



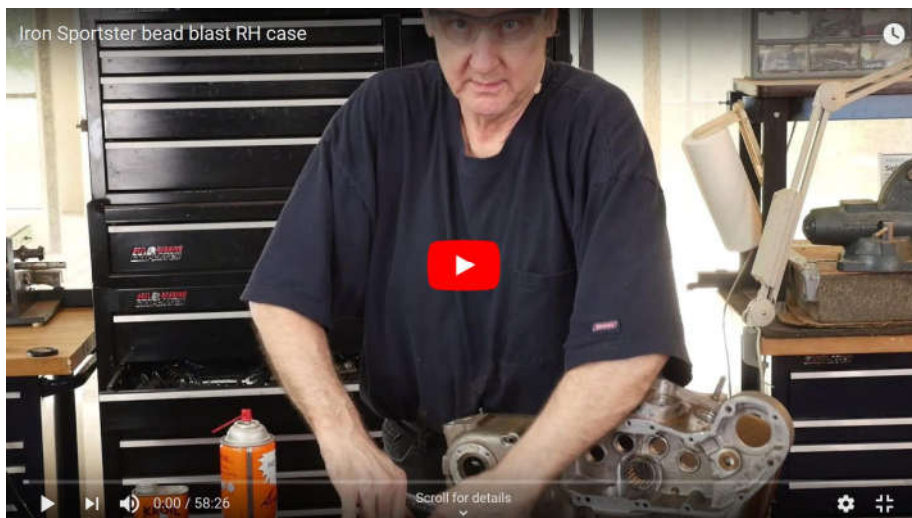
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# Iron Sportster bead blast RH case

**Strip the bearings and studs off the case. Wash well, then bead blast; it looks new.**

## The tips and tricks:

1. **A 1-3/16 socket will serve to push out the pinion bearing. Use a press.**
2. **You can double-nut or use a pipe wrench to get the big stud out.**
3. **An 11/16" socket can drive out the cam bearings.**
4. **Early case must have cam bearings driven from the inside.**
5. **Plastic lunch bags can keep parts clean and organized.**
6. **The case must be clean and dry before bead blasting.**
7. **#10 glass bead gives bright finish.**
8. **Have a bin or tray for all the parts.**
9. **As always, return the tool to box.**



Here are some tips and tricks for getting the the right-hand case stripped and bead blasted. (Click for video.)

Bead blasting aluminum cases can make them look like new. Some restorers think that it devalues antique engines and prefer soda blasting. I am trying out very fine #10 glass bead media. It will not cut through dirt or gasket residue, but leaves a near-perfect finish, not the "frosty" finish coarser beads leave. It takes much longer to do, but it is still well under an hour in the blast cabinet.

The key thing is that the case must be free of any oil film, or water residue before it gets blasted. It is important to have an air dryer or water in the compressed air will put a darker grey discoloration and mottling that you can't get rid of. The first blasting did not get some silicone off the lifter block bores and some sealer on the gaskets. I also used brake cleaner to get oil out of blind bolt holes. Compressed air is essential to get the cases dry, and then blow out the beads.



Start cleaning the case-half using Fantastik or dish soap. No dishwasher.



Here is the case outside after cursory cleaning in the sink.



The inside of the case looks pretty good after the first wash. It has to be clean of oil and silicone before bead blasting.



You need compressed air to blow off the water now and bead blast media later.



Carb cleaner or brake cleaner will dissolve the oil film, including in bolt holes.



The case outside looks better, but there is still sealer near the transmission mainshaft bearing. Don't glue you bike together.





The inside looks great, good enough to run if you want to live with the outside.



Chem-Dip will soften that sealer by the mainshaft bearing.



My Snap-On gasket scraper was pretty rough, I sharpened it on a stone, but not too sharp or it will dig into the aluminum.



A couple swipes and the sealer is gone.



To get the residue, you can use steel wool to get any traces off.



Back to the sink and de-greaser to get the Chem-Dip removed. It is very strong and you need safety glasses, and good gloves. Never get even a drop on your skin.





Hot water and the spray head gives some force to wash the engine case.



These long gloves protect your forearms from the Chem-Dip, it is really strong.



More air to get the water out. The bead blaster will blow off water, but you don't want the beads getting moist.



Steel wool cleans up the gasket surfaces or any sealer remaining.



My home-made bead blast cabinet slides under the sink in the garage.



A wood frame with window screen supports the parts. Gun and gloves were from Summit Air 30 years ago.





This 2-HP quiet air compressor can keep up with the blasting, with a small nozzle.



A air cooler gets the water out of the air, so the blaster does not mottle the case.



A shop vac hooks to the cabinet to compensate for the blast air coming in. The vac inside the cabinet can't keep up.



A milk crate to sit on, and it is time to bead blast the right-hand engine case.



