

Radiator Leaks.txt

Erik

Joined: 10 May 2005

Posts: 89

Location: Moerdijk, The Netherlands

Posted: Thu Sep 07, 2006 9:26 am Post subject: Stopping radiator leaks

Hi all,

The radiator on my '27 Flyer has some small leaks. Nothing very serious but I still would like it to be watertight....

In Technicalities it is stated that modern leak stoppers should not be used because this might block the internal holes etc. But, Technicalities has been around for some time now and maybe more modern leak stoppers will work just fine.

Does anybody have any experience with this subject?

Kind regards,
Erik

--- Read all about the Dutch Scott Run 2007 here! ---

Back to top

dave bushell

Joined: 09 Jun 2004

Posts: 112

Location: Caterham, Surrey

Posted: Thu Sep 07, 2006 10:30 pm Post subject: Radiator leaks

Hi Erik

I always used to use mustard powder in my rads before I had some new radiators made. The mustard powder stays in solution with the water until it seeps out of a small leak hole and then it dries into a hard crust and stops the leak. I have used this method for over 40 years without encountering any problems.

Dave

Back to top

efr215

Joined: 06 Nov 2004

Posts: 80

Posted: Fri Sep 08, 2006 11:37 am Post subject:

I seem to remember reading that during WWII there was an Air Ministry specification on oatmeal for aircraft engine cooling systems. (I think it was supposed to cure ordinary leaks rather than bullet holes!) Given that English

Radiator Leaks.txt

mustard powder is largely very finely ground flour it looks like it wasn't just someone flying a kite! (Sorry!)

Erik's remark about some preparations clogging small waterways could have some foundation. In order to block a hole you have first to span it and then the "plug" has to harden, presumably then the particles in these preparations could span an already restricted waterway. What is unlikely to happen is that the stoppage will harden, as most preparations seem to require access to heat and air for this to occur. If this is the case as long as the radiator is not allowed to dry out and/or get hot it should be possible to flush it out.

If it is suspected that harder deposits such as lime-scale restrict the internal passages then it might be worth trying a domestic kettle cleaner to dissolve out contaminants before trying a sealer. If kettle cleaner fails then there are more aggressive cleaners used on boiler systems, domestic and industrial.

Looking at the Scott cooling system, unpressurised, no fan, no forced circulation, the size of the radiator and the engine's output, (as much heat as horsepower remember), its ability to reject the waste heat must be pretty marginal even with everything perfect. If the radiator is so bad/old/abused that you are terrified of finishing up with sieve or a pile of crumbs after a good cleanout then maybe it is time to start saving for a new one!

The trouble with radiators is that they are largely made of brass.

The trouble with brass is that it is an easy material to work, it's cheap, has an attractive colour, takes a nice shine and doesn't go "rusty" in the way iron & steel does. On the down side a major component of brass is Zinc and zinc can and does dissolve out. On an old radiator I'll lay odds this is the major source of troubles, the dissolved zinc leaves microscopic cavities and cracks at the grain boundaries. The material is now no longer a cohesive structure and becomes brittle; the damaged area is also a seed point, aided by a bit of vibration, for larger fatigue cracks. Just to make matters worse these microscopic cracks make it almost impossible to get the brass chemically clean so that when you do try to solder up a leak the blankety blank solder won't stick.

All of which leads me to wonder if German Silver or Monel metal might not be a better bet.

Or even air cooling...

Take no notice, my other bike's a Comet.

Back to top

Folkert

Joined: 19 Jun 2006

Posts: 2

Location: Northern Germany

Posted: Fri Sep 08, 2006 11:56 am Post subject: radiator leak

Hi Erik,

just for us continental Scott owners:

"Cole's fine mustard powder" is not very popular and might not be available from the shelf of any LIDL or ALDI supermarket. It is a must(ard) for British cuisine.

You will surely find it in your local Delicatessen shop - what a coincidence to SCOTT motorcycles...

The old-fashioned tin can will look nice in your kitchen once you can do without

Radiator Leaks.txt

it in bike's shed

Folkert

Back to top

efr215

Joined: 06 Nov 2004

Posts: 80

Posted: Fri Sep 08, 2006 12:23 pm Post subject:

"Just for us continental Scott owner's."

It's Coleman's Mustard!!!

Smashing with liver & bacon too!

Back to top

dave bushell

Joined: 09 Jun 2004

Posts: 112

Location: Caterham, Surrey

Posted: Sat Sep 09, 2006 11:16 pm Post subject: Stopping radiator leaks

What ever you do, don't use commercial radiator cleaners, domestic or vehicular, on an already leaking old radiator. I did once (I think it was radflush) and I ended up with so many extra leaks that nothing I did after that would stop it leaking. I ended up having to have the radiator re-cored
Dave

Back to top

Erik

Joined: 10 May 2005

Posts: 89

Location: Moerdijk, The Netherlands

Posted: Mon Sep 11, 2006 7:29 pm Post subject:

Well guys,

Coleman's Mustard or not... it somehow worked this weekend on track... I deliberately say "somehow"...

After the first session the radiator started to leak again (at another place than the one I successful soldered the day before...) so I put in some more mustard powder (about 10 teaspoons to be precise). I thought I just HAD to try such an old school trick!

Radiator Leaks.txt

Well... the leak wasn't cured at all (at the end it was spraying out at about 1 litre per 15 minutes)... and my whole bike, boots and pants were coated in a crust of mustard...

It was only because there also was some anti-freeze in the water or I would have had a nice mustard soup!

