

Polishing Alloy Casings.txt

I have just received an ally gearbox/mag shield from the spares scheme. It came "as cast". What is the best way to go about polishing it?
Dave

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Erik

Joined: 10 May 2005

Posts: 112

Location: Moerdijk, The Netherlands

Posted: Thu Feb 22, 2007 7:48 pm Post subject:

Well, I have the same work waiting as I got a outrigger cover from the Scheme recently...

As I do not want a very shiny finish I intend to sand it with my orbital sander from coarse to fine. Then by hand with some wet sandingpaper (grain 400-1000) and then with some polishing paste and a clean cloth... It's a dirty job. I did the same to some casings of my Cimatti.

Cheers,
Erik

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

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Richard Moss

Joined: 12 Nov 2004

Posts: 47

Posted: Thu Feb 22, 2007 9:10 pm Post subject: polishing castings

You just have to give it to the Italians for their castings... fantastic... and look at the size of it in regards to the capacity.
What is it Erik? 125?

as for polishing you could try a flap wheel in a drill to get the worst off before finishing off the old fashioned way.

or

A metal polisher probably wouldn't charge too much for buffing it up for you if you don't have the time. That's the boring easiest way!

regards

Richard

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Erik

Joined: 10 May 2005

Posts: 112

Location: Moerdijk, The Netherlands

Posted: Thu Feb 22, 2007 9:20 pm Post subject:

Yes, it's a 125... Look at the size of the crank too... massive!

Erik

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

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dave bushell

Joined: 09 Jun 2004

Posts: 127

Location: Caterham, Surrey

Posted: Sat Feb 24, 2007 6:18 pm Post subject: Polishing ally castings

Thanks Erik and Richard for your replies. The level of finish that Erik has achieved is about what I'm after. Thanks again.

Dave

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efr215

Joined: 06 Nov 2004

Posts: 98

Posted: Sun Feb 25, 2007 1:24 am Post subject:

There 'aint no short cuts . . .

One of the things that should be understood about the quality of a polished surface is that there is a subtle difference between just shiny and smooth and shiny (or satin if you prefer), the human eye is all too good at detecting the difference even if we do not consciously "see" it.

The most desirable and eye catching finish is one that has a surface that is free from all minor ripples and irregularities. This is why careful handwork will result in a superior finish because the use of powered polishing tends to leave just such ripples.

The sad truth however is that for each grade of abrasive you use the time to get

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the surface free of all traces of the previous grade and thus to the state where it is ready for the next finer grade will always be twice as long as the previous one.

If the casting is very rough start out with 2nd cut or smooth cut files, if the cast shape is intricate then a set of rifer files might be worth their price. Flatten off a bit of copper pipe and use it to keep the file clear of nibs lodged in the file's teeth or they will put scratches in the surface that are deeper than those left by the file which means removing yet more metal to eliminate them.

Once you have all the major lumps and bumps smoothed off start with something like 60grit emery cloth, then 120, 240, 400, 600 and finally even flour cloth. Most of these grades are available as inch wide rolls rather than sheet and is to be preferred for this job. Also very useful are small rubberised bricks of abrasive, my ones happen to be called "Garryflex", I am sure there are others. They are available in the same grades as the cloth but in my experience tend to cut slower.

When using strips of emery cloth it is good practice to use a suitably shaped piece of wood as a backing. The rubberised bricks have the merit of being self-supporting while being flexible enough to conform. They can also be cut to get into difficult corners.

Some aluminium tends to have a certain "suet pudding" quality when cut, a good quality emery cloth will stand a little paraffin as a lubricant and reduce the risk of more "nibs" plus improving cutting and finish, the rubberised bricks work better with soap and water.

Be critical, examine the surface closely and only proceed to the next grade when you are really sure that all scratches caused by the previous grade have been removed. Be warned, it will take an inordinate amount of time to remove any such marks with the finer grade.

Do not over use any one piece of emery cloth, a little experience will tell you when it stops cutting efficiently, over use is no economy and just wastes time and effort.

If all the above has put you off commercial polishing is one way out but they are, with the best will in the world, earning a living, speed is all and they are likely to round off corners and remove detail. Careful use of power tools can help and save you time but its elbow grease in the end!

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dave bushell

Joined: 09 Jun 2004

Posts: 127

Location: Caterham, Surrey

Posted: Mon Feb 26, 2007 10:41 pm Post subject: Polishing ally castings

Hi efr215

Your detailed advice will no doubt produce an end result akin to a plate glass mirror, I would then be afraid to take it out in the rain!

I can't imagine the Scott works taking that degree of trouble to polish their products except perhaps for Olympia Show machines. The finish obtained by Erik on his Cimatti crankcases is quite adequate for me but your advice generally will be very helpful in achieving a satisfactory finish.

Thanks

Dave