, or may be reluctant to bring them out during adverse weather. Please come along in your daily driver.

Do you need more information? Please contact me at 592-1448 or by email at mikeskene@telus.net.

Here's what is coming up:

THE TOUR de BRITAIN Sunday, March 28th

Meet at 11:00am in the parking lot at Cattle Point in Oak Bay, just off Beach Drive for an 11:30am departure. We'll tour a bit and have lunch at the Embassy Inn.

TAKING TO THE AIR Sunday, April 25th

Meet at 10:00am in the parking lot at Mayfair Lanes, just north of Mayfair Shopping Centre, for an 10:30am departure. We'll visit the BC Aviation Museum at the Victoria International Airport (cost \$2), then have lunch at the Waddling Dog.

THE VICTORIA HILL CLIMB Sunday, May 2nd

Meet at 11:00am in the parking lot at Mayfair Lanes, just north of Mayfair Shopping Centre, for an 11:30am departure. We'll see the sights from the tops of some local hills, then have lunch at the Cedar Hill Golf Club.

NEED MORE INFORMATION?

HAVE IDEAS FOR FUTURE RUNS?

Please contact Mike Skene at 592-1448 or mikeskene@telus.net

(Continued from page 9)

JAGUAR RACING NEWS, continued

Jaguar Racing is doing exceedingly well. The car is a modified XKR, this year powered by the supercharged



Jaguar 4.0 liter V8 engine. The car and the engine have been modified by RocketSport R Performance Racing. Scott Pruett, the lead driver, won the driver's title by a large margin in 2003. Jaguar

finished second and third in the race series as well. The first Trans Am race goes April 16 with the Toyota Grand Prix in Long Beach California.

Last season, Jaguar introduced two E Type entries into the Vintage Racing circuit in North America, to promote the sale of Select Edition, Certified Pre-Owned cars.

I hope to continue on the history of Jaguar racing as well as updates on the current programs in the next issue of the Island Growler.



Editor's Note: Just as we go to print with this issue, the results of the first race of the 2004 Formula One season are in. Held at Albert Park in Melbourne under clear and sunny skies, the race began with Mark Webber 6th on the grid and Christian Klein 19th. Both cars got off to a clean start. Unfortunately, Mark lost 6th gear on Lap 27, and 7th gear shortly afterwards. His lap times slowed and the decision was made to retire. Christian drove well and finished a very respectable 11th in his first race.

Mark was disappointed to have not finished his home race, but was happy with the preparation of the car, and felt very competitive prior to the mechanical failure. He feels the R5 can deliver and is looking forward to the next race in Malaysia.

Christian was pleased to have finished 11th in his very first Grand Prix race. He was frustrated to have started so far back, but the opportunity to work his way up provided a big boost to his confidence. He was very impressed with the balance and set-up of his car.

So, the initial race of the season provided mixed results for the Jaguar team. Overall, the cars performed well with the significant exception of the gearbox problems with Webber's car. The rookie Klein showed great promise with a decent finish.

And the overall results? To no one's surprise, Michael Schumaker led from start to finish, and with Barrichello close behind, it was a one-two finish for Ferrari.

COMING EVENTS

Here's what's ahead on the British car calendar. More detailed information is available at JCCV meetings. Events coordinator is Mike Skene 592-1448 or mikeskene@telus.net.

Mon, Mar 22nd, 7:30pm. JCCV General Meeting upstairs in the cricket clubhouse, Beacon Hill Park, Victoria. Presentation by JCCV member and carburetor expert Doug Unia.

Sun, Mar 28th, 11:00am. JCCV Sunday drive and lunch. Meet in the parking lot at Cattle Point, Victoria. More information on page 13.

Sun, Apr 25th, 10:00am. JCCV Sunday drive and lunch. Meet in the parking lot at Mayfair Lanes, Victoria. More information on page 13.

Mon, Apr 26th, 7:30pm. JCCV General Meeting upstairs in the cricket clubhouse, Beacon Hill Park, Victoria. Presentation TBA.

Sun, May 2nd, 11:00am. JCCV Sunday drive and lunch. Meet in the parking lot at Mayfair Lanes, Victoria. More information on page 13.

Wed to Fri, May 19th to 21st. The Jaguar Owners' North American Tour comes to Victoria. Details are in the January issue. www.jonat.org. Local contact Gregory Andrachuk 595-7453 or v12-vdp@shaw.ca.