I'll have a go at soldering again... ;o)

Erik

--- Read all about the Dutch Scott Run 2007 here! ---

[Back to top](#)

Roy Lapidge

Joined: 07 Feb 2006

Posts: 2

Posted: Mon Sep 11, 2006 9:22 pm Post subject:

Hello Erik,

In happy memory of my first motorcycle in 1951, a 1930 3 speed 'Flyer', perhaps you may consider trying my method of dealing with minor leaks on a 'Scott' radiator.

Provided you have the patience to get the rad. absolutely dry on the inside by gentle external heating with hot air or similar, and provided that the leaks are at the soldered ends of the honeycomb tubes, try 'Araldite'.

Note where the leaks occur, heat the rad. in this area until just too hot to touch and, using a matchstick or similar, apply the 'Araldite' which will liquify and be drawn into the porous solder and limescale. If the working area is kept hot for a few minutes, the 'Araldite' will 'gell' and begin to set. If care is taken, the repairs will be almost invisible.

Use the normal slow setting 'Araldite' which, after mixing, will remain usable for at least one hour. 'Araldite' will easily cope with the working conditions of a 'Scott' radiator.

Regards,

Roy

[Back to top](#)

Roger Moss

Joined: 31 May 2004

Posts: 242

Location: Leicester UK

Posted: Tue Sep 12, 2006 12:25 am Post subject: Happy memories!

Hi Erik and all leak fans.

Radiator Leaks.txt

When I had my Replica, the radiator leaked. I made a punch to cut out rubber bungs about 6mm thick and fitted them in the leaking tubes. To my recollection, the rad had 1200 tubes so blocking up a few will not hurt. Unfortunately, one day I filled it from the wrong plastic bottle (AT a race meeting) and this one had dilute detergent in it. The water came out like a fountain. I bought some tube and made and fitted 350 tubes one at a time. I finally gave up as I realised that when the core has deteriorated to that extent, there is no real alternative to having a new core.

Jon Hodges does a great job on the honeycomb radiators, but I do not know if he does modern cores. I would always use Jon as first preference, but a customer told me of a man named Tony Wilder from Leeds who used to work at Northern Radiators. I am told that Tony does modern cores and his Tel No is 0113 287 2946

In both these cases you are in direct contact with the man who does the work. Working through an intermediary has resulted in difficulties in recent times. On the Mustard story, yes I heard that one but never tried it. I was intrigued, however, by an elderly maker of steam engined models, who stopped his boilers leaking by using "algae water" what is that, I asked, expecting some exotic brew. Its water from the top of a stagnant pond with algae in it, he replied. I have not tried that either.

So, for me, avoid any cleaning fluids and make rubber bungs with a hole cutter.

Kind Regards

Roger

Rebuilding and upgrading of Scott and Silk power and transmission units. New enhanced replica Scott engines. Special manufacture Scott technical info at our website www.mossengineering.co.uk

Back to top

Folkert

Joined: 19 Jun 2006

Posts: 2

Location: Northern Germany

Posted: Tue Sep 12, 2006 12:38 pm Post subject:

Hi Erik,

thanks for bravely providing your SCOTT to test the Coleman's mustard recipe. After enjoying your pictures i will return the mustard can back into the kitchen...

I repaired some kart and bike pressurized radiators with modern aluminium cores by applying drops of 2-component glue (for example UHU-brand) and it worked. This stuff smells like epoxy, hardens within an hour and is glassclear. I tried it sucessfully on leaking glassfibre petrol tank too. A clean and dry surface around the leak and generously spraying with brake cleaner for degreasing is recommended

Our local radiator repair shop advised me to try this method but i don't know whether it works on brass honeycomb radiators.

Folkert

Back to top

Erik

Joined: 10 May 2005

Radiator Leaks.txt

Posts: 89

Location: Moerdijk, The Netherlands

Posted: Tue Sep 12, 2006 12:43 pm Post subject:

Hi Folkert,

Ich werde das mal versuchen! ;o)

Gruss,
Erik

--- Read all about the Dutch Scott Run 2007 here! ---

Back to top

Erik

Joined: 10 May 2005

Posts: 89

Location: Moerdijk, The Netherlands

Posted: Mon Sep 18, 2006 9:21 am Post subject:

Well, yesterday I repaired my rad using the good old soldering iron...
After filling with hot water it was watertight and this morning it still was. so
let's hope for the best.

I also spend several hours cleaning up the mustard crust on the bike. It seems
to have reacted with the paint on my cylinders leaving some residu I could only
remove using a rubbing compound. I think I'll find mustard on my bike for at
least a few months to come....

Erik

--- Read all about the Dutch Scott Run 2007 here! ---

Back to top

Erik

Joined: 10 May 2005

Posts: 89

Location: Moerdijk, The Netherlands

Posted: Sat Sep 23, 2006 6:28 pm Post subject:

Well guys, here my next update...

My soldering worked well....for about 20 miles.... Then the leak was back making
my bike dirty again and causing misfiring on the lefthand side.

I was so fed up with it that I thoroughly flushed the radiator to get rid of the
final mustard and then poured in a can of Bar's leak.... Yes, I did just the
thing that I should not do according to Technicalities.

Radiator Leaks.txt

And did it work? Well I wish I could say yes..... The leak was still there! Remember, we are only talking about two very small leaks! Even the "wonder leakstopper" could not fix it.

At last I tried the 2 component glue suggestion after the radiator had cooled down (when cold the leak always was gone...). And this seems to work! I smeared a coat on the leak and heated it to make it a bit more fluid (like in the Araldite tip). Today I did a 100 mile ride of fast touring and not a single drop came out. I wonder, did it really work????

But with this leak gone I noticed the bike starting to loose gearboxoil... but that is a completely different story!

Happy Scotting!

Erik