Just a little blasting and the case looks good, but the gasket surfaces need more.



A previous owner used silicone, trying to seal the valve lifter blocks. This caused no end of grief.



More silicone that the bead blast gun could not cut through.



This wire brush fits the lifter bores and scrubbed out the silicone residue.



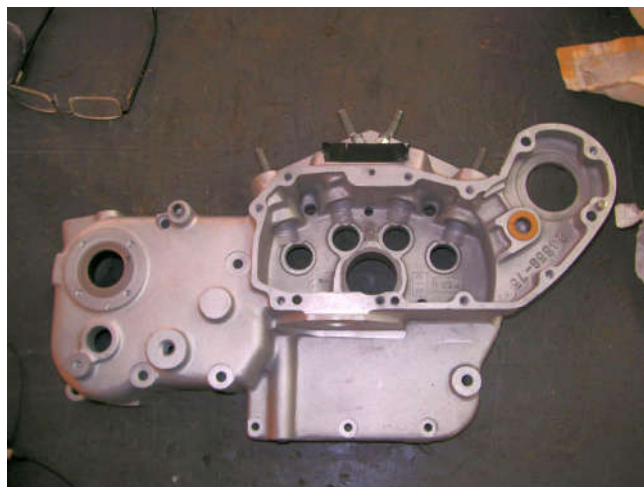
Some dirt on a gasket surface for the cam cover.



Even with the shop vac, there was a lot of beads that blew out of the cabinet.

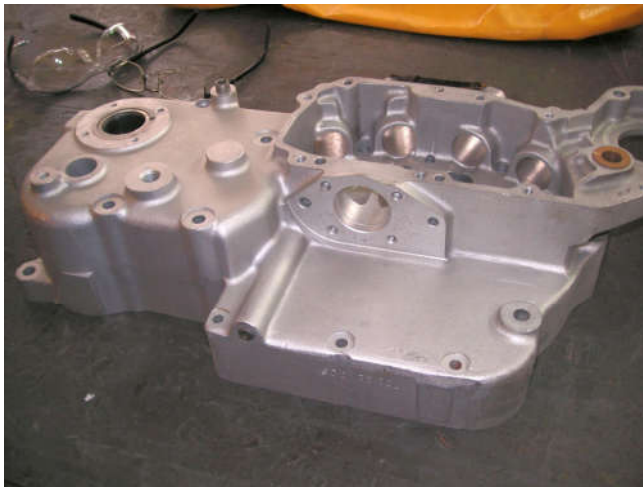


The lifter bores had a thin coating of silicone that did not wash or blow off, even with the brake cleaner.



After a second trip to the bead blaster, the case is now clean enough to build, but still needs careful inspection.





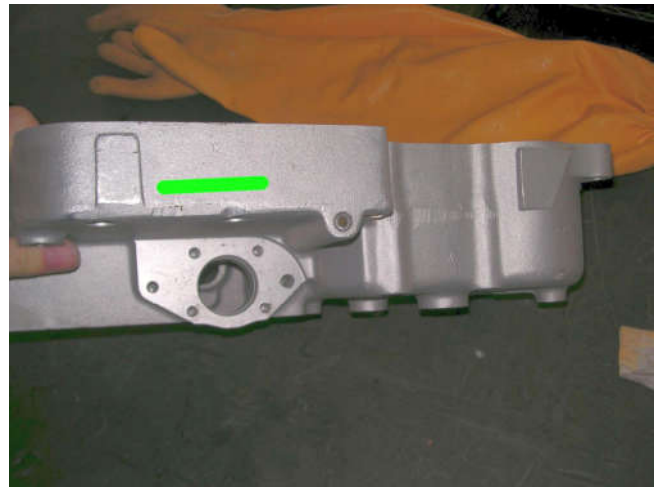
I used a fine glass bead, #10, which takes longer but leaves a brighter surface than course beads.



The cases look like new.



The inside of the cases are more important, especially the gasket surfaces. There was still some sealer I scrapped off.



The bottom of the case looks good, including the oil pump mount.

It is important to have an air compressor to blow all the water off the case before bead blasting. It is also essential to blow all the beads off after blasting. Take special care on any blind holes. I sprayed brake cleaner in all the holes and then blew off to make sure there was no oil film inside that was holding beads.

If feel the bolts and screws feel "scratchy" when you assemble, that means you did not get all the beads out. If you get all the oil off the case before it gets blasted, that means fewer beads will get stuck in nooks and crannies. I used over a can of brake cleaner to wash off any oil film before blasting. Carb cleaner would have worked just as well.

You only have once chance to get the case pristine before assembly, so it is worth being meticulous at this stage. I will use a machinist's headband magnifier to inspect the case when I put it back together. And even more air to make sure there are no beads stuck in crevices inside the case. I am delighted with the #10 beads, but they are harder to remove even with air blow off.