

## Mogul Valve Block Repair???

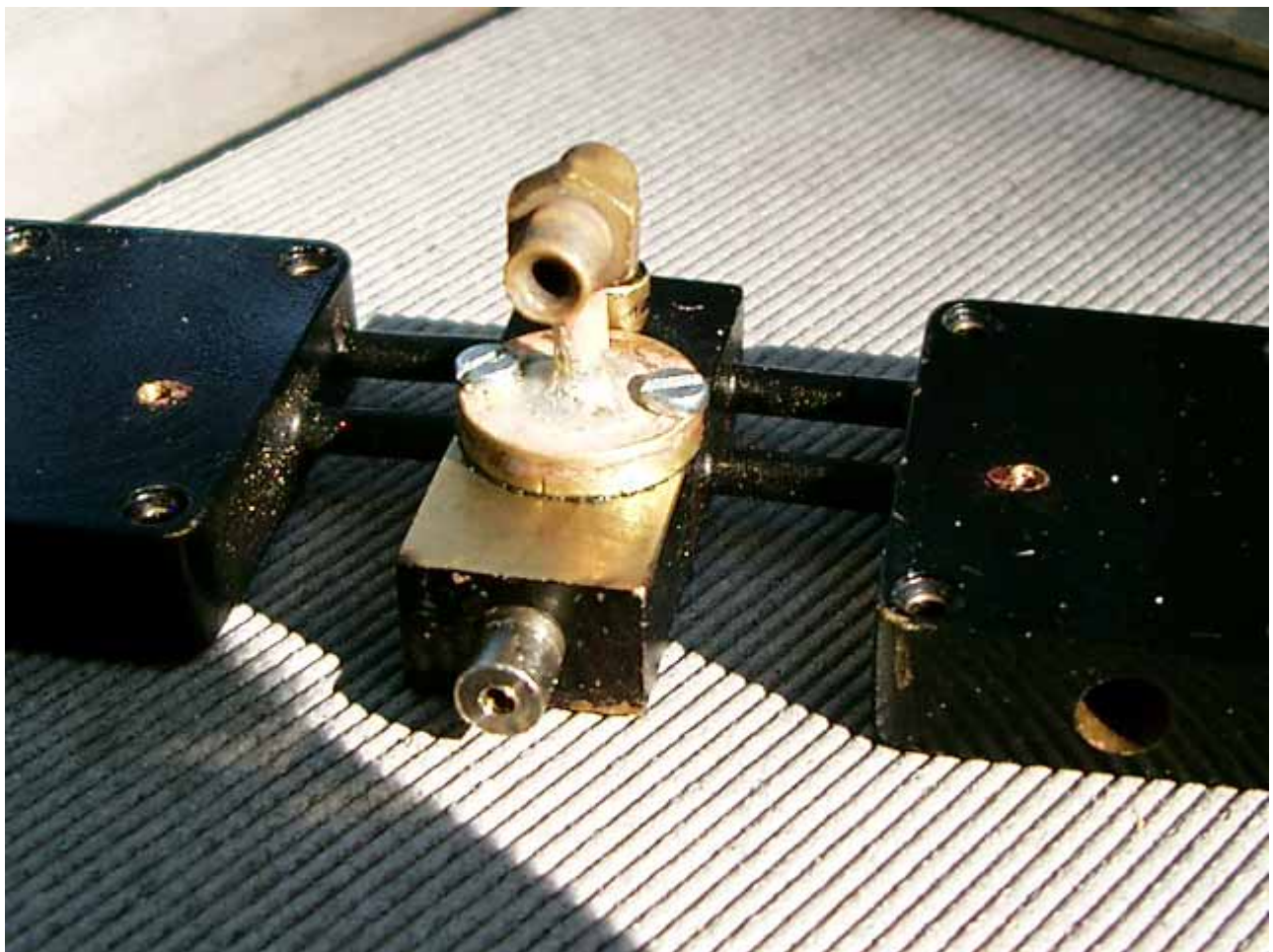
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**Topic author:** Dave Hottmann

**Posted on:** 29 Sep 2006 18:56:45

If the steam fitting breaks off the direction valve block, silver brazing it back on will lead to an internal leak. The required temperature will distort the valve bore. At the factory the boring is done after soldering. The best way to repair it is to silver braise the fitting to a disc and fasten the disc to the block with screws as close to the edge as possible. Between the disc and block is a gasket. Credit for this idea goes to Norm Saley.



## Replies:

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**Reply author:** insanerocketkid

**Replied on:** 29 Sep 2006 19:24:08

how did you manage to break it off in the first place, dave? :) Too much disassembly and reassembly? :-]

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**Reply author:** Dave Hottmann

**Replied on:** 29 Sep 2006 21:15:29

Mike,

This has happened a few times. I believe it is a stress failure induced by the superheater or movement of the superheater. Whether from tinkering or normal running, neither of which I can prove. I have not had one break myself. The piece pictured is one that I repaired for an east coast customer. I only recieved the valve block after an attempt was made to silver solder the fitting to the block, which leaked to the point that the engine would not run after repairs. The piece pictured is what I'm sending back to the customer, a broken one from my scrap pile waiting for repair.

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**Reply author:** Bob Starr

**Replied on:** 29 Sep 2006 23:06:51

Dave,

Interesting.....I have never had to do one on a mogul, but certainly have done the Ruby block. Never had a problem with any distortion after soldering tho. I suspect that the person that you got it from must have really overheated it.

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**Reply author:** CDR

**Replied on:** 01 Oct 2006 07:24:14

More than once I've had to silver braze an assembly that had a fiddly part to it like a close tolerance hole diameter. What I do is to turn up a stainless steel pin a few tenths smaller than the existing hole, and insert it into the bore prior to lighting off the torch. A very close fit is essential, and a through hole is ideal from the removal angle. If it's a blind hole then predrill through the stainless plug to a convenient tap drill diameter, and then tap in the appropriate thread. If the plug sticks in place after the brazing operation, just screw in a threaded rod/Allen screw and screw-jack it out. Another way is to ream the through hole in the plug, and after heating and cooling just fill the reamed hole with oil and drive in a close sized punch. Striking the punch will pressurize the oil and blow out the plug.

The reason that I recommend stainless steel (use a ss bolt or screw for raw stock) is that both its thermal conductivity and coefficient of expansion are low (relative to the yellow metals), and so if the job is done quickly, and it always should be, than very little can go wrong; keep flux away too!

KO-5

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**Reply author:** lotsasteam

**Replied on:** 02 Oct 2006 15:45:40

I had to silver braze my Mogul in the same spot,i left the piston valve in and removed only the smoke box,after i bend the broken (hanging on a tiny piece of tubing together)piece of tubing almost gapless in place.The use of some heatshield (wet papertowel) helped to concentrate the flame in a small spot and the silver solder flowed where it was needed.A couple hours soaking the piston valve in Marvel Mistery oil losened all the gunk and freed the valve!The Mogul works again!!

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