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Turbo air box repair final report

Date: 1/25/2013

Part: DG #1 Airbox,

Serial number _____ Inspected by: Alaa and Denn

1. Base metal

- cast iron
- ductile iron
- cast steel
- cast aluminum
- other _____

4. Cause of damage

- impact
- heat
- freezing
- normal operation
- other _____

2. Machinability

- no previous repairs
- arc-welded
- brazed
- heat-related cracks
- other _____

5. Length of crack/s

16" and 10"

6. Material thickness

$\frac{3}{4}$ "

7. Operating pressure

5.33 Bar

3. Casting shape where cracked

- flat
- inside/outside corner
- radius
- other _____

8. Operating temperature
N/A

9. Working environment
 hot
 cold
 safety concerns
describe: _____

 other _____

10. Remachining requirements
 bolt holes
 bearing bores
 machined surfaces
 other _____

11. Customer's needs
 permanent repair
 temporary repair
 turnaround time
describe: _____

 other _____

12. Accessibility
 room for the tools?
 room for the operator/s?
 need for disassembly?
describe: Remove air cooler
box to allow for welding. Remove all
studs
 other _____

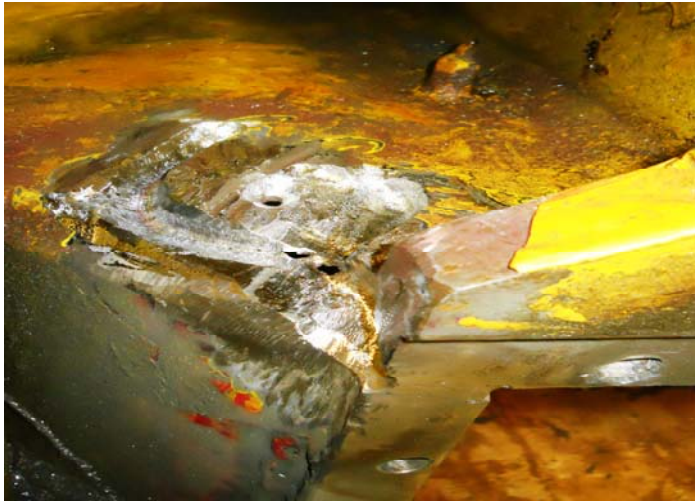
13. Inspection method(s)
Mag particle check using electro-magnet.

14. Damage found: Top left corner has 16" of crack. Previously arc welded. Removed old weld, and prepared crack for welding.



#1

Grind out existing weld and Prep area.



Arc weld cracks.



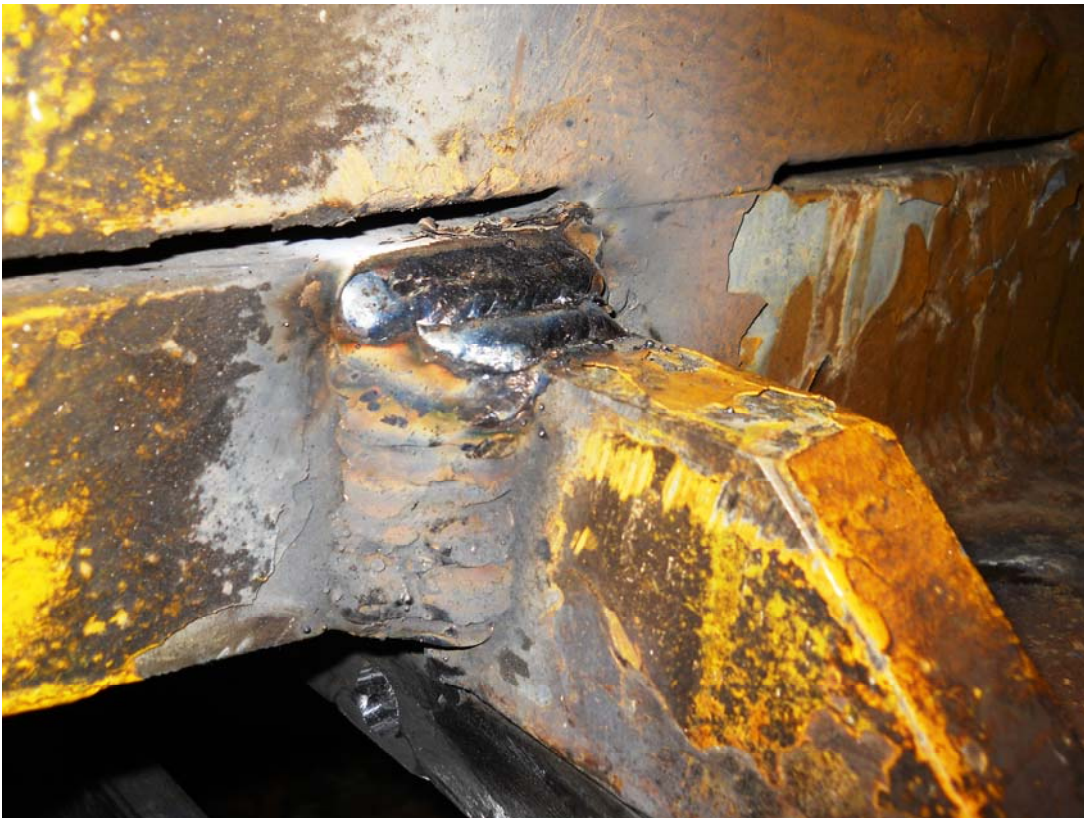
Hand finished.



#2 Turbo support gusset is cracked.
Prep for welding.



Turbo support gusset welded.



#3 Vertical support bar cracked.



Vertical support bar welded and hand finished.



#4 Overhead crack in center of air box, was previously welded.
Removed old weld, and crack.



Welded center crack and hand finish.



#5 Two broken stud holes.



Two broken stud holes welded



-N-S

#6 Installed **Full-Torque** thread inserts.



#7 Machined mounting flange.