Sat, May 22nd. 19th Annual Vancouver All British Field Meet, Van Dusen Gardens, Vancouver BC. This year the Vancouver ABFM is part of the JONAT tour, so plan to attend with many of your fellow members. With snow capped mountains in the background, both the Gardens and more than 500 British cars will be enjoyed by over 10,000 people who attend each year. Have an enjoyable day with your car and other enthusiasts amidst the rhododendrons, daffodils, and tulips. Complete information at a JCCV meeting or at www.westerndriver.com.

Mon, May 31st, 7:30pm. JCCV General Meeting upstairs in the cricket clubhouse, Beacon Hill Park, Victoria. Presentation TBA.

Sat & Sun, Jun 5th & 6th. Annual concours, Jaguar car show and slalom hosted by the Pacific Jaguar Enthusiasts Club in Pitt Meadows, BC. A casual, relaxed, and friendly event held in conjunction with Pitt Meadows Days. A perfect introduction to the world of Jaguar marque events. Entry forms available at JCCV meetings. For more information, contact Art Dickenson 604-465-7244 or silver007@shaw.ca or local contact Gregory Andrachuk 250-595-7453 or v12-vdp@shaw.ca

Sat, Jun 19th. Victoria MG Club's 12th Annual All British Slalom at Western Speedway. Open to all British cars - have some fun on the track. Entry forms available at JCCV meetings. For information, contact Jim Mills 250-655-4604 or jmmills@shaw.ca. Note this is not a JCNA sanctioned slalom.

Sun, Jun 20th. Annual Father's Day British Car Picnic in the Park, Beacon Hill Park, Victoria. This event will mark one year since JCCV was formed, so we will want to have a significant presence.

Sun, Jun 27th. Vintage Car Club of Canada Annual Swap Meet at Saanichton Fairgrounds.

Mon, Jun 28th, 7:30pm. JCCV General Meeting upstairs in the cricket clubhouse, Beacon Hill Park, Victoria. Presentation TBA.

Fri to Sun, Jul 2nd to 4th. Rally In the Valley, Penticton BC, hosted by the Okanagan British Car Club. Information at www.obcc.ca

Sat, Jul 17th. Annual concours and Jaguar car show hosted by the Jaguar Owners' Club of Oregon in Forest Grove, Oregon. Information at www.joco.org

Sun, Jul 18th. Annual Forest Grove Concours d'Elegance, Forest Grove, Oregon. "English Elegance" is the theme. For more info www.forestgroveconcours.org.

Sun, Jul 18th. Brits on the Beach, annual show of the Central Island Branch of the Old English Car Club at Transfer park, Ladysmith BC. More information at members.shaw.ca/cioecc/home.htm

Fri & Sat, Jul 23rd & 24th. 16th Annual Western Washington All British Field Meet, Bellevue WA. Contact Arnie Taub 425-644-7874 or ataub@worldnet.att.net or see www.abfm.com.

Mon, Jul 26th, 7:30pm. JCCV General Meeting upstairs in the cricket clubhouse, Beacon Hill Park, Victoria. Presentation TBA.

Sat, Aug 7th. Jaguar Car Club of Victoria Mock Concours. Held in preparation for our first JCNA Concours in 2005. Location and details TBA.

Sun, Aug 8th. 19th Annual Cowichan Valley Car Picnic, at Brentwood College, Mill Bay BC. More information at www.cvcp.ca

CLASSIFIEDS

Advertisements are run for three issues at no charge. Place your ad with the editor at 250-370-2820 or dougi@shaw.ca

1973 XJ6 Series I, \$1,500. Doug 250-756-2207 or cioecc@shaw.ca

1976 XJ6 Series II Coupe, sable brown, collector plates, 100,000 miles. Driven almost daily. Must be sold. Offers on \$12,000 Ian 250-655-0956.

1984 XJ Series III V12 Vanden Plas, good running condition, sunroof, 160,000 km. \$4,500. Mike 250-592-1448.

Assorted parts for Series II E Type: motif bar, fuel tank, doors, rear door and rear door glass for coupe, headlamp recess finisher panels. Also steering rack, fuel tank for Series I E Type, twin SU carbs c/w manifold for Mark 2, wheel covers for Mark X. Larry 250-595-0612 or elatkins@shaw.ca

1993 XJ6 Vanden Plas, black, good condition, 121,500 km. Marge 250-477-2460

1989 V12 Vanden Plas, light blue, runs well, needs transmission pan gasket & shift shaft seal, 186,000 km. Norman 250-418-8